

Agriculture and Food Research Initiative Competitive Grants Program

**MODIFICATION IN RED: PART I, C.2
(2/4/2014).**

Food Safety Challenge Area

2014 Request for Applications

Letter of Intent Deadline: February 26, 2014

Application Deadline: May 8, 2014



U.S. Department of Agriculture

National Institute of Food and Agriculture

NATIONAL INSTITUTE OF FOOD AND AGRICULTURE; U.S. DEPARTMENT OF AGRICULTURE

**AGRICULTURE AND FOOD RESEARCH INITIATIVE
COMPETITIVE GRANTS PROGRAM
FOOD SAFETY CHALLENGE AREA**

INITIAL ANNOUNCEMENT

CATALOG OF FEDERAL DOMESTIC ASSISTANCE: This program is listed in the Catalog of Federal Domestic Assistance under **10.310**.

DATES: Letters of Intent (LOI) are required by this program and must be received by 5:00 p.m. Eastern Time (ET) on February 26, 2014. Applications must be received by 5:00 p.m. Eastern Time (ET) on May 8, 2014. Applications received after this deadline will normally not be considered for funding (see Part IV, C. of this RFA). Comments regarding this request for applications (RFA) are requested within 6 months from the issuance of this notice. Comments received after that date will be considered to the extent practicable.

STAKEHOLDER INPUT: The National Institute of Food and Agriculture (NIFA) seeks your comments about this RFA. We will consider the comments when we develop the next RFA for the program, if applicable, and we'll use them to 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)). Submit written stakeholder comments by the deadline set forth in the DATES portion of this Notice to: Policy and Oversight Division; Office of Grants and Financial Management; National Institute of Food and Agriculture; USDA; STOP 2299; 1400 Independence Avenue, SW; Washington, DC 20250-2299; or via e-mail to: Policy@nifa.usda.gov. (This e-mail address is intended only for receiving comments regarding this RFA and not requesting information or forms.) In your comments, please state that you are responding to the Agriculture and Food Research Initiative Food Safety Challenge Area RFA.

EXECUTIVE SUMMARY: The U.S. Department of Agriculture (USDA) established the Agriculture and Food Research Initiative (AFRI) under which the Secretary of Agriculture may make competitive grants for fundamental and applied research, education, and extension to address food and agricultural sciences (as defined under section 1404 of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (NARETPA) (7 U.S.C. 3103)), as amended, in six priority areas. The six priority areas include: 1) plant health and production and plant products; 2) animal health and production and animal products; 3) food safety, nutrition, and health; 4) renewable energy, natural resources, and environment; 5) agriculture systems and technology; and 6) agriculture economics and rural communities.

NIFA requests applications for the Food Safety Challenge Area Program for fiscal year (FY) 2014. In the Food Safety Challenge Area, specific program areas are designed to achieve the long-term outcome of reducing foodborne illnesses and deaths through a safe food supply. In pursuant to H.R. 3547, the Consolidated Appropriations Act, 2014, the amount available to

support the Agriculture and Food Research Initiative (AFRI) program in FY 2014 will be approximately \$275 million.

It is anticipated that approximately \$11 million will be made available to support new awards within the Food Safety Challenge Area. Project types supported by AFRI within this Challenge Area will propose multi-function Integrated Research, Education, and/or Extension Projects, Conference and Food and Agricultural Science Enhancement (FASE) Grants. This RFA identifies integrated program objectives, eligibility criteria, application instructions, and matching requirements for each project type.

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PART I—FUNDING OPPORTUNITY DESCRIPTION

A. Legislative Authority and Background

Section 7406 of the Food, Conservation, and Energy Act of 2008 (FCEA) (Pub. L. 110-246) amends section 2(b) of the Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i(b)) to authorize the Secretary of Agriculture to establish the Agriculture and Food Research Initiative (AFRI); a competitive grant program to provide funding for fundamental and applied research, education, and extension to address food and agricultural sciences. Grants shall be awarded to address priorities in United States agriculture in the following areas:

1. Plant health and production and plant products;
2. Animal health and production and animal products;
3. Food safety, nutrition, and health;
4. Renewable energy, natural resources, and environment;
5. Agriculture systems and technology; and
6. Agriculture economics and rural communities.

To the maximum extent practicable, the National Institute of Food and Agriculture (NIFA), in coordination with the Under Secretary for Research, Education, and Economics (REE), will make grants for high priority research, education, and extension, taking into consideration, when available, the determinations made by the National Agricultural Research, Extension, Education, and Economics Advisory Board (NAREEEAB) pursuant to section 2(b)(10) of the Competitive, Special, and Facilities Research Grant Act (7 U.S.C. 450i(b)(10)), as amended. The authority to carry out this program has been delegated to NIFA through the Under Secretary for REE.

AFRI Stakeholder Input

The programs described herein were developed within the context of the authorized purposes of USDA research, extension, and education projects and activities. In addition, AFRI obtains input from Congress, the National Agriculture Research, Education and Economics Advisory Board, as well as many university, scientific, and agricultural committees and organizations. NIFA developed a stakeholder's Web page (www.nifa.usda.gov/business/reporting/stakeholder.html) to document stakeholder input that is considered when developing and updating Program Area Descriptions and Priorities each year.

