# REQUEST FOR APPLICATION

## Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program (WAMS)

MODIFICATION: This RFA is an updated version of the FY 2020-FY 2021 solicitation. It includes only the references to FY 2021 funding; FY 2020 references have been eliminated. Edits in red on pages 2, 3, 7, 12, 15 and 24.

| | |
|---|---|
| **FUNDING YEARS:** | Fiscal Year 2021 |
| **APPLICATION DEADLINES:** | FY 2021 January 21, 2021 |
| **LETTER OF INTENT DEADLINE:** | Not Required |
| **FUNDING AVAILABILE**: | $384,000 annually |
| **CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER:** | 10.318 |

**INITIAL ANNOUNCEMENT**
National Institute of Food and Agriculture, United States (U.S.) Department of Agriculture (USDA)

***Catalog of Federal Domestic Assistance***. The Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program (WAMS) is listed in the Assistance Listings under the Catalog of Federal Domestic Assistance number 10.318.

**Table 1**: Key Dates and Deadlines

| Task Description | Deadline |
|---|---|
| Application: | 5:00 P.M. Eastern, FY 2021 January 21, 2021 |
| Letter of Intent: | Not Required |
| Applicants Comments: | Within six months from the issuance of this notice (*NIFA may not consider comments received after the sixth month*) |

***Stakeholder Input***. The National Institute of Food and Agriculture (NIFA) seeks comments on all request for applications (RFAs) so it can deliver programs efficiently, effectively, with integrity, and with a focus on customer service. NIFA considers comments, to the extent possible when developing RFAs and use comments to help meet the requirements of Section 103(c)(2) of the Agricultural Research, Extension, and Education Reform Act of 1998 (7 U.S.C. 7613(c)(2)). Applicants may submit written comments to Policy@usda.gov (email is for comments only). Please use the following subject line: Response to the WAMS RFA.

## EXECUTIVE SUMMARY

This notice identifies the objectives for WAMS projects, deadlines, funding information, eligibility criteria for projects and applicants, and application forms and associated instructions. NIFA requests applications for WAMS to support research and extension activities that increase the number of women and underrepresented minorities from rural areas who will pursue and complete a postsecondary degree in science, technology, engineering or mathematics (STEM) disciplines.

NIFA requests applications for the WAMS program for Fiscal Year 2021. The anticipated amount available for grants in both years is approximately $384,000. This RFA is being released prior to the passage of an appropriations act for FY2021. Enactment of additional continuing resolutions or an appropriations act may affect the availability or level of funding for this program.

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## PART I. FUNDING OPPORTUNITY DESCRIPTION

### A. Legislative Authority

This program is administered under 7 U.S.C. 5925 as amended. Section 1672 of the Food, Agriculture, Conservation, and Trade Act of 1990 (7 U.S.C. 5925(d)(7)) authorizes the Secretary of Agriculture to make competitive grants to increase the participation of women and underrepresented minorities from rural areas (definition Part VIII, E) in STEM fields in higher education. Priority is extended to eligible institutions that carry out continuing programs funded by the Secretary.

### B. Purpose and Priorities

For this program, NIFA will support projects with a target audience of K-14 students (kindergarten through twelfth grade plus two years of post-secondary schooling (e.g., vocational technical institutions or community or junior colleges). Four-year undergraduate, graduate, and post-doctoral focused projects will not be awarded under this grant announcement. Projects with a primary target of 4-year undergraduate, graduate and post-doctoral studies should consider NIFA's workforce and development focused programs.

WAMS-funded project activities must support the creation, adaptation, and adoption of learning materials and teaching strategies to operationalize what we know about how students learn. Many of these concepts are identified in the National Research Council's publication: *How People Learn*. WAMS-funded projects shall also focus on imparting both technical knowledge as well as 'soft' skills such as communication, team work, and problem solving, as these are abilities expected by employers. These concepts may be found in the publication: *Comparative Analysis of Soft Skills: What is Important for New Graduates?*

The purpose of this program is to support research, education/teaching, and extension projects that increase participation by women and underrepresented minorities from rural areas in STEM. NIFA intends this program to address educational needs, as determined by each institution, within broadly defined areas of food and agricultural sciences.

Applications recommended for funding must highlight and emphasize the development of a competent and qualified workforce in the food and agricultural sciences. WAMS-funded projects should improve the economic health and viability of rural communities by developing research and extension initiatives that focus on new and emerging employment opportunities in STEM occupations. Projects that contribute to the economic viability of rural communities are also encouraged.

***eXtension***. WAMS encourages (but does not require) projects that develop content suitable for delivery through eXtension.

***Leadership Skills Development***. The development of leadership skills, knowledge, and qualities are necessary to prepare students for agricultural and related careers in the private sector, government, and academia. WAMS teaching applications must demonstrably incorporate a leadership development component to equip students with technical and leadership abilities upon graduation. Specific activities may include:

1. Developing practical applications to increase understanding of leadership roles, including critical thinking, problem solving, and communication skills; ethics and professionalism; and working in teams;

2. Connecting the academic classroom experience with daily leadership roles and organizational activities;
3. Providing opportunities for mentoring and shadowing; and
4. Organizing leadership academies, workshops, trainings, etc.

***Social and Behavioral Science Disciplines.*** Projects that integrate social and behavioral sciences to provide experiential learning opportunities for students in applied research, and related community development programs. Incorporation of social and behavioral sciences is important for addressing many of the challenges facing agriculture and rural communities, such as increasing global demand for food production in the face of limited natural resources; improving health and reducing obesity; and increasing economic opportunities.

