

Short Summary

The Goals and Objectives of the GRFP are primarily to support the expansion of the scientific workforce in the United States, and to promote the inclusion of more people in STEM. The GRFP evaluates applicants using a range of criteria, but especially considered are Intellectual Merit, meaning the applicant's seeming potential to fulfill their research plans and goals, and Broader Impacts, meaning the societal benefits that the applicant's research will bring (GRFP, pg. 17-18). The GRFP aims to support awardees who demonstrate strong potential and competency in research, in hopes that the awardee will go on to make significant discoveries, innovations, and production of information that will bolster the well-being of society (GRFP, page 18).

Reverse Outline

Important Information And Revision Notes

This section provides details about basic submission requirements including where to submit your proposal, when to submit it by, when reference letters are due by, where to find information regarding highest priority research initiatives for the U.S. government, and how to request accommodations.

Summary of Program Requirements

- 1) Outline of the purpose of the GRFP, which is to bolster the STEM workforce by providing 3 years of support to "outstanding graduate students who are pursuing full-time research-based master's and doctoral degrees in [STEM] or STEM education," (GRFP, page 3).
- 2) Describes the reason the GRFP was created, which was to support students who show promise to "make significant contributions in STEM," (GRFP, page 3).

Broadening Participation in STEM

- 1) NSF is legally mandated to encourage participation of historically underrepresented groups in STEM.
- 2) Information on how to contact the cognizant program officer(s) and a list of the Catalog of Federal Domestic Assistance Number(s) for different fields of STEM.
- 3) Award Information: Specifications about the award, including that it is a fellowship award, the number of awards likely to be granted, the average funding likely to be granted per awardee (stipend and education allowance), and how funding will be allocated to the awardee.
- 4) Organization Limit: Students awarded this Fellowship must be accepted into a graduate program in STEM at an accredited university in the United States or Puerto Rico and be enrolled in that program by the fall.
- 5) Applicant Eligibility: List of several conditions that must be met by the applicant when the application is due in order for their application to even be considered (most requirements are straightforward, complexity arises if the applicant is already a graduate student).
- 6) Number of Times an Individual May Apply: Describes the differing limits for seniors/bachelor's degree holders, current graduate students, and bachelor's-master's concurrent degrees, where seniors/bachelor's degree holders have the least restrictions and may apply an unlimited number of times.

- 7) Limit on Number of Applications: “An eligible applicant may submit only one application per annual competition,” (GRFP, page 5).
- 8) Application Preparation and Submission Instructions: Informs the reader that application instructions deviate from standard guidelines and to continue reading for more information about applying and budgetary limitations, and also provides due dates for different fields of study.
- 9) Application Review Information Criteria: Fellowship money will be sent to and managed by the institution (but the institution must follow NSF GRFP administrative guidelines), and the student must submit yearly financial activity records.

Introduction

- 1) The GRFP exists to support (for 3 years) students pursuing graduate educations who show great potential to contribute to advancing research in STEM.
- 2) The GRFP has two main goals, which are to financially support early career scientists and to increase participation in science.
- 3) GRFP is integral to the NSF’s mission to be a leader in STEM research and innovation, as evidenced by NSF Fellows who have gone on to do breakthrough work.

Program Description

- 1) The applicant must prepare a comprehensive plan that highlights their academic and research experience as well as their graduate plan to show why they have potential in research advancement.
- 2) Applicants must be enrolled in a STEM research graduate program at an accredited university by the time the Fellowship begins and must stay enrolled through the duration of the Fellowship.
- 3) There are many STEM fields that NSF supports and that are eligible to apply for the GRFP.

Award Information

- 1) The GRFP will be awarded to a maximum of 2,300 Fellows and funding will be granted for a maximum of three years (available to use for 5 years), and will be allocated each fall.
- 2) The GRFP awards a maximum of \$53,000 per year to the awardee, \$37,000 of which in the form of a stipend and \$16,000 of which in the form of a Cost of Education allowance.
- 3) The institution the Fellow attends must exempt Fellows from tuition in excess of the Cost of Education (if the awardee institution accepts the fellowship funds).
- 4) Supplemental funding is permitted.
- 5) Describes how Fellows with disabilities can apply for special assistance funding.
- 6) Fellows can apply for NSF non-academic INTERN opportunities as well.
- 7) The NSF may award Honorable Mentions to applicants that show potential but who are not chosen for the Fellowship.

