NSF Proposal Development Guide   CLASS 3/2020

FASTLANE is the official interactive web-based computer portal for the National Science Foundation for information exchange and the administration of proposals and awards with Sponsored Projects Offices and NSF. It will eventually be replaced by Research.gov.

RESEARCH.GOV-will become the replacement grants management and portal for Fastlane. The portal has been updated and currently supports collaborative proposal preparation with subawards.

Currently, Research.gov supports the preparation and submission of full, research non-collaborative and collaborative proposals with subawards.   All future NSF proposal submissions will occur in Research.gov unless otherwise noted and not supported.

NSF UPDATE (NEW!!!!)   **March 30, 2020**

We are excited to announce that effective March 30, 2020, the research community can prepare and submit separately submitted collaborative proposals from multiple organizations in Research.gov. Proposers can now prepare Full, Research proposals in Research.gov that are:

- Single submissions from one organization (available since April 2018)
- Single submission collaborative proposals with subawards (available since June 2019)
- Separately submitted collaborative proposals from multiple organizations

What's New for Separately Submitted Collaborative Proposals?

- **Proposal Preparation**: Proposers can select a separately submitted collaborative proposal as an option in the Proposal Creation Wizard and identify themselves as part of a lead or non-lead organization.
- **Linking:** The lead organization can initiate a request to link proposals with non-lead organizations. However, all proposals in the collaboration must be prepared and submitted in Research.gov and cannot be a mix of Research.gov and FastLane proposals.
- **New "Submission Pending" Status:** The Research.gov submission process for separately submitted collaborative proposals is different than the submission process in FastLane.
    - A new Research.gov "Submission Pending" status informs the organization that their proposal submission is pending in a queue until all linked lead and

non-lead proposals in the collaboration attain "Submission Pending" status and can be submitted to NSF as a set.

- o Separately submitted collaborative proposals with a "Submission Pending" status can be edited, but the Authorized Organizational Representative (AOR) must resubmit the edited proposal to return it to a "Submission Pending" status.
- o A Proposal File Update (PFU) is not required to edit the proposal at the "Submission Pending" stage. However, a PFU could be utilized after the entire collaborative set is submitted to NSF and a proposal ID number for each separately submitted collaborative proposal is generated.

- **Submit Proposal Wizard:** The AOR Submission Wizard screen will display the lead and non-lead organization information.
- **Other Related Changes:**
  - o **Postdoctoral Mentoring Plan:** A Postdoctoral Mentoring Plan is only required when funds for postdoctoral scholars are requested on the budget. A proposal compliance error will block proposal submission if there is a mentoring plan but no requested funds.
  - o **Print Concatenate:** This functionality is available for lead and non-lead proposals.
  - o **New Automated Compliance Error/Warning Messages and Business Rules for Separately Submitted Collaborative Proposals:** Compliance checks triggering an error will prohibit proposal submission to NSF, whereas checks triggering a warning will allow proposal submission to NSF.
  - o **Delete In-progress Proposals:** Proposers can delete their in-progress separately submitted collaborative proposals.
  - o **Redesigned Research.gov "About" Page with New and Updated FAQs:** Check out our redesigned Research.gov About Proposal Preparation and Submission webpage with links to new and updated Frequently Asked Questions (FAQs) organized by topic.

What's Ahead?
We are also happy to share that NSF is currently developing the following capabilities in Research.gov:

- Other Authorized User (OAU) role changes (see Research.gov advisory currently posted)
- Support for Single Copy Documents
- Submission of Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Phase I and Phase II proposals
- Submission of Rapid Response Research (RAPID), Early-concept Grants for Exploratory Research (EAGER), and Research Advanced by Interdisciplinary Science and Engineering (RAISE) proposals

Other proposal types including conference, equipment, travel, fellowship, and additional non-research type proposals identified in the *Proposal & Award Policies & Procedures Guide (PAPPG)* are not yet available in Research.gov.

All NSF proposal and submission types continue to be available in FastLane. View the Research.gov Proposal System Release Timeline for more information.

NSF- PAPPG is your guide (Proposal and Award Policies and Procedures Guide)
All NSF proposals must use and conform to this guide. (Specific opportunity guidance supersedes the PAPPG)

A full research proposal must contain the following sections. Note that specific NSF Grants.gov Application Guide may use different naming conventions, and sections may appear in a different order than in FastLane or Research.gov, however, the content is the same.

NSF proposals must conform to the following requirements:

Proposal Font, Spacing and Margin Requirements

a. Use one of the following fonts identified below:

- Arial$_Z$ (not Arial Narrow), Courier New, or Palatino Linotype at a font size of 10 points or larger;
- Times New Roman at a font size of 11 points or larger; or
- Computer Modern family of fonts at a font size of 11 points or larger.