***Advancement in U.S. Food, Agriculture, and Forestry.*** In an increasingly interconnected world, these domestic advancements have global importance, and may require information and cooperation from beyond our borders. Any proposed activity (e.g., partnerships, exchanges, training, and/or travel), must support the domestic objectives of WAMS. Applicants must clearly describe and demonstrate how international activities proposed in applications submitted to WAMS will contribute to advances in U.S. agriculture. When proposing international activities, applicants must describe the metrics that will be used for reporting beneficial outputs and outcomes. These metrics should reflect how the proposed international collaboration adds value to achieving the WAMS program's objectives by introducing innovative technologies/approaches, promoting synergistic science, addressing issues of mutual concern, or other means. Additional guidance on including international activities in WAMS applications is provided on the NIFA Center for International Programs webpage that includes Frequently Asked Questions, descriptions of existing MOUs and other resources.

The WAMS Program is aligned with the following USDA Strategic Goals:

1. Strategic Goal 4: Facilitate Rural Prosperity and Economic Development;

**Table 2**: Program Key Information

| Title | Description |
|---|---|
| Program Code: | WAMS |
| Program Code Name: | Women and Minorities in STEM |
| CFDA Number | 10.318 |
| Project Type: | Education/ Teaching, Research, Extension, Integrated |
| Grant Type: | Standard Grants |
| Application Deadline | FY2021 January 21, 2021 |
| Grant Duration: | 24-36 Months |
| Anticipated # of Awards/Fiscal Year: | 4 |
| Maximum Award Amount: | Approximately $100,000 for 24-36 months |
| Proposal Submission Limitations: | One application per eligible institution |

A proposed project must address one or more Educational Need Areas and/or be an Applied Project that addresses research, outreach and capacity building to benefit the communities served, especially that of their students.

1. ***Educational Need Areas***. WAMS projects should focus on the purpose of one or more of the FY 2021 Need Areas. Please note that at least one of these Need Areas must be indicated on the Project Summary (Part IV § B(3)).
    a. *Curriculum Design, Materials Development, and Library Resources*. Promotes the development of courses of study and degree programs, new and improved curricula, and instructional materials and technology; to promote the acquisition of library resources including books and journals relating to the food, agriculture, natural resources, and human sciences; and to stimulate the use of new approaches to the study of traditional subjects, new research on teaching and learning theory, and new applications of knowledge. The overall objective is to increase the quality of, and continuously renew, the academic programs at K-14 institutions in the food and agricultural sciences.
    b. *Faculty Preparation and Enhancement of Teaching.* Advances faculty development in the areas of teaching competency and leadership, subject matter expertise, or student recruitment and advising skills. Applications may emphasize, but are not limited to: obtaining experience with recent developments and new applications in a field; expanding competence in innovative technologies and new methods of instruction delivery; developing new skills in a field of science or education including student advising skills. Each faculty recipient of support for developmental activities must be an "eligible participant' as defined in Appendix III Definitions.
    c. *Instruction Delivery Systems.* Encourages the use of alternative methods of delivering instruction to enhance the quality, effectiveness, and cost efficiency of teaching programs. Applications may emphasize, but are not limited to: incorporating alternative instructional methodologies that respond to differences in student learning styles; inter-institutional collaborations that deliver instruction in ways that maximize program quality and reduce unnecessary duplication; and consideration and implementation of innovative instructional techniques, methodologies, and delivery systems in response to advances in knowledge and technology.
    *d.* *Scientific Instrumentation for Teaching and Research.* Provides students and faculty in science-oriented courses with suitable, up-to-date equipment and curriculum in order to involve them in work central to scientific understanding and progress. Applications may emphasize, but are not limited to acquiring new, state-of-the- art instructional, laboratory, classroom, and research scientific equipment to help assure the achievement and maintenance of outstanding food, agriculture, natural resources, and human sciences education programs, upgrading existing equipment, or replacing non-functional or obsolete equipment.
    e. *Student Experiential Learning.* Furthers the development of student scientific and professional competencies through experiential learning programs that provide students with opportunities to solve complex problems in the context of real-world situations. Applications may emphasize, but are not limited to: preparing future graduates to advance knowledge and technology, especially in the use of Artificial Intelligence in food and agricultural industry; enhancing quality of life; conserving resources; and addressing community and economic development issues. Projects should focus on advancing student decision-making and communications skills, data and analytical skills and improving real-life technological expertise. Activities may include, but are not limited to internships, practicum experiences, study abroad

opportunities, leadership skill development, and participation with faculty on applied research and related community development projects.

f. *Student Recruitment, Retention, Mentoring and Educational Equity (including the provision of student financial assistance).* Enhances educational equity for under-represented students, and to strengthen student recruitment and retention programs in order to promote the future strength of the Nation's scientific, professional, and technical workforce in the food, agriculture, natural resources, and human sciences. Applications may emphasize, but are not limited to:

   i. Initiating new projects or supplementing current efforts to attract increased number of students from under-represented groups, their families, and communities to engage in a robust exchange of ideas on using the full breadth of the Nation's intellectual resources more effectively.

   ii. Developing agricultural and science literacy programs at the high school level to attract students to college and careers in the food, agriculture, natural resources, and human sciences; mentoring and summer enrichment programs and other initiatives for student retention; and the provision of student financial support to attend college.

   Each student recipient of monetary support for educational costs or developmental purposes must be enrolled at an eligible institution and meet the requirement of an "eligible participant' as defined in Appendix III: Definitions.

