**Standard Proposal Outline/Checklist**

National Science Foundation

This document summarizes the key components of a standard proposal submitted to National Science Foundation. Review complete instructions in the [NSF 24-1 Proposal and Award Policies and Procedures Guide](https://new.nsf.gov/policies/pappg/24-1) (PAPPG), the solicitation, and [Updates on NSF Priorities](https://www.nsf.gov/updates-on-priorities).

**Formatting:**

* Use one of these fonts: 10-point or larger Arial, Courier New, or Palatino Linotype; 11-point or larger Times New Roman or Computer Modern family of fonts.
* Fonts not specified above, such as Cambria Math, may be used for mathematical formulas, equations, or when inserting Greek letters or special characters.
* A font size of smaller 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. The text must still be readable.
* Margins must be at least one inch. No proposer-supplied information may appear in the margins.
* Line spacing must not exceed six lines of text per vertical inch.
* Paper size must be no larger than standard letter paper size (8.5 by 11 inches).
* Research.gov automatically paginates documents; do not number pages unless otherwise directed.

**Checklist of Application Components**

* Cover Sheet
* Project Summary
* Project Description
* References Cited
* Budget
* Budget Justification
* Facilities, Equipment, and Other Resources
* Senior Personnel Documents
	+ Biographical Sketches
	+ Current and Pending (Other) Support
	+ Collaborators and Other Affiliations
	+ Synergistic Activities
* Special Information and Supplementary Documentation
	+ Data Management Plan
	+ Mentoring Plan
	+ Letters of Collaboration
	+ Safe and Harassment-free Fieldwork Plan
	+ List of Suggested Reviewers or List of Reviewers Not to Include

**Cover Sheet**

Completed in Research.gov; work with departmental grants staff or Office of Sponsored Programs pre-award coordinator on this.

**Project Summary (1-page limit)**

The Project Summary should be informative to those working in the same or related fields and understandable to a broad audience within the scientific domain. It should not be an abstract of the proposal. The summary must include three separate sections:

1. **Overview**
	* Describe the activity that would result if the proposal were funded, and state the objectives and methods to be employed.
2. **Intellectual Merit**
	* Describe the potential of the proposed activity to advance knowledge within its own field or across different fields, including the team’s qualifications to conduct the project and the extent to which the proposed activities suggest and explore creative, original, or potentially transformative concepts.
3. **Broader Impacts**
	* Describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes.

Each section heading must be placed on its own line and the section’s text beginning on the next line. Upload the Project Summary file as an attachment.

**Project Description (15-page limit)**

The Project Description should provide a clear statement of the work to be undertaken. Do not use URLs. If this project involves collaboration with other organizations, describe the roles of the other entities, specify the managerial arrangements, and explain the advantages of the multi-organizational effort. Working within the 15-page limitation, below are suggested page lengths for each Project Description subsection. Note that Results from Prior NSF Support is limited to 5 pages. The Broader Impacts and Results from Prior NSF Support sections are required.