A font size of less than 10 points may be used for mathematical formulas or equations, figures, tables or diagram captions and when using a Symbol font to insert Greek letters or special characters. Other fonts not specified above, such as Cambria Math, may be used for mathematical formulas, equations, or when inserting Greek letters or special characters. PIs are cautioned, however, that the text must still be readable.

b. No more than six lines of text within a vertical space of one inch.

c. Margins, in all directions, must be at least an inch.

Sections of the Proposal:

a. **Cover Sheet**
b. **Project Summary**
c. **Table of Contents**
d. **Project Description**
e. **References Cited**
f. **Biographical Sketch(es)**
g. **Budget and Budget Justification**
h. **Current and Pending Support**
i. **Facilities, Equipment and Other Resources**
j. **Special Information and Supplementary Documentation**
   • **Data Management Plan**
   • **Postdoctoral Mentoring Plan (if applicable)**
k. **Single Copy Documents**
   • **Collaborators & Other Affiliations Information**

The proposal preparation instructions for RAPID, EAGER, RAISE, GOALI, Ideas Lab, FASED, conference, equipment, travel, center, research infrastructure, and fellowship proposal types may deviate from the above content requirements.

a. **Cover Sheet** (embedded in the Fastlane/Research.gov portal, the cover sheet requires data selection and data entry to create the "**proposal shell").** There are four major components of the Cover Sheet. A number of the boxes contained on the Cover Sheet are pre-filled as part of the FastLane login process. The information requested on the Cover Sheet includes:

1) Type of proposal being developed (Research, EAGER, RAISE, etc..)
2) Collaborative or non-collaborative
3) Awardee Organization/Primary Place of Performance
4) Program Announcement/Solicitation/Program Description Number
5) NSF Unit of Consideration
6) Remainder of the Cover Sheet (Title, budget and duration information, PI/co-PI , awardee organization information, other information*: Human subjects, vertebrate animals, proprietary information, **international activity and funding of a foreign organization** *(new*)*

If the proposal includes use of vertebrate animals, supplemental information is required. See Chapter II.D.4. for additional information.
15 If the proposal includes use of human subjects, supplemental information is required. See Chapter II.D.5. for additional information.

b. **Project Summary (1 page maximum)**
Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an **overview,** a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity.

The overview includes a description of the activity that would result if the proposal were funded and a statement of objectives and methods to be employed.

==The statement on intellectual merit== should describe the potential of the proposed activity to advance knowledge.

==The statement on broader impacts== should describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes.

The Project Summary should be informative to other persons working in the same or related fields, and, insofar as possible, understandable to a broad audience within the scientific domain. It should not be an abstract of the proposal.

c. **Table of Contents** (A Table of Contents is automatically generated for the proposal as it is being created. The proposer cannot edit this form

d. **Project Description** (15 pg. max.)
   Maps, photographs and other pictorial presentations are included in the 15-page limitation

The Project Description should provide a clear statement of the work to be undertaken and must include the objectives for the period of the proposed work and expected significance; the relationship of this work to the present state of knowledge in the field, as well as to work in progress by the PI under other support.

The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures. Proposers should address what they want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified. These issues apply to both the technical aspects of the proposal and the way in which the project may make broader contributions.

The Project Description also must contain, as a separate section within the narrative, a section labeled "**Broader Impacts".** This section should provide a discussion of the broader impacts of the proposed activities. Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to the project. NSF values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the U.S.; and enhanced infrastructure for research and education.

The Project Description must contain, as a separate section within the narrative, a section labeled "*Intellectual Merit".*

e. **References Cited**

Reference information is required. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the proposer has a website address readily available, that information should be included in the citation.

f.   **Biographical Sketch (es) NSF is very particular regarding adherence to the NSF biosketch format. Be sure to adhere to the format for compliance**

A separate biographical sketch (limited to two pages) is required for each individual identified as senior personnel. **Do not submit any personal information in the biographical sketch.** This includes items such as: home address; home telephone, fax, or cell phone numbers; home e-mail address; driver's license number; marital status personal hobbies and the like. Such personal information is not appropriate for the biographical sketch and is not relevant to the merits of the proposal.