2. ***Applied Projects.*** In addition to the Education Need Areas, applicant may choose to develop studies that have relevancy and application within the communities that these institutions serve.

   a. *Applied Studies in the Food and Agricultural Sciences.* Apply the body of knowledge in the food, agriculture, natural resources, and human sciences to address real-world problems, including applied research activities focused on community and economic development issues related to food, agriculture, natural resources, and human sciences. Examples include:

      i. Conducting plant or animal breeding programs to develop better crops, forests, or livestock (e.g., improving disease resistance, improving productivity, yielding higher quality products)

      ii. Conceiving, designing, and evaluating new bio-processing techniques for eliminating undesirable constituents from or adding desirable ones to food products

      iii. Proposing and evaluating ways to enhance utilization of the capabilities and resources of WAMS institutions to promote rural development (e.g., exploitation of new technologies by small rural businesses)

      iv. Identifying control factors influencing consumer demand for agricultural products

      v. Analyzing social, economic, and physiological aspects of nutrition, housing, and lifestyle choices, and of community strategies for meeting the changing needs of different population groups; and

vi. Studying other identified state, regional, community, national and global problems such as human nutrition and obesity prevention, sustainable agriculture, bioenergy, climate change, food safety, food security, biotechnology, agribusiness management and marketing, and aquaculture.

b. *Applied Research Support Systems.* Establish centralized support systems to meet state, regional, or community needs, or serve clientele that cannot otherwise afford or do not have ready access to the support in question, or to provide such support more economically thereby freeing up resources for other applied research uses. Examples include:
   i. Storage, maintenance, characterization, evaluation, and enhancement of germ plasm for use by animal and plant breeders (including those using the techniques of biotechnology)
   ii. Digital databases of important scientific information (e.g., epidemiological, demographic, nutrition, weather, economic, crop yields, animal migration patterns); and
   iii. Expert service centers for sophisticated and highly specialized methodologies e.g., evaluation of nutritional quality of foods, toxicology, taxonomic identifications, consumer preferences and demographics.

c. *Technology-based Information Delivery Systems.* Promote innovations and improvements in the delivery of benefits of food and agricultural sciences to producers and consumers, particularly those who are currently disproportionately low in receipt of such benefits. Examples include:
   i. Computer-based decision support systems to assist small scale farmers, ranchers, herders, or fishermen to take advantage of relevant technologies, programs, policies, etc.; and
   ii. Effective delivery systems for nutrition information or for resource management assistance for low-income families and individuals.

d. *Other Applied Research and Community Development Applications.* Encourage other creative projects, outside the areas previously outlined, that are designed to provide needed enhancement to the capacity of women and minority groups to conduct applied research and related community development projects.

3. ***Expected Products and Results.*** The WAMS program requires all project directors to provide appropriate metrics and describe the expected products and results, outcomes, and their potential impact on strengthening food and agricultural science education, research and extension in the United States. Metrics to assess products, outputs and outcomes are to be clearly delineated in the proposal.
4. ***Evaluation Plan.*** All projects must have an Evaluation Plan that includes both a strategy for monitoring the project as it evolves (to provide feedback to guide these efforts), as well as a strategy for evaluating the effectiveness of the project in achieving its goals and for identifying positive and negative findings when the project is completed. The complexity of the evaluation will depend on the scope of the project. Grantees are encouraged to obtain an independent evaluation to secure appropriate documentation of the project's outputs and outcomes. Such efforts should be led by knowledgeable and

experienced individuals. As a guide, up to 10% of the grant funds may be used to support this purpose.

## PART II. AWARD INFORMATION

### A. Available Funding

The anticipated amount available for WAMS in FY 2021 is approximately $384,000. This RFA is being released prior to the passage of an appropriations act for FY2021. Enactment of additional continuing resolutions or a full appropriations act may affect the availability or level of funding for this program.

USDA is not committed to fund any particular application or to make a specific number of awards. The Automated Standard Application for Payments, operated by the Department of Treasury, Bureau of Fiscal Service, is the designated payment system for awards resulting from this RFA.

### B. Application Restrictions

NIFA will evaluate applications using the criteria described in Part V of this RFA. Applications for FY 2021 are limited to the following applications types:

1. *New application*: New applications will be evaluated using the criteria described in Part V of this RFA and are subject to the due dates herein (see Appendix III for definition).
2. *Resubmitted application*: Resubmitted applications must include responses to the previous review panel summary, and are subject to the same criteria and due dates herein. Resubmitted applicants must enter the NIFA-assigned proposal number of the previously submitted application in the *Federal Field (Field 4)* on the application form (see Appendix III for definition).

### C. Project and Grant Types

The following describes the types of *projects* or *grants* that are eligible for funding:

1. ***Project Types.*** Applicants must propose one of the following:
    a. *Education/Teaching Projects*. Single-function Education/Teaching Projects develop human capital relevant to overall program goals for U.S. agriculture. An education activity or teaching activity is formal classroom instruction, laboratory instruction, and practicum experience in the food and agricultural and other related matters such as faculty development, curriculum development, instructional materials and equipment, and innovative teaching methodologies
    b. *Extension Projects.* Single-function Extension Projects conduct programs and activities that deliver science-based knowledge and informal educational programs to people, enabling them to make practical decisions. Extension Projects may also include related matters such as certification programs, in-service training, client recruitment and services, curriculum development, instructional materials and equipment, and innovative instructional methodologies appropriate to informal educational programs.
    c. *Research Projects.* Single-function Research Projects support applied research conducted by individual investigators, co-investigators within the same discipline, or multidisciplinary teams. Applied research means research that includes expansion of the findings of fundamental research to uncover practical ways in which new knowledge can be advanced to benefit individuals and society. Multi-disciplinary research projects are those in which investigators from two or more food and agricultural science disciplines collaborate closely to address a common problem.

d. *Integrated Research, Education/Teaching and/or Extension Projects.* An Integrated Project includes at least two of the three functions of the agricultural knowledge system (i.e., research, education/teaching, and extension) within a project. The functions addressed in the project should be focused around the problem or issue and should be interwoven throughout the life of the project to complement and reinforce one another. The functions should be interdependent and necessary for the success of the project and no more than two-thirds of the project's budget may be focused on a single component.