The AFRI program was significantly restructured and refocused in FY 2010 to more effectively address societal challenges while continuing to support foundational agricultural science. A public meeting was held on June 2, 2010, to seek stakeholder comments on the FY 2010 AFRI RFAs prior to revising them for FY 2011, 2012, and beyond. NIFA received more than 200 comments from stakeholders, including a wide range of scientific societies, commodity groups, colleges and universities, other research organizations, non-profit organizations, and individuals.

In general, stakeholders congratulated NIFA for its focus on societal challenges, which is expected to increase the visibility and effectiveness of agricultural science for the nation. They appreciated the larger grants offered through the challenge area RFAs, which are critical for

achieving measurable outcomes in these important problem areas. They expressed concern, however, that the continuation grant mechanism used to make grants from the Challenge Area RFAs would limit NIFA's ability to offer new grants in the future. Stakeholders agreed that large, inter-disciplinary teams are necessary to successfully carry out the research, education, and extension work needed to address the challenge areas. However, they told NIFA that it was difficult to build these teams given the relatively short application deadlines established in FY 2010. Stakeholders also expressed concern that newer faculty and smaller institutions in particular, would find it difficult to compete successfully for these larger grants. In addition, stakeholders observed that the challenge area RFAs provided few, if any, opportunities for investigator-initiated projects by small teams or single investigators. Similarly, stakeholders felt that the challenge area RFAs were too prescriptive, allowing little flexibility by applicants to address these problems in the ways they thought best.

Stakeholders were pleased to see that a portion of the AFRI funding was devoted to the support of fundamental and applied research in the six priority areas identified by Congress in AFRI's authorizing legislation, the Food, Energy, and Conservation Act of 2008 (FCEA, Pub.L. 110-246). Research in the six priority areas was solicited through the Foundational Program RFA. Stakeholder feedback associated with that RFA included comments that insufficient funds were allocated to its programs, the priority statements within the RFA were narrowly written, and important areas of science had been omitted from the Foundational Program RFA. In addition, stakeholders commented that some of the priority areas, specifically those within the Agriculture Economics and Rural Communities Program Area, were better suited to projects that integrate research, education, and extension, rather than projects that conduct research only.

Some of the AFRI Challenge Area RFAs will again offer awards as continuation grants. This is standard practice in many Federal granting agencies, including the National Science Foundation where up to 70 percent of the grant portfolio is funded by the continuation mechanism. The use of continuation grants allows for a much higher level of post-award oversight and quality control since funds are allocated on a year-by-year basis with continued funding provided only if performance has been satisfactory, appropriations are available for this purpose, and continued support would be in the best interests of the Federal government and the public. Over the short term, lack of growth in the AFRI appropriation will restrict the number of new grants that can be made from the Challenge Areas, but this situation will be corrected over the longer term as projects are completed and Congress grows the AFRI appropriation toward its full authorized level.

The AFRI Challenge Areas were established in FY 2010 to more effectively address challenges faced by society. Programmatically, the tighter focus of the Challenge Area RFAs supports the development of more specific tools and responses to societal challenges. Financially, the shift to larger, multi-institutional grants leverages the nearly 20 year investment history in individual investigator awards and translates this research into solutions for current problems. While NIFA believes that these changes are appropriate to the scope of the work to be done through a project funded in a Challenge Area, we recognize that these changes in the ways that project teams are assembled and in award sizes may take some time to adjust to. NIFA remains committed to engaging small, mid-sized and minority-serving institutions and young scientists in all of its

programs. To ensure their participation in AFRI we offer Food and Agriculture Science Enhancement (FASE) grants within all program areas. FASE gives special funding consideration to applications from qualifying schools for even the largest grants, and sets aside 10 percent of AFRI funding for this purpose. FASE-eligible schools are those with enrollments of fewer than 17,500 students, minority-serving institutions, and those in EPSCoR states (see Part II, D, 3, c, 2). In addition, AFRI gives special consideration to new faculty with fewer than five years of experience, and offers pre- and post-doctoral fellowships to encourage young scientists to engage in agricultural science.

NIFA received over 20 stakeholder comments specific to the AFRI Food Safety RFA. Some of these comments were supportive of the FY 2010 program priorities focused on shiga-toxicogenic *Escherichia coli* (STEC) and foodborne viruses. The inclusion of noroviruses in the FY 2010 program priorities was highly commended by several stakeholders. Some stakeholders felt that AFRI should focus on other foodborne bacterial pathogens such as *Salmonella* and chemical toxicants. In the 2011 RFA, integrated projects addressing *Salmonella* and *Campylobacter* in poultry were solicited. Stakeholders also felt the AFRI Food Safety Challenge Area should address, among others, antimicrobial resistance. In the combined 2012/2013 AFRI Food Safety Challenge Area RFA integrated projects addressing antimicrobial resistance were solicited and approximately \$3.0 M were awarded.