SciENcv   (NEW!!)
*(the required format for BioSketch and Current & Pending effective June 1, 2020)

Note the following email from NSF regarding the use of SciENcv as an approved format for biosketch and Current and Pending Support submission:

From: NSF ERA Forum <nsferaforum@nsf.gov>
Reply-To: NSF ERA Forum <nsferaforum@nsf.gov>
Date: Monday, June 17, 2019 at 11:13 AM
To: NSF ERA Forum <nsferaforum@nsf.gov>
Subject: NSF-approved Biographical Sketch Format

https://www.youtube.com/watch?v=V3VquWmgcco

 Dear Colleagues:
Please be advised that the National Science Foundation (NSF) has designated the National Institutes of Health's SciENcv (Science Experts Network Curriculum Vitae) as an NSF-approved format for submission of BOTH the **biographical sketch(es) and Current and Pending Support** documents and is encouraging its use to prepare a both documents for inclusion in proposals to NSF.

In accordance with the *Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 19-1), a biographical sketch (limited to two pages) is required for each individual identified as senior personnel on a proposal, and a separate biographical sketch PDF file, or other NSF-approved format, must be uploaded in FastLane for each designated individual (see PAPPG Chapter II.C.2.f.). The biographical sketch and file format requirements also apply to NSF proposals submitted through Research.gov and Grants.gov.

Beginning with the next iteration of the PAPPG (effective for proposals due on or after, June 1, 2020), NSF will only accept PDFs for biographical sketches that are generated through use of an NSF-approved format. A description of NSF-approved format(s) will be posted on the NSF website when the PAPPG is issued.

Multiple training resources are available on the SciENcv website. The following website resources may be of assistance to proposers preparing a biographical sketch using the SciENcv format:

- SciENcv Background

- YouTube Video: SciENcv Tutorial

- [Create a Biosketch in SciENcv](#)

- [YouTube Video: Integrating with ORCID](#)

- [SciENcv Help](#)

(NEW!!) Additionally, <mark>effective June 1, 2020, NSF will implement the updated language concerning the biosketch</mark>. Specifically, there is now language related to the concerns about foreign influence:

"(b) Appointments
A list, in reverse chronological order by start date of all the individual's academic, professional, or institutional appointments, beginning with the current appointment. Appointments include any titled academic, professional, or institutional position **whether or not remuneration is received, and whether full- time, part-time, or voluntary (including adjunct, visiting, or honorary)**."

This means any board positions, appointments at other institutions (note **adjunct!**), etc., need to be included in the biosketch. Which of course will soon need to be created in SciENcv.

g.   **Budget and Budget Justification**

Each proposal must contain a budget for each year of support requested. Contact the Research Liaison Officer (RLO) to determine the budgetary requirements for your proposal and to create the budget using the [DOR budget template.](#) The sponsor funding opportunity takes precedence in terms of budgetary requirements and indirect cost allowances. Amounts and expenses budgeted also must be consistent with the proposing organization's policies and procedures and cost accounting practices used in accumulating and reporting costs.

Each proposal must also include a budget justification that is **no more than five pages. T**he amounts for each budget line item requested must be documented and justified in the budget justification specified.

The proposal may request funds under any of the categories listed so long as the item and amount are considered necessary, reasonable, allocable, and allowable under 2 CFR § 200, Subpart E, NSF policy, and/or the program solicitation.

For proposals that contain a **subaward(s),** each subaward must include a separate budget justification of no more than five pages.

*As a general policy, NSF limits the salary compensation requested in the proposal budget for senior personnel to **no more than two months of their regular summer salary in any one year.**

h.   **Current and Pending Support**
        This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, **including this project,** and any subsequent funding in the case of continuing grants.

         SciENcv (NEW!!)
        The required format for BioSketch and Current & Pending effective June 1, 2020)

Note the following email from NSF regarding the use of [SciENcv](#) as an approved format for biosketch and Current and Pending Support submission:

All current and pending support from whatever source (e.g., Federal, state, local or foreign government agencies, public or private foundations, industrial or other commercial organizations, or internal funds allocated toward specific projects) must be listed. The proposed project and all other projects or activities requiring a portion of time of the PI and other senior personnel must be included, even if they receive no salary support from the project(s).

A separate current and pending support pdf file, or other approved NSF template, must be uploaded in FastLane/Researcg.gov for each individual designated as senior personnel**.**

i.   **Facilities, Equipment and Other Resources**

This section of the proposal is used to assess the adequacy of the resources available to perform the effort proposed to satisfy both the Intellectual Merit and Broader Impacts review criteria. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded.

j.   **Special Information and Supplementary Documentation**

Data Management Plan

This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results (see Chapter XI.D.4), and may include:

1.   The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project;
2.   the standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies);
3.   policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
4.   policies and provisions for re-use, re-distribution, and the production of derivatives; and
5.   plans for archiving data, samples, and other research products, and for preservation of access to them

Plans for data management and sharing of the products of research. Proposals must include a document of no more than two pages uploaded under "Data Management Plan" in the supplementary documentation section of FastLane/Researach.gov.