Integrated Project applicants are encouraged to review NIFA's Integrated Programs Application Information webpage for additional information on integrated programs, including tips for writing Integrated Project applications and an example of an integrated application

***2.Grant Types.*** Standard grant is the grant instrument for this RFA. This is an award instrument by which NIFA agrees to support a specified level of effort for a predetermined project period without the announced intention of providing additional support at a future date.

### D. Ethical Conduct of Funded Projects

In accordance with sections 2, 3, and 8 of 2 CFR Part 422, institutions that conduct USDA-funded extramural research must foster an atmosphere conducive to research integrity, bear primary responsibility for prevention and detection of research misconduct, and maintain and effectively communicate and train their staff regarding policies and procedures. In the event an application to NIFA results in an award, the Authorized Representative (AR) assures, through acceptance of the award that the institution will comply with the above requirements. Award recipients must, upon request, make available to NIFA the policies, procedures, and documentation to support the conduct of the training. See Responsible and Ethical Conduct of Research for further information.

### E. Proposal Submission Limitations

Each eligible, individual institution, independent branch campus, and branch institution of a State system may submit one application as an individual institution each FY.

## PART III. ELIGIBILITY INFORMATION

### A. Eligibility Requirements

As contained in Section 7204 of the Food, Conservation, and Energy Act of 2008 (FCEA) (Pub. L. 110-246 which amends Section 1672 of the Food, Agriculture, Conservation, and Trade Act of 1990 (7 U.S.C. 5925)), applications may only be submitted by the following eligible applicants: (a) State agricultural experiment stations; (b) colleges and universities; (c) university research foundations; (d) other research institutions and organizations; (e) Federal agencies; (f) national laboratories; (g) private organizations or corporations; and, (h) individuals.

Applicants for the WAMS program must meet all the requirements discussed in this RFA. Failure to meet the eligibility criteria by the application deadline may result in exclusion from consideration or, preclude NIFA from making an award. For those new to Federal financial assistance, NIFA's Grants Overview provides highly recommended information about grants and other resources to help understand the Federal awards process.

***Duplicate or Multiple Submission*** – duplicate or multiple submission is not allowed. NIFA will disqualify both applications if an applicant submits duplicate or multiple submissions. For those new to Federal financial assistance, NIFA's Grants Overview provides highly recommended information about grants and other resources to help understand the Federal awards process.

### B. Cost Sharing or Matching

In accordance with 7 U.S.C. 5925(a)(2) the if a grant provides a particular benefit to a specific agricultural commodity, the grant recipient is required to match the USDA funds awarded on a dollar-for-dollar basis from non-Federal sources with cash and/or in-kind contributions. **(See Part IV. R&R Budget. 3. for details.)**

NIFA may waive the matching funds requirement for a grant if NIFA determines that: (1) the results of the project, while of particular benefit to a specific agricultural commodity, are likely to be applicable to agricultural commodities generally; or (2) the project involves a minor commodity, the project deals with scientifically important research, and the grant recipient is unable to satisfy the matching funds requirement.

## PART IV. APPLICATION AND SUBMISSION

### A. Method of Application

Applicants must apply to this RFA electronically; no other method or response is accepted. The electronic application for this RFA and additional resources are available on Grants.gov and Grants 101. **Table 3** provides instructions on how to obtain an electronic application. **Part II § 1** of the NIFA Grants.gov Application Guide (Application Guide) contains detailed information regarding the Grants.gov registration process.

**Table 3: Steps to Obtain Application Materials**

| Steps | Action |
|---|---|
| Step One: Register | *New Users* to Grants.gov must register early with Grants.gov prior to submitting an application (Register Here). |
| Step Two: Download Adobe | Download and Install Adobe Reader (see Adobe Software Compatibility for basic system requirements). |
| Step Three: Find Application | Using this funding opportunity number **USDA-NIFA-WAMS-007852**, search for application here: Opportunity Package. |
| Step Four: Assess Readiness | Contact an AR prior to starting an application to assess the organization's readiness to submit an electronic application. |

**Table 4: Help and Resources**

| Grants.gov Support | NIFA Support |
|---|---|
| Grants.gov Online Support<br>Telephone support: 800-518-4726<br>Toll-Free or 606-545-5035<br>Email support: support@grants.gov<br>Self-service customer based support: Grants.gov iPortal<br>*Key Information: Customer service business Hours 24/7, except federal holidays.* | Email: policy@usda.gov<br>*Key Information*: Business hours: Monday thru Friday, 7a.m. – 5p.m. ET, except federal holidays |

### B. Content and Form of the Application

The Application Guide is part of the corresponding application package for this RFA. The RFA overrides the Application Guide if there is a discrepancy between the two documents. NIFA will accept subsequent submissions to an application until the application deadline. However, applicants that do not meet the application requirements, to include partial applications, risk being excluded from NIFA's review. NIFA will assign a proposal number to all applications that meet the requirements of this RFA. Applicants must refer to the proposal number when corresponding with NIFA. **Table 5** outlines other key instructions for applicants.