Eligibility Information

- 1) Applicants must submit their own application, must use the specified submission module to submit, must have evidence of acceptance into a graduate degree program within the United States or Puerto Rico, and must stay enrolled in a graduate degree program throughout the duration of the fellowship.

- 2) Repeat of previously stated application requirements.
- 3) Applicants must understand and certify their understanding and fulfillment of all criteria.
- 4) Citizenship: Applicants must be US citizens, nationals, or permanent residents, visa holders are not eligible.
- 5) Degree Requirements: Undergraduates or bachelor's degree holders who have not been enrolled in graduate programs and who will begin graduate school when the award period begins, graduate students who have completed a year or less than one academic year, or students who seek to return to graduate school who are two plus years past their most recent enrollment in graduate school.
- 6) Undergraduate students and bachelor's degree holders who have never enrolled in grad school can apply an unlimited number of times as long as they are prepared to begin graduate school in fall of the year the award begins.
- 7) Joint Bachelor's-Master's degree students may only apply once.
- 8) Specifications for current graduate students of what counts as one academic year of graduate study.
- 9) Previous graduate students returning to school are eligible as long as it has been two or more consecutive years since they were enrolled in a graduate program.
- 10) Various fields of study are eligible (geosciences and life sciences are likely most relevant to ESS).
- 11) Applicants must enroll in a program that matches the stated Major Field of Study proposed in their application.
- 12) Only research based graduate degrees qualify for GRFP support.
- 13) Ineligible degree programs: Students enrolled in practice-oriented graduate degree programs are not eligible for GRFP funding.
- 14) Ineligible areas of study: Health/patient based research is not eligible for GRFP support.
- 15) Ineligible proposed research: Health and disease related research is ineligible, with limited exceptions if the research advances fundamental knowledge within the field of study.
- 16) Plant pathology research is eligible unless it is primarily for the purpose of increasing agricultural production or food safety.
- 17) Research may have policy implications but may not demonstrate expressed support for certain policy outcomes.
- 18) Applicants are encouraged to consult an advisor or faculty when preparing research plans.

Application Preparation and Submission Instructions

- 1) Applications must be submitted by the field specific deadline by 5:00pm of the applicant's local time on the deadline.
- 2) Applicants need three reference contacts and two reference letters must be submitted by reference writers and received by the NSF by 5:00pm ET on the deadline.
- 3) List of all of the required information and statements required for the application.
- 4) Additional information that is not required by the GRFP Application Module will not be reviewed.
- 5) List of stylistic guidelines.
- 6) The GRFP Application Module will not accept documents that do not meet listed criteria, thus applicants should be very careful and proofread application materials to prevent delays.

- 7) Specifications for statements, with an emphasis on producing original work.
- 8) Both statements must include individual and separate “Intellectual Merit” and “Broader Impacts” sections, or they will not be reviewed.
- 9) Transcripts are required and at least one transcript is needed for the GRFP Application Module to accept the application.
- 10) Transcripts should be submitted as PDFs, with personal information redacted, and must not be encrypted.
- 11) Specifications for applicants who earned their master’s degree through joint Bachelor’s-Master’s program.
- 12) Applications must be submitted by the deadline with required materials and must display “received” status in the Application Module in order to be reviewed.
- 13) Applicants must provide contact information for 3 reference writers, may have up to 5 potential reference writers, must have two reference letters by the deadline, and reference writers must not be the student’s family members.
- 14) The list of reference writers may not be changed after the application is submitted, and students are responsible for checking accuracy of reference emails and reference willingness to participate.
- 15) Applicants may list 5 reference writers, but if more than three reference letters are received, only the top three will be considered as ranked by the applicant.
- 16) Reference writers must submit to the GRFP Module and will receive email confirmation after they upload their letter on behalf of the applicant.
- 17) Applicants should give reference letter writers plenty of time and should provide writers with copies of their application materials.
- 18) Specifications for reference letters and what reference letters should include.
- 19) The GRFP Application Module has an “Application Completion Status” feature that allows the applicant to see their progress and make sure they have submitted all required materials before deadlines.
- 20) NSF applicants hoping to pursue interdisciplinary research are eligible to apply.
- 21) Applications must be submitted by the deadline for the field of study stated in the application.
- 22) Applications may be withdrawn on or before November 15th of the application year and will not count towards the application limit for students with a limit.
- 23) Repeat of budget information already provided.
- 24) List of due dates by field.
- 25) Repeat that application materials must be submitted through the GRFP Application Module.

