# NSF PROPOSAL WRITING GUIDELINES

The following information is an excerpt from the Proposal & Award Policies & Procedures Guide (PAPPG). To view the entire PAPPG visit: https://www.nsf.gov/pubs/policydocs/pappg18_1/index.jsp

**Proposal Pagination, Margin and Spacing Requirements**
All proposals must be clear, legible, and conform to the following requirements:
   a. An Arial, Courier new, Palatino Linotype, typeface, a black font color, and a font size of 10 points or larger; or Times New Roman, Computer Modern, 11 point font or larger. Proposals can contain high resolution graphics and color.
   b. Margins, in all directions, must be at least an inch.
   c. **No more than six lines of text within a vertical space of one inch.**
   d. Each section of the proposal must be individually paginated prior to upload to FastLane.

**Contents of the Proposal**
**1. Project Summary (1 page limit)**
   The proposal must contain a summary of the proposed activity suitable for publication, written in the third person. It must clearly address **in three separate text boxes** within the one-page summary:
   - an overview of the proposed activity;
   - the intellectual merit of the proposed activity;
   - the broader impacts resulting from the proposed activity.

| Overview | Intellectual Merit | Broader Impacts |
|---|---|---|
| • Describe the activity that would result if the proposal were funded<br>• State the objectives and methods to be employed | • Potential to advance knowledge and understanding within and across fields<br>• Qualifications of investigators<br>• If collaboration, how chosen partners strengthen project<br>• Creativity and originality<br>• Conceptualization and organization<br>• Access to resources | • Potential to benefit society and contribute to the achievement of specific, desired societal outcomes.<br>• Advances discovery while promoting teaching, training and learning<br>• Broadens the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)<br>• Enhances the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships<br>• Results disseminated broadly |

**Proposals that do not separately address both merit review criteria within the one-page Project Summary will be returned without review.**

*Only Project Summaries that use special characters may be uploaded in the Supplementary Documents section.* However, they *must* contain headings for Overview, Intellectual Merit, and Broader Impacts or the proposal will be returned without review.

**2. Project Description (15 page limit)**
The Project Description should provide a clear statement of the work to be undertaken and must include:

objectives for the period of the proposed work and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere.

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

The Project Description must contain, as a separate section within the narrative 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 United States; and enhanced infrastructure for research and education.

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

URLs must *not* be used in the Project Description.

**Results from Prior NSF Support (can be up to 5 pages)**
If any PI/Co-PI identified on the project has received NSF funding with an end date in the past five years (including any current funding and no-cost extensions), information on the award is required, irrespective of whether the support was directly related to the proposal or not. When the PI/Co-PI has received more than one award (excluding amendments to existing awards), they need only report on the one award most closely related to the proposal. Funding includes not just salary support, but any funding awarded by NSF. NSF awards such as standard or continuing grants, Graduate Research Fellowship, Major Research Instrumentation, travel, conference, and center awards, etc., are subject to this requirement. Reviewers will be asked to comment on the quality of the prior work described in this section. The following information must be provided:

a) the NSF award number, amount and period of support;
b) the title of the project;
c) a summary of the results of the completed work, including accomplishments, supported by the award. The results must be separately described under two distinct headings: Intellectual Merit and Broader Impacts;
d) a listing of the publications resulting from the NSF award (a complete bibliographic citation for each publication must be provided either in this section or in the References Cited section of the proposal); if none, state "No publications were produced under this award";
e) evidence of research products and their availability, including, but not limited to: data, publications, samples, physical collections, software, and models, as described in any Data Management Plan; and

f) if the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

## 3. Budget and Budget Justification

Each proposal must contain a budget for each year of support requested. The budget justification must be no more than five pages. The amounts requested for each budget line item should be documented and justified in the budget justification. For proposals that contain a subaward(s), each subaward must include a separate budget justification of no more than five pages.

The proposal may request funds under any of the categories listed so long as the item and amount are considered necessary, reasonable, allocable, and are allowable under the applicable cost principles, NSF policy, and/or the program solicitation. Amounts and expenses budgeted also must be consistent with MSU's policies and procedures and cost accounting practices used in accumulating and reporting costs.

**Salary Support**

Grant funds may not be used to augment the total salary or annual salary rate of faculty members during the period covered by the term of faculty appointment or to reimburse faculty members for consulting or other time in addition to a regular full-time organizational salary covering the same employment period.