**Table 5: Key Application Instructions**

| Instruction | References (All references are to the Application Guide) |
|---|---|
| Attachments must be in a portable document format (PDF) format. | **Part III § 3** |
| Check the manifest of submitted files to verify attachments are in the correct format. | **Part III § 6.1** |
| Conduct an administrative review of the application before submission. | **Part VII** |
| Follow the submission instructions. | **Part IV § 1.5** |
| Provide an accurate email address, where designated, on the SF-424 R&R. | **Part IV § 1.5** |
| Contact the Grants.gov helpdesk for technical support, and keep a record of the correspondence. | N/A |
| Contact NIFA if applicant does not receive correspondence from NIFA regarding an application within ***30*** days of the application deadline. | N/A |

***SF 424 R&R Cover Sheet***. See **Part V § 2** and **Part V § 2.17**of the Application Guide for the required certifications and assurances.

***SF 424 R&R Project/Performance Site Location(s)***. See **Part V § 3** of the Application Guide.

***R&R Other Project Information Form***. See **Part V § 4** of the Application Guide.

1. Field 7. Project Summary (PS)/Abstract. The PS must show how the project goals align with the project goals of the WAMS Program. See **Part V § 4.7** of the Application Guide for instructions and suggested templates.
2. Field 8. Project Narrative (PN). The PN must not exceed 12 double-spaced pages of written text including figures and tables. The font size should be no smaller than 12 points, Times New Roman. The page limits outlined here ensure fair and equitable competition. Appendices to the PN are allowed if they are directly germane to the proposed project. Do not add appendices to circumvent the page limit. The PN must include all of the following:
    a. *Introduction*. Include a clear statement of the long-term goal(s) and supporting objectives of the proposed activities. Summarize the body of knowledge or other past activities that substantiate the need for the prosed project. Describe ongoing or recently completed significant activities that relate to the proposed project including the work of key project personnel. Include preliminary data/information pertinent to the proposed project. In addition, this section should include in-depth information on the following, when applicable:

i. Estimates of the magnitude of the issues and their relevance to stakeholders and to ongoing state-federal food and agricultural research, education and extension programs.
ii. The role of stakeholders in problem identification, planning, implementation, and evaluation as appropriate.
iii. Reasons for performing the work at the proposing institution.

b. *Objectives*. All applications must include a statement(s) of specific aims of the proposed effort in clear, concise, complete, and logically arranged terms.
c. *Methods*. Explicitly state the procedures or methodology you will apply to the proposed effort. This section should include, but not necessarily be limited to, a description of:
   i. Stakeholder involvement in problem identification, planning, implementation and evaluation
   ii. Proposed project activities, listed sequentially
   iii. Techniques to be employed in this project, including their feasibility and rationale
   iv. Expected results
   v. How activities will be evaluated
   vi. How data will be analyzed and interpreted
   vii. Plans to communicate results to stakeholders and the public
   viii. Pitfalls that might be encountered
   ix. Limitations to proposed procedures
d. *Project timetable*. The proposal should outline all important phases as a function of time, year by year, for the entire project, including periods beyond the grant funding period.

***Field 12, Add Other Attachments***. See **Part V § 4.12** of the Application Guide.

1. *Response to previous review*. Title the attachment as 'Response to Previous Review' in the document header and save file as 'Response to Previous Review'. This requirement only applies to "Resubmitted Applications" as described under Part II § B of this RFA. If desired, additional comments may be included in the text of the PN, subject to the page limitations of that section.

2. *Expected Outcomes*. Title the attachment "Expected Outcomes" in the document header and name the file to be saved as "Expected Outcomes". Please use a format similar to what is provided in **Table 6** below, to submit expected impacts and attach it as the last page of the application.

**Table 6: Expected Outcomes**

| Expected outcomes during entire grant period | Expected Number | Justification for expected number |
|---|---|---|
| 1. Number of products to be developed through grant funds during the grant period (i.e., curricula, academic programs, recruitment/retention programs, materials, experiential learning opportunities) | N/A | N/A |
| 2. Number of faculty directly supported by this grant | N/A | N/A |

| | | |
|---|---|---|
| 3. Number of students directly supported by this grant through stipends, work-study, etc. | N/A | N/A |
| 4. Number of students who will indirectly benefit from the products produced from the grant during the grant period (i.e., using the curriculum/instrumentation, enrolled in the program, recruited or retained but not paid by the grant using scholarships, fellowships and assistantships). | N/A | N/A |

***R&R Senior/Key Person Profile (Expanded)***. See **Part V § 5** of the Application Guide for profile requirements, details about the biographical sketch, and suggested support templates.

***R&R Personal Data***. This information is voluntary and is not a precondition of award (see **Part V § 6** of the Application Guide).