1. **Overview, Goal, and Objectives (suggested length: 1-1.5 pages)**
	* State in two to three paragraphs the problem or opportunity your proposal will address. Address how your proposed research will help synthesize, build, and expand research foundations in the areas identified as priorities in the solicitation.
	* Explain the long-term goal of your research, the overall goal of the proposed project, and the specific objectives of the work proposed.
2. **Background and Significance (suggested length: 3.5-5 pages)**
	* Describe the background leading to the application, evaluate existing knowledge, and identify gaps that the project is intended to fill. Discuss how this project will generate foundational research that will advance the field in general or address significant challenges. Also describe the contributions the project will make to synthesizing, expanding, or building the base of knowledge and evidence needed in the field, and to the development of theory and methodology.
	* Summarize prior work relevant to the proposed project, including relevant work in progress by the PI under other support.
3. **Research Plan (suggested length: 7-9 pages)**
	* Describe the work necessary to meet the objectives set forth in the first section.
	* Include clear statements of the research activities to be undertaken, including experimental methods and procedures.
	* Include any plans for collaboration among researchers in related disciplines.
	* Include evaluation criteria, as well as a timeline for the completion of project activities and key milestones.
	* If proposing the use of vertebrate animals, provide sufficient information to enable reviewers to evaluate the rationale for involving animals; the choice of species and number of animals to be used; the description of the proposed use of the animals; the exposure of animals to discomfort, pain, or injury; and the description of any euthanasia methods to be used.
	* For proposals that include funding to an international campus branch of a U.S. institution of higher education or to a foreign organization or foreign individual (including through use of a subaward or consultant arrangement), justify why the project activities cannot be performed at the U.S. campus. The justification must include:
		+ Why support from the foreign counterpart’s in-country resources is not feasible.
		+ Why the foreign organization or foreign individual can carry out the activity more effectively than a U.S. organization or U.S. individual.
		+ What unique expertise, organizational capability, facilities, data resources, and/or access to a geographic location not generally available to U.S. investigators the foreign organization or foreign individual brings to the project.
		+ What significant science and engineering education, training, or research opportunities the foreign organization or foreign individual offers to the United States.
4. **Broader Impacts (suggested length: ½-1 page)**
	* A separate section labeled “Broader Impacts” is required within the narrative, and “Broader Impacts” must appear as a heading on its own line.
	* Discuss the broader impacts of the proposed activities, which may be accomplished through the research itself, activities directly related to the research, or activities supported by, but complementary to, the project.
	* Describe how the project’s participation activities aim to create opportunities for all Americans everywhere, without preference to any individuals or groups.
5. **Intellectual Merit (optional; suggested length: ½ page)**
	* The intellectual merit of a project encompasses its potential to advance knowledge within its own field or across different fields.
	* Discuss the qualifications of the team to conduct the project.
	* Explain the extent to which the proposed activities suggest and explore creative, original, or potentially transformative concepts.
6. **Results from Prior NSF Support (5-page limit)**
	* The purpose of this section is to assist reviewers in assessing the quality of prior work conducted with current or prior NSF funding. If any PI or co-PI identified on the proposal has received prior NSF support—including an award with an end date in the past five years or any current funding (including any no cost extensions)—information on the award is required for each PI and co-PI, regardless of whether the support was directly related to the proposal or not. In cases where the PI or any co-PI has received more than one award (excluding amendments to existing awards), they need only report on the one award that is most closely related to the proposal. Support means salary support, as well as any other funding awarded by NSF, including research, Graduate Research Fellowship, Major Research Instrumentation, conference, equipment, travel, and center awards, etc. Provide the following information:
		+ The NSF award number, amount, and period of support.
		+ The title of the project.
		+ 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. If the project was recently awarded and therefore no new results exist, describe the major goals and broader impacts of the project.
		+ 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.”
		+ 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 and Sharing Plan.
		+ If the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

**References Cited (no page limit)**

Provide a list of bibliographic citations relevant to the proposal. While there is no page limit, this section must contain bibliographic citations only and cannot include parenthetical information.

* 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.
* Identify the website address if the document is available electronically.
* Follow accepted scholarly practices in citing source materials relied upon in preparing any section of the proposal.

**Budget and Budget Justification (5-page limit for budget justification)**

Consult with departmental grant staff and/or staff in the Office of Sponsored Programs for advice on budget development and completing the appropriate budget justification attachments.

**Facilities, Equipment and Other Resources (no page limit)**

Provide a narrative description of the resources available to perform the effort proposed to satisfy both the Intellectual Merit and Broader Impacts review criteria.

* Describe internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded.
* Describe any substantial collaboration with individuals not included in the budget; document each collaboration with a letter (see Letters of Collaboration below).
* Describe only directly applicable resources.
* The description should be narrative in nature.
* Do not include any quantifiable financial information.

**Biographical Sketches (no page limit)**

Provide an NSF-style biographical sketch for each person identified as senior/key personnel. SciENcv must be used to create the biographical sketches.