Application Review Information

- 1) Applications will be reviewed by reviewers from a broad spectrum of related fields, thus it is important that the applicant pick the Major Field of Study most closely related to their proposed graduate program.
- 2) Intellectual Merit and Broader Impacts especially will be reviewed, and should have their own headings, where intellectual merit is “the potential to advance knowledge” and broader impacts is “the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.”

- 3) Broader impacts with socially relevant outcomes, such as advancing education, public engagement, well-being of individuals, facilitation of partnerships across fields, national security, and economic benefits.
- 4) Reviewers will look at a range of criteria including educational and research experience, leadership, service, etc.
- 5) Reviewers will complete a comprehensive review of applications, recommend applicants for the GRFP, and the NSF will then select applicants from recommendations using the NSF's mission and goals to guide decisions.

Award Administration Information

- 1) Awardees will be notified by early April of the competition year.
- 2) Funds are given to the awardee's institution of higher education and are subject to terms and conditions.
- 3) Applicants must accept or decline the offer and terms and conditions by the specified deadline if awarded the Fellowship.
- 4) Fellows must accept terms and conditions and make a diligent effort and academic progress towards receiving their graduate degree while receiving the Fellowship, and the Fellowship may be revoked if terms are breached.
- 5) Applicants may not accept the GRFP award if they accept a different federal graduate fellowship.
- 6) Research must follow legal and ethical guidelines, and Fellows must be trained in the Responsible and Ethical Conduct of Research.
- 7) Research involving human subjects must get IRB approval or be exempt from IRB review.
- 8) Research involving vertebrate animals must be in compliance with the Animal Welfare Act and regulations under the Secretary of Agriculture, and must be approved by the Institutional Animal Care and Use Committee (IACUC).
- 9) Vertebrate animal research involving international research must still be approved by the US grantee's IACUC and must follow the International Guiding Principles for Biomedical Research Involving Animals.
- 10) The NSF does not claim rights over Intellectual Property produced by fellows, however fellows should include an Acknowledgement and Disclaimer in publications using the following statement:

“This material is based upon work supported by the National Science Foundation Graduate Research Fellowship Program under Grant No. (NSF grant number). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.”
- 11) Fellows must update their Annual Activities Report and Fellowship Status Declaration each year to show progress (broader impacts, presentations, publications, teaching and research assistantships, awards and recognitions, etc.) and to verify that they will be utilizing the Fellowship for that year.
- 12) If a Fellow does not declare intent to utilize the Fellowship for the year, they will be in violation of the terms and conditions and the Fellowship will be terminated.

- 13) The Division of Graduate Education (DGE) gathers information about Fellows to understand the efficacy of the Fellowship, thus Fellows may be contacted for information about their educational and career pursuits and may be subject to evaluation.
- 14) GRFP institutions must submit a GRFP completion report to update student status each year.

Agency Contacts

- 1) Provides a list of emails and phone numbers to contact for different issues and inquiries.

Other Information

- 1) Guides applicants to the NSF website for information of NSF initiatives and changes to procedures.
- 2) Provides website for other federal government-wide grant opportunities, including NSF funding opportunities.
- 3) Provides information about pursuing research internationally through opportunities offered by the NSF.

About The National Science Foundation

- 1) Describes the history of the NSF as an independent Federal agency which got its mandate from the National Science Foundation Act of 1950.
- 2) The NSF funds a broad range of STEM fields in schools across the country, both primary, secondary, and post-secondary, and other organizations.
- 3) While the NSF does not operate any laboratories, it supports labs and research projects across the country and across fields.
- 4) The NSF has awards for scientists with disabilities to provide support for them to acquire equipment that can help them conduct their research.
- 5) Describes accessibility options for people with hearing impairments.
- 6) The NSF means to advance scientific progress within the United States through grants.