***R&R Budget***. See **Part V § 7** of the Application Guide.

1. Budgets for each project year do NOT have to be the same from year to year. However, detailed budget information (budget and narrative) must be submitted for each year of the proposed project.
2. During the tenure of a grant, PDs must attend at least one National Project Directors' Meeting/Conference, if offered, in Kansas City, Missouri or any other announced location. The purpose of the meeting will be to discuss project and grant management, opportunities for collaborative efforts, future directions for education reform, and opportunities to enhance dissemination of exemplary end products/results of the projects. Reasonable travel expenses to attend this meeting may be included in the application's budget under travel expenses.
3. Match – If an applicant concludes that the matching requirements described under Part III § B of this RFA is not applicable to them; the applicant must include an explanation of their conclusion in the *budget justification*. NIFA will consider this justification when determining final matching requirements or if required matching can be waived. NIFA retains the right to make final determinations regarding matching requirements.
   Grants that require matching funds as specified under Part III § B of this RFA must list in their *budget justification* the matching sources, the identification of the entity(ies) providing the match, and the total pledged amount. A written verification of commitments of matching support (a pledge agreement) is not required. However, applicants are subject to the documentation, valuing and reporting requirements, as specified in 2 CFR Part 200, "Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (the Uniform Guidance)," and 7 CFR 3430, "Competitive and Noncompetitive Non-Formula Federal Assistance Programs – General Award Administrative Provisions."
4. Indirect costs (IDC) – See **Part IV § C** of this RFA for funding restrictions regarding indirect cost, and **Part V 7.9** of the Application Guide for additional information

***Data Management Plan***. A Data Management Plan (DMP) is required for this program. Applicants should clearly articulate how the project director (PD) and co-PDs plan to manage

and disseminate the data generated by the project. The DMP will be considered during the merit review process (see Part V § B of this RFA, **Part III § 3.1** of the Application Guide and NIFA's Data Management Plan page).

***Supplemental Information Form***. See **Part VI § 1** of the Application Guide.

1. Field 2. Program to which the applicant is applying. Enter the program name Women and Minorities in STEM and the program code WAMS. Accurate entry is critical.
2. Field 8. Conflict of Interest List. See **Part VI § 1.8** of the Application Guide.

***Representations Regarding Felony Conviction and Tax Delinquent Status for Corporate Applicants***. This is required for corporate applicants. See **Part VI § 2** of the Application Guide for a description of the term, "corporation."

## C. Funding Restrictions

***Indirect Cost (IDC) not to exceed 30 percent of Total Federal Funds Awarded (TFFA) of the recipient***. Section 1462(a) and (c) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) limits IDC for the overall award to 30 percent of Total Federal Funds Awarded (TFFA) under a research, education, or extension grant. The maximum IDC rate allowed under the award is determined by calculating the amount of IDC using:

1. the sum of an institution's negotiated indirect cost rate and the indirect cost rate charged by sub-awardees, if any; or
2. 30 percent of TFFA.

The maximum allowable IDC rate under the award, including the IDC charged by the sub-awardee(s), if any, is the lesser of the two rates.

If the result of number one is the lesser of the two rates, the grant recipient is allowed to charge the negotiated IDC rate on the prime award and the sub-award(s), if any. Any sub-awards would be subject to the sub-awardee's negotiated IDC rate. The sub-awardee may charge its negotiated IDC rate on its portion of the award, provided the sum of the IDC rate charged under the award by the prime awardee and the sub-awardee(s) does not exceed 30 percent of the TFFA.

If the result of number two is the lesser of the two rates, then the maximum IDC rate allowed for the overall award, including any sub-award(s), is limited to 30 percent of the TFFA. That is, the IDC of the prime awardee plus the sum of the IDC charged by the sub-awardee(s), if any, may not exceed 30 percent of the TFFA.

In the event of an award, the prime awardee is responsible for ensuring the maximum indirect cost allowed for the award is not exceeded when combining IDC for the Federal portion (i.e., prime and sub-awardee(s)) and any applicable cost-sharing (see 7 CFR 3430.52(b)). Amounts exceeding the maximum allowable IDC are considered unallowable. See sections 408 and 410 of 2 CFR 200.

Successful applicants must not use grant funds awarded under the authority of this RFA to renovate or refurbish research, education, or extension space; purchase or install fixed equipment in such space; or to plan, repair, rehabilitate, acquire, or construct buildings or facilities.

## PART V. APPLICATION REVIEW REQUIREMENTS

### A. NIFA's Evaluation Process

NIFA evaluates each application in a two-part process. First, we screen each application to ensure that it meets the administrative requirements as set forth in this RFA. Second, a scientific peer- review process will be used to technically evaluate applications that meet the administrative requirements using a review panel **(see NIFA Peer Review Process).**

**Scientific Peer Review Process:**

NIFA selects reviewers for the review panel based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors:

- the level of relevant formal scientific, technical education, or extension experience of the individual, as well as the extent to which an individual is engaged in relevant research, education, or extension activities;
- the need to include experts from various areas of specialization within relevant scientific, education, or extension fields;
- the need to include other experts (e.g., producers, range or forest managers/operators, and consumers) who can assess relevance of the applications to targeted audiences and to program needs;
- the need to include experts from a variety of organizational types (e.g., colleges, universities, industry, state and Federal agencies, and private profit and non-profit organizations) and geographic locations;
- the need to maintain a balanced composition with regard to minority and female representation and an equitable age distribution; and
- the need to include reviewers who can judge the effective usefulness of each application to producers and the general public.

After each peer review panel has completed its deliberations, the responsible program staff of NIFA will recommend that your project is either approved for support from currently available funds or declined due to insufficient funds or unfavorable review.

NIFA reserves the right to negotiate with the PD/PI and/or the submitting organization or institution regarding project revisions (e.g., reductions in the scope of work, funding level, period, or method of support) prior to recommending any AFRI project for funding.

After the review process has been completed, NIFA sends copies of reviews, *not* including the identity of reviewers, and a summary (if applicable) of the review panel comments to the PD.

***Conflicts of interest***. NIFA takes extreme care to prevent any actual or perceived conflicts of interest that may influence the review or evaluation (see NIFA Peer Review Process for Competitive Grant Applications).