Data management requirements and plans specific to the Directorate, Office, Division, Program, or other NSF unit, relevant to a proposal are available at: http://www.nsf.gov/bfa/dias/policy/dmp.jsp. If guidance specific to the program is not available, then the requirements established in this section apply.

- **Postdoctoral Mentoring Plan (if applicable)**

Each proposal29 that requests funding to support **postdoctoral researchers30** must upload under "Mentoring Plan" in the supplementary documentation section of FastLane, a description of the mentoring activities that will be provided for such individuals.

k.   **Single Copy Documents**

- **Collaborators & Other Affiliations Information (COA)**
(COA) Information must be separately provided for each individual identified as senior project personnel through use of the COA template.   Collaborators & Other Affiliations Information

The following information regarding collaborators and other affiliations (COA) must be separately provided for each individual identified as senior personnel on the project. The COA information must be provided through use of the COA template. The information in the tables is not required to be sorted, alphabetically or otherwise. For additional information please refer to the frequently asked questions on the COA template page.

Collaborative Proposals (2 methods of submission)

Definition:
A collaborative proposal is one in which investigators from two or more organizations wish to collaborate on a unified research project. **Collaborative proposals may be submitted to NSF or Research.gov in one of two methods:** as a single proposal, in which a single award is being requested (with sub awards administered by the lead organization); or by simultaneous submission of proposals from different organizations, with each organization requesting a separate award. In either case, the lead organization's proposal must contain all of the requisite sections as a single package to be provided to reviewers (that will happen automatically when procedures below are followed). All collaborative proposals must clearly describe the roles to be played by the other organizations, specify the managerial arrangements, and explain the advantages of the multi-organizational effort within the Project Description.

Collaborative Proposal Submission:
 Research.gov (See NSF System Update above for additional guidance)
 Fastlane (see below)

a. **Submission of a collaborative proposal from one organization** The single proposal method allows investigators from two or more organizations who have developed an integrated research project to submit a single, focused proposal. A single investigator bears primary responsibility for the administration of the grant and discussions with NSF, and, at the discretion of the organizations involved, investigators from any of the participating organizations may be designated as coPIs. Note, however, that if awarded, a single award would be made to the submitting organization, with any collaborators listed as subawards. (See Chapter II.C.2.g(vi)(e) for additional instructions on preparation of this type of proposal.) If a proposed subaward includes funding to support postdoctoral researchers, the mentoring activities to be provided for such individuals must be incorporated in the supplemental mentoring plan outlined in Chapter II.C.2.j.

b**. Submission of a collaborative proposal from multiple organizations** Simultaneous submission of proposals allows multiple organizations to submit a unified set of certain proposal sections, as well as information unique to each organization as specified below. All collaborative proposals arranged as separate submissions from multiple organizations must be submitted via FastLane. For these proposals, the project title must begin with the words "Collaborative Research:" If funded, each organization bears responsibility for a separate award. Required sections of the proposal differ based on the organization's role. The following sections are required for a collaborative proposal submitted by:

Lead Organization

- Cover Sheet
- Project Summary
- Table of Contents (automatically generated)
- Project Description
- References Cited
- Biographical Sketch(es)
- Budget and Budget Justification
- Current and Pending Support
- Facilities, Equipment and Other Resources
- Data Management Plan
- Postdoctoral Mentoring Plan (if applicable)
- Collaborators & Other Affiliations Information

Non-Lead Organization

- Cover Sheet
- Table of Contents (automatically generated)
- Biographical Sketch(es)
- Budget and Budget Justification
- Current and Pending Support
- Facilities, Equipment and Other Resources
- Collaborators & Other Affiliations Information

To submit the collaborative proposal, the following process must be completed:

(i) Each non-lead organization must assign their proposal a proposal PIN. This proposal PIN and the temporary proposal ID generated by FastLane or Research.gov when the non-lead proposal is created, must be provided to the lead organization before the lead organization submits its proposal to NSF/Research.gov.

(ii) The lead organization must then enter each non-lead organization(s) proposal PIN and temporary proposal ID into the FastLane lead proposal by using the **"Link Collaborative Proposals**" option found on the FastLane "Form Preparation" screen OR in Research.gov.

(iii) If funded, both lead and non-lead organizations are required to submit separate annual and final project reports.

Check with Research.gov, the Research Liaison Officer and/or the Division of Research for additional guidance and information on NSF collaborative proposal submission, as the process and functionality continues to develop.