Privacy Act And Public Burden Statements

- 1) Information requested on the GRFP application may be used by other government agencies or involved parties.
- 2) Information Collection is only required by an issuance from the Office of Management and Budget with the appropriate control number (3145-0023).

Appendix

- 1) The applicant must select a Major Field of Study and the program that they pursue must match a subfield of the Major Field selected in their application.
- 2) The applicant's selection of a Major Field will impact the deadline of their application, which experts will review the application, and which graduate programs apply.
- 3) Most ESS related fields fall under Geosciences (biogeochemistry, earth system science, environmental science) or Life Sciences (ecology, environmental biology, evolutionary biology).

Required Documentation and Information

- 1) Comprehensive plan that includes “academic achievements, attributes, and experiences that illustrate the applicant’s demonstrated potential for significant research achievements...relevant education, research experience, and plans for graduate education...”
- 2) Confirmation of acceptance to a graduate degree program if awarded
- 3) Three reference letters, submitted by the reference letter writer through the NSF Reference Letter System

Requirements:

- Institutional or professional letterhead, if available
- SIGNED by the reference writer, including the name, professional title, department, and institution
- Two (2) page limit (PDF file format)
- Standard 8.5” x 11” page size
- 11-point or larger Times New Roman font and 1” margins on all sides
- Single spaced using normal (100%) single-line spacing

Specifications:

“The reference letter should address the NSF Merit Review Criteria of Intellectual Merit and Broader Impacts (described in detail below). It should include details

Explaining the nature of the relationship to the applicant (including research Advisor role), comments on the applicant’s potential for contributing to a globally-engaged United States science and engineering workforce, statements about the Applicant’s academic potential and prior research experiences, statements about The applicant’s proposed research, and any other information to aid review

Panels in evaluating the application according to the NSF Merit Review Criteria.”

- 4) Personal Information
- 5) Education and work experience
- 6) Transcript PDFs
- 7) Proposed Graduate Study & Graduate School Information
- 8) Names and emails of a minimum of 3 reference letter writers
- 9) Personal, Relevant Background, and Future Goals Statement PDF (3 page page limit, including citations, figures, etc).
- 10) Graduate Research Plan Statement PDF (2 page page limit, including citations, figures, etc).
- 11) Both statements must include “Intellectual Merit” and “Broader Impacts” sections within individual separate sections under individual separate headings

Statement Guidelines:

- 8.5” x 11” page size
- 11 pt or larger font (excluding image text)
- Times New Roman for text and Cambria Math for equations, Symbol font for non-alphabetic characters
- Cited references should include name of journal
- 1” margins (no header, footer, name, or page number)
- No less than single-spacing (~6 lines per inch)
- PDF file format required

CURRICULUM VITAE

NAME Sammy Tetrault **DATE:** 9/25

POSITION Student, Ecosystem Science and Sustainability
Colorado State University
Fort Collins, CO 80523

EDUCATION

Year	Degree	Institution	Area of Study
2023	AGS	Front Range Community College	General Studies
2025 (Anticipated)	BS	Colorado State University	Ecosystem Science & Sustainability

WORK EXPERIENCE

Year	Institution	Position	Department
2024 - 2025	Colorado State University	Undergraduate Research Assistant	Agricultural Biology

Professional Non-Academic

2025 - present	City of Fort Collins	Forestry Field Worker I
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TEACHING EXPERIENCE

Year	Institution	Position	Department
2024	Colorado State University	Undergraduate Lab Teaching Assistant	Biology

PRESENTATIONS

2025	“Effects of Indaziflam on Native Species Seed Emergence” presented at Colorado State University’s Celebrate Undergraduate Research & Creativity (CURC) event.
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HONORS & AWARDS

2025	CURC 2025 College Honors: Warner College of Natural Resources	Colorado State University
2023-2025	Phi Theta Kappa Scholarship Recipient	Colorado State University

References

Brandeis University. Reverse Outlining. (n.d.).

National Science Foundation. (2025, August). NSF 24-591: NSF Graduate Research Fellowship Program (GRFP).