### B. Evaluation Criteria

NIFA will use the following criteria, listed in order of importance, to evaluate this RFA:

1. **Potential for Advancing Quality of Education; Significance of the Problem.** This criterion is used to assess the likelihood that the project will have an impact upon and advance the quality of food and agricultural sciences by strengthening institutional capacities to meet clearly delineated needs. Elements considered include institutional long-range goals, WAMS's Goals, identification of a problem or opportunity to be addressed, justification for the project, innovation, advancing educational equity, multidisciplinary and/or problem-based focus, and potential for adoption by other institutions.
2. **Proposed Approach and Cooperative Linkages.** This criterion relates to the soundness of the proposed approach including objectives, methodology, plan of operation, timetable, logic model, expected products and results, evaluation, and dissemination plans. Emphasis is placed on the quality of educational or research support provided to the applicant institution through its partnerships and collaborative initiatives, and on the potential cooperative linkages likely to evolve as a result of this project.
3. **Institutional Capability and Capacity Building.** This criterion relates to the institution's capability to perform the project and the degree to which the project will strengthen its teaching or research capacity. Elements include the institution's commitment to the project, the adequacy of institutional resources (administrative, facilities, equipment, and/or materials) available to carry out the project, potential for academic or research enhancement, and plans for project continuation or expansion beyond the period of USDA support.
4. **Key Personnel.** This criterion relates to the adequacy of the number and qualifications of key persons who will develop and carry out the project, and the qualifications of project personnel who will provide for the assessment of project results and impacts and dissemination of these findings.
5. **Budget and Cost-Effectiveness.** This criterion relates to how well the total budget supports the project and is cost effective. Elements considered include the necessity and reasonableness of costs to carry out project activities and achieve project objectives; the appropriateness of budget allocations between the applicant and any collaborating institution(s); the adequacy of time committed to the project by key project personnel; and the degree to which the project maximizes the use of limited resources, optimizes educational value for the dollar, achieves economies of scale, and focuses expertise and activity on high-priority Educational Need Areas.

### C. Organizational Management Information

Applicants must submit specific management information relating to an applicant prior to an award and update the information as needed. Applicants may only have to update their information if they had previously provided the information under this or another NIFA program. NIFA provides the requisite forms during the pre-award process. Although an applicant may be eligible for award under this program, there are factors that may exclude an applicant from receiving federal financial and nonfinancial assistance and benefits under this program (e.g., debarment or suspension of an individual, or a determination that an applicant is not responsible).

### D. Application Disposition

Applicants may withdraw at any time before NIFA makes a final funding decision. NIFA will retain all applications, including withdrawn applications and unfunded applications.

## PART VI. AWARD ADMINISTRATION

### A. General

Within the limit of funds authorized, the NIFA awarding official will make grants to responsible and eligible applicants whose applications are judged most meritorious under the procedures set forth in this RFA. The date specified by the NIFA awarding official as the effective date of the grant must be no later than September 30 of the federal fiscal year in which the project is approved for support and funds are appropriated for such purpose, unless otherwise permitted by law. The project need not be initiated on the grant effective date, but as soon thereafter as practical so that project goals may be attained within the funded project period. All funds granted by NIFA under this RFA may be used only for the purpose for which they are granted in accordance with the approved application and budget, regulations, terms and conditions of the award, applicable federal cost principles, USDA assistance regulations, and NIFA General Awards Administration Provisions 7 CFR part 3430, subparts A through E.

***Award Notice***. The award document will provide pertinent instructions and information as described in 2 CFR 200.210 (see NIFA's Terms and Conditions).

### B. Administrative and National Policy Requirements

Several federal statutes and regulations apply to grant applications and the projects outlined in this RFA (some are listed here: Federal Regulations). Unless specifically noted by statue or award-specific requirements, NIFA Policy Guide applies to all NIFA awards.

## PART VII. OTHER INFORMATION

### A. Use of Funds and Changes in Budget

***Delegation of fiscal responsibility***. Unless the terms and conditions of the award state otherwise, awardees may not in whole or in part delegate or transfer to another person, institution, or organization the responsibility for use or expenditure of award funds.

***Changes in Budget or Project Plans***. In accordance with 2 CFR 200.308, awardees must request prior approval from NIFA for the following program or budget-related reasons (the awardee is subject to the terms and conditions identified in the award):

1. Change in the scope or the objective of the project or program without prior written approval (even if there is no associated budget revision requiring);
2. Change in a key person specified in the application or the federal award;
3. Disengagement from the project for more than three months, or a 25 percent reduction in time devoted to the project;
4. Inclusion of costs that require prior approval in accordance with 2 CFR 200 Subpart E (Cost Principles), or 45 CFR Part 75 Appendix IX, (Principles for Determining Costs Applicable to Research and Development under Awards and Contracts with Hospitals), or 48 CFR, unless waived by the federal awarding agency,
5. Part 31 (Contract Cost Principles and Procedures);
6. Transfer of funds budgeted for participant support costs to other categories of expense (§200.75 Participant support costs);
7. Sub-awarding, transferring or contracting out of any work under a federal award, including fixed amount sub-awards (see §200.332, Fixed Amount Sub-awards), unless described in the application and funded in the approved federal awards. This provision does not apply to the acquisition of supplies, material, equipment, or general support services;
8. Changes in the approved cost-sharing or matching provided by the non-federal entity; and
9. The need for additional federal funds to complete the project.