* See <https://www.nsf.gov/bfa/dias/policy/biosketch.jsp> for guidance.
* See [NSF Pre-award and Post-award Disclosures Relating to the Biographical Sketch and Current and Pending (Other) Support](https://www.nsf.gov/bfa/dias/policy/disclosures_table/may2024.pdf) for disclosure guidance.

**Collaborators and Other Affiliations Information (no page limit)**

Collaborators and other affiliations spreadsheets must be provided for each person identified as senior/key personnel. Use the NSF-approved format at <https://www.nsf.gov/bfa/dias/policy/coa.jsp>.

**Synergistic Activities (1-page limit per senior/key person)**

Each individual identified as a senior/key person must provide a document of up to one-page that includes a list of up to five distinct examples that demonstrates the broader impact of the individual’s professional and scholarly activities that focus on the integration and transfer of knowledge as well as its creation. Examples may include, among others:

* Innovations in teaching and training
* Contributions to the science of learning
* Development and/or refinement of research tools
* Computation methodologies and algorithms for problem-solving
* Development of databases to support research and education
* Broadening the participation of groups underrepresented in STEM
* Participation in international research collaborations
* Participation in national and/or international standards development efforts
* Service to the scientific and engineering community outside of the individual’s immediate organization

**Data Management and Sharing Plan (2-page limit)**

The Data Management and Sharing Plan should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results and may include:

* The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced during the project.
* The data and metadata format and content standards (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies).
* Policies for access and sharing, including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements.
* Policies and provisions for re-use, re-distribution, and the production of derivatives.
* Plans to archive and preserve access to data, samples, and other research products.

Data management and sharing 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 listed above apply.

Simultaneously submitted collaborative proposals and proposals that include subawards are a single unified project and should include only one supplemental combined Data Management and Sharing Plan, regardless of the number of non-lead collaborative proposals or subawards included. In such collaborative proposals, the Data Management and Sharing Plan should discuss the relevant data issues in the context of the collaboration.

A valid Data Management and Sharing Plan may include only the statement that no detailed plan is needed, as long as the statement is accompanied by a clear justification. 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. Do not use the Data Management and Sharing Plan to circumvent the 15-page Project Description limitation.

**Mentoring Plan (if applicable; 1-page limit)**

Each proposal that requests funding to support postdoctoral scholars or graduate students must provide a description of the mentoring activities that will be provided for such individuals.

* Describe the mentoring that will be provided to all postdoctoral scholars or graduate students supported by the project, regardless of whether they reside at the submitting organization, any subrecipient organization, or at any organization participating in a simultaneously submitted collaborative proposal.
* Separate plans are not required for postdoctoral scholars or graduate students. The plan may, however, specify how different components of the mentoring program will be enacted for the two types of researchers.
* For NSF awards that will provide substantial support to postdoctoral scholars and graduate students, each individual must have an Individual Development Plan, which is updated annually, that maps the educational goals, career exploration, and professional development of the individual. NSF defines “substantial support” as an individual that receives one person month or more during the annual reporting period under an NSF award.
* Do not use the mentoring plan to circumvent the 15-page Project Description limitation.
* Note that in situations where a postdoctoral scholar is listed in Section A of the NSF Budget and is functioning in a Senior/Key Personnel capacity (i.e., responsible for the scientific or technical direction of the project), a mentoring plan is not required.
* Examples of mentoring activities include, but are not limited to, career counseling; training in preparation of grant proposals, publications, and presentations; guidance on ways to improve teaching and mentoring skills; guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas; and training in responsible professional practices.
* The Office of Proposal Development’s [Mentoring Plan template](https://research.unl.edu/proposaldevelopment/wp-content/uploads/sites/6/2025/08/NSF-Mentoring-Plan-Template.docx) may be used.