NSF limits the salary compensation requested in the proposal budget for senior personnel to no more than two months of their regular salary in any one year. This limit includes salary compensation received **from all NSF-funded grants**. Any compensation for such personnel in excess of two months must be disclosed in the proposal budget, justified in the budget justification, and must be specifically approved by NSF in the award notice budget.

It is the organization's responsibility to define and consistently apply the term "year", and to specify this definition in the budget justification.

If no person months and no salary are being requested for senior personnel, they should be removed from Section A of the budget (consistent with NSF's cost sharing policy).

## 4. References Cited

Reference information is required. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified. If there are no references cited, a statement to that effect should be included in this section of the proposal and uploaded into FastLane.

## 5. Attachments

**Biographical Sketch**

A biographical sketch (limited to two pages) is required for each individual identified as senior project personnel. Proposers may elect to use third-party solutions, such as NIH's SciENcv (instructions are available here) to develop and maintain their biographical sketch. Proposers are advised that they are still responsible for ensuring that biographical sketches created using third-party solutions are compliant with NSF proposal requirements. Biographical information must be submitted on the approved NSF Biographical Sketch Form. "Publications" section has been changed to "Products", making clear that products may include, but are not limited to, publications, data sets, software, patents, and copyrights.

In addition, biographical sketches of all senior personnel can no longer be grouped together in a single PDF file—they must now be uploaded separately for each individual identified on the proposal as senior personnel. However, Biographical sketches for Other Personnel and for Equipment proposals should be uploaded as a single PDF file in the Other Supplementary Documents section of the proposal.

## Current and Pending Support

This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, **including this project**, and any subsequent funding in the case of continuing grants. All current project support from whatever source (e.g., Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations) must be listed.

The proposed project and all other projects or activities requiring a portion of time of the PI and other senior personnel must be included, even if they receive no salary support from the project(s). The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months per year to be devoted to the project, regardless of source of support. Similar information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including NSF.

## Facilities and Other Resources

This section of the proposal is used to assess the adequacy of the resources available to perform the effort proposed to satisfy both Intellectual Merit and Broader Impacts review criteria. Proposers should describe only those resources that are directly applicable, and 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.

Proposers should not include any dollar amounts, costs, dates of acquisition, etc. for any facilities, equipment and other resources. These figures can be interpreted as cost-sharing which is unallowable by the NSF. If there are no facilities, equipment and other resources information, a statement to that effect should be included in this section of the proposal and uploaded into FastLane.

## Data Management Plan

Proposals must include a section of no more than two pages that discusses plans for data management and sharing of the products of research. This supplement should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results. A valid Data Management Plan may include only the statement that no detailed plan is needed, as long as the statement is accompanied by a clear justification.

Simultaneously submitted collaborative proposals and proposals that include subawards are a single unified project and should include only one combined Data Management Plan. In such collaborative proposals, the data management plan should discuss the relevant data issues in the context of the collaboration.

Proposers who feel that the plan cannot fit within the limit of two pages may use part of the 15-page Project Description for additional data management information. Proposers are advised that the Data Management Plan must not be used to circumvent the 15-page Project Description limitation.

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

## Letters of Collaboration

Any substantial collaboration with individuals not included in the budget should be described and documented with a letter from each collaborator, which should be provided in the supplementary documentation section of FastLane. Letters of collaboration should be limited to stating the intent to collaborate and should not contain endorsements or evaluation of the proposed project.

**6. Single Copy Documents**
**Collaborators & Other Affiliations Information**
Previously part of the biosketch, this is a single-copy document that requires each senior project personnel to provide information regarding collaborators and other affiliations. The template has been developed to be fillable, however, the content and format requirements must not be altered by the user. This template must be saved in .xlsx or .xls format and directly uploaded into FastLane as a Collaborators and Other Affiliations Single Copy Document.

Proposers using the Collaborators and Other Affiliations template for more than 10 senior project personnel will encounter proposal print preview issues. If there are more than 10 individuals designated as senior project personnel on the proposal, or if there are print preview issues when using the COA template, each completed template must be saved as a .txt file [select the Text (Tab Delimited) option] rather than as an .xlsx file. This format will still enable preservation of searchable text and avoid delays in processing and review of the proposal.