### B. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of NIFA transaction records, which are available to the public. Information that the Secretary of Agriculture determines to be confidential, privileged, or proprietary in nature will be held in confidence to the extent permitted by law. Therefore, applicants should clearly mark any information within the application they wish to have considered as confidential, privileged, or proprietary. NIFA will retain a copy of an application that does not result in an award for three years. Such an application will be released only with the consent of the applicant or to the extent required by law. An applicant may withdraw at any time prior to the final action thereon.

### C. Regulatory Information

This program is not subject to the provisions of Executive Order 12372, which requires intergovernmental consultation with state and local officials. Under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35), the collection of information requirements contained in this notice have been approved under OMB Document No. 0524-0039.

## APPENDIX I: AGENCY CONTACT

**Programmatic Contact**

| Name | Email | Telephone |
|---|---|---|
| Carlos Ortiz, PhD | carlos.ortiz@usda.gov | 202-445-5594 |

For administrative questions related to:

- Grants.gov, see Part IV of this RFA
- Other RFA or application questions, please email policy@usda.gov
- Awards under this RFA, please email awards@usda.gov

**NIFA's Mailing Address**:
National Institute of Food and Agriculture
U.S. Department of Agriculture
P.O. Box 419205
Mail Stop 10000
Kansas City, MO 64141-6205

## APPENDIX II: GLOSSARY OF TERMS

| Name | Acronyms |
|---|---|
| Authorized Representative | AR |
| Agricultural Research, Extension, and Education reform Act of 1998 | AREERA |
| Catalog of Federal Domestic Assistance | CFDA |
| Center of Excellence | COE |
| Data Management Plan | DMP |
| Food, Agricultural, Natural Resources and Human Sciences | FANH |
| Food, Conservation, and Energy Act | FCEA |
| Indirect Cost | IDC |
| National Agricultural Research, Extension, and Teaching Policy Act | NARETPA |
| National Institute of Food and Agriculture | NIFA |
| Request for Application | RFA |
| Research, Education, and Economics | REE |
| Science, Technology, Engineering or Mathematics | STEM |
| Total Federal Funds Awarded | TFFA |
| United States Department of Agriculture | USDA |
| Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program | WAMS |

## APPENDIX III: DEFINITIONS

Refer to 7 CFR 3430 Competitive and Noncompetitive Non-formula Federal Assistance Programs – General Award Administrative Provisions for additional definitions.

| Terms | Definitions |
|---|---|
| Continuation Award | An award instrument by which NIFA agrees to support a specified level of effort for a predetermined period of time with a statement of intention to provide additional support at a future date, provided that performance has been satisfactory, appropriations are available for this purpose, and continued support would be in the best interest of the federal government and the public. |
| Matching | The process through which a grant recipient match awarded USDA funds with cash and in-kind contributions on a dollar-for-dollar basis. The matching funds must derive from non-Federal sources. |
| New Application | An application not previously submitted to a program. |
| Renewal Application | A project application that seeks additional funding for a project beyond the period that was approved in an original or amended award. |
| Resubmitted Application | A project application that was previously submitted to a program, but the application was not funded. |
| Resubmitted Renewal Application | A project application that requests additional funding for a project beyond the period that was approved in the original award. This is an application that had previously been submitted for renewal to but not funded. |
| Institution of Higher Education | An educational institution in any state that:<br>1. Admits as regular students those persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate;<br>2. Is legally authorized within such state to provide a program of education beyond secondary education;<br>3. Provides an educational program for which the institution awards a bachelor's degree or provides not less than a 2-year program that is acceptable for full credit toward such a degree;<br>4. Is a public or other nonprofit institution; and<br>5. Is accredited by a nationally recognized accrediting agency or association, or if not so accredited, is an institution that has been granted pre-accreditation status by such an agency or association that has been recognized by the Secretary of Education for the granting of pre- accreditation status, and the Secretary of Education has determined that there is satisfactory assurance that the institution will meet the accreditation standards of such an agency or association within a reasonable time. |

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|---|---|
| K-14 | Kindergarten through twelfth grade plus two years of post-secondary schooling (e.g., vocational technical institutions or community or junior colleges); it does not include 4-year colleges or universities. |
| Partnership | Requires that all partners have a substantial involvement in the project throughout the life of the project. If a partnership between multiple entities is proposed, the proposal should clearly identify the following:<br>1. A narrative of each entity's clearly established role in the project;<br>2. How each entity involved as a partner on the project will contribute to execution of project objectives, determine experimental design, develop the project work plan and time table, and submit collaborative, timely reports; and<br>A comprehensive project budget that reflects each entity's financial or in-kind contribution to the total project budget costs |
| Rural Area | Any locality that has a population of 50,000 inhabitants or less, and is generally characterized as having fewer than 1,000 inhabitants per square mile (U.S. Census Bureau). |
| Training | The planned and systematic acquisition of practical knowledge, skills or competencies required for a trade, occupation or profession delivered by formal classroom instruction, laboratory instruction, or practicum experience that prepares women and underrepresented minorities from rural areas for participation in STEM fields. |
| Underrepresented minority | Any ethnic group – African American, Alaskan Native, American Indian, Asian American, Hispanic American, Native Hawaiian, Pacific Islander, or any other group – whose representation among food, agriculture, natural resource, and human science professionals in science, technology, engineering, and mathematics (STEM) fields is disproportionately less than their proportion in the general population as indicated in standard statistical references. |
| Eligible Participant | An individual who is a citizen or non-citizen national of the United States, as defined in 7 CFR 3430.2, or lawful permanent resident of the United States. |