**Letters of Collaboration**

Letters of collaboration should be limited to stating the intent to collaborate and should not contain endorsements or evaluation of the proposed project. Use NSF-suggested language for letters of collaboration:

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

Unless required by a specific program solicitation, letters of support should not be submitted as they are not a standard component of an NSF proposal. A letter of support is typically from a key stakeholder such as an organization, collaborator, or Congressional Representative, and is used to convey a sense of enthusiasm for the project and/or to highlight the qualifications of the PI or co-PI.

**Safe and Harassment-free Fieldwork (SAHF) Plan (if applicable, 2-page limit)**

**All Proposals:** For each proposal that proposes to conduct research off-campus or off site, the authorized organizational official (AOR) must complete a certification that the organization has a plan in place for that proposal that describes how the following types of behavior will be addressed:

* Abuse of any person, including, but not limited to, harassment, stalking, bullying, or hazing of any kind, whether the behavior is carried out verbally, physically, electronically, or in written form; or
* Conduct that is unwelcome, offensive, indecent, obscene, or disorderly.

This plan should also identify steps the proposing organization will take to nurture an inclusive off-campus or off-site working environment, e.g., trainings; processes to establish shared team definitions of roles, responsibilities, and culture, e.g., codes of conduct; and field support, such as mentor/mentee support mechanisms, regular check-ins, and/or developmental events.

Communications within team and to the organization should be considered in the plan, minimizing singular points within the communications pathway (e.g., a single person overseeing access to a single satellite phone), and any special circumstances such as the involvement of multiple organizations or the presence of third parties in the working environment should be considered. The process or method for making incident reports as well as how any reports received will be resolved should also be accounted for.

The organization’s plan for the proposal must be disseminated to individuals participating in the off-campus or off-site research prior to departure. ***Proposers should not submit the plan to NSF for review.***

Simultaneously submitted collaborative proposals and proposals that include subawards are a single unified project and, as such, only one combined plan for the project should be developed, regardless of the number of non-lead collaborative proposals or subawards included. The lead organization is responsible for checking the “Off-Campus or Off-Site Research” box on the Cover Sheet, if applicable.

**BIO/GEO Proposals Only:** Several NSF solicitations issued by the Directorates for Biological Sciences and Geosciences (BIO/GEO) require submission of a SAHF Plan for consideration as part of the merit review process ***in lieu of the organizational plan described above.*** The SAHF Plan is a project-specific two-page supplementary document that will be considered under the Broader Impacts review criterion for any proposal with off-campus or off-site research submitted to a participating solicitation. Please review the solicitation to determine if this supplementary document is required. The four components of the SAHF Plan are specified in each solicitation and include:

* A description of the field setting and unique challenges for the team;
* Steps that will be taken to nurture an inclusive off-campus or off-site working environment;
* Communication processes; and
* Organizational mechanisms for reporting, responding to, and resolving issues of harassment, should they arise.

**List of Suggested Reviewers or List of Reviewers Not to Include (optional)**

**List of Suggested Reviewers:** Proposers may include a list of suggested reviewers (including email address and organizational affiliation) who they believe are especially well qualified to review the proposal. Office of Proposal Development recommends listing 3-5 key experts along with a brief rationale for each, especially if your work is highly specialized or interdisciplinary.

**List of Reviewers Not to Include:** Proposers also may include a separate list of persons they would prefer not to review the proposal. Office of Proposal Development encourages applicants to only name people to this list if they have fair justification, e.g. “This person is a direct competitor in XYZ area.” Include name, email, organization, and a brief rationale for each.

* Contact [Office of Proposal Development staff](https://research.unl.edu/proposaldevelopment/) for strategic review prior to submission.
* NSF’s [Exhibit II-2](https://www.nsf.gov/policies/pappg/24-1/ch-2-exhibit-2) contains information on conflicts of interest that may be useful in preparation of these lists. For example, those listed in the Collaborators and Other Affiliations list cannot be listed as suggested reviewers.
* The cognizant program officer handling the proposal considers the suggestions and may contact the proposer for further information. The decision regarding whether to use these suggestions, however, remains with the program officer.