USDA and NIFA recognize the importance of addressing the health impacts of chemical toxicants and antibiotics in food safety. In addition to the combined 2012/2013 AFRI Food Safety program, the National Integrated Food Safety Initiative (NIFSI) had a special emphasis on antibiotic resistance in the FY 2010 and 2011 RFA (*Minimizing Antibiotic Resistance Transmission throughout the Food Chain*). Furthermore, AFRI's *Addressing Critical and Emerging Food Safety Issues* Program Area called for the identification and assessment of emerging microbial and chemical contaminants (including antimicrobials) that may be foodborne hazards. Recognizing that these are important food safety issues, NIFA awarded approximately \$11 M in FY 2010 and 2011 in these areas. The *Addressing Critical and Emerging Food Safety Issues* program priority received continued focus in the combined 2012/2013 AFRI Food Safety RFA. NIFA awarded approximately \$1.8 M in grants. The combined 2012/2013 Food Safety RFA was also expanded to include the program priority *Improving the Safety of Fresh and Fresh-Cut Produce*. NIFA awarded approximately \$3 M in new grants in this produce safety program priority.

Some stakeholder comments were critical of the program's large grants and highly focused program priorities. These stakeholders felt that more areas of food safety research should be covered by the AFRI Food Safety RFA. This would provide more opportunities (due to a greater number of smaller awards) for a broader number of researchers, especially new investigators. Stakeholders also emphasized the need for inclusion of the following disciplines in the Food Safety programs: food science, economics, social sciences, and animal science. The FY 2010 AFRI Food Safety RFA included broad, comprehensive language that was meant to address not only biological and physical science-based topics, but also social, behavioral, educational, and economic approaches to addressing complex food safety issues. This comprehensive call for

multidisciplinary approaches to solving food safety issues is also highlighted in the FY 2011, FY 2012/2013, and FY2014 program priorities.

Many comments were received about providing career opportunities for young scientists, ensuring that there is a pipeline of researchers with the skills to address the challenges facing agriculture and ensuring continuity in food and agricultural science disciplines. The food industry wants students with advanced degrees. Universities expressed concern that they would not be able to train these students without adequate research funding. For the first time, the FY 2010 Fellowships Grant program supported both predoctoral students and postdoctoral students. The program focused on developing technical and functional competence for predoctoral students and the research independence and teaching credentials of postdoctoral scientists in the agriculture, forestry, and food sciences that are within NIFA's challenge areas through well-developed and highly interactive mentoring and training activities. Students may apply to the AFRI NIFA Fellowships Grant program RFA available at www.nifa.usda.gov/afri.

Food Safety Challenge Area

The Food Safety Challenge Area focuses on the societal challenge of ensuring the availability and accessibility of a safe and nutritious food supply while maintaining American agriculture competitiveness. In order to sustain an estimated population of 9 billion people, the world will need to double the production of safe and nutritious food. The Food Safety Challenge Area RFA program areas in combination with the Food Safety, Nutrition and Health Program Priorities in the AFRI Foundational Program, are designed to achieve the long-term outcome of a sustainable, safe and nutritious food supply. Project types supported by AFRI within this RFA include multi-function Integrated Research, Education, and/or Extension Projects, conferences, and Food and Agricultural Science Enhancement (FASE) Grants.

NIFA may also solicit applications for AFRI funds through other announcements, including supplemental AFRI RFAs or RFAs issued in conjunction with other agencies. Such announcements will be made public in the same manner as this announcement. Other sources of NIFA funding for work relevant to the Food Safety Challenge Area can be found at www.nifa.usda.gov/afri. Additional sources of NIFA funding for work relevant to the Food Safety Challenge Area include the following NIFA programs:

- *AFRI Foundational Program*
- *NIFA Fellows Program*

B. Purpose and Priorities

The purpose of AFRI is to support research, education, and extension work by awarding grants that address key problems of national, regional, and multi-state importance in sustaining all components of food and agriculture, including farm efficiency and profitability, ranching, renewable energy, forestry (both urban and agroforestry), aquaculture, rural communities and entrepreneurship, human nutrition, food safety, physical and social sciences, home economics and rural human ecology, biotechnology, and conventional breeding. Through this support, AFRI advances knowledge in both fundamental and applied sciences important to agriculture. It also

allows AFRI to support education and extension activities that deliver science-based knowledge to people, allowing them to make informed practical decisions. This AFRI RFA is announcing funding opportunities for Integrated Research, Education, and/or Extension Projects.

Supporting the many components of agriculture under the constraints of a growing population, pressure on natural resources, and the challenges of climate variability and change, requires research, education, extension, and integrated programs that increase agricultural and natural resource sustainability. The term "sustainable agriculture" (NARETPA, 7 U.S.C. 3103) means an integrated system of plant and animal production practices having a site-specific application that will over the long-term achieve the following goals: 1) satisfy human food and fiber needs; 2) enhance environmental quality and the natural resource base upon which the agriculture economy depends; 3) make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; 4) sustain the economic viability of farm operations; and 5) enhance the quality of life for farmers and society as a whole.

The National Research Council Committee on Twenty-First Century Systems Agriculture recently updated and simplified this definition as a four-part goal: satisfy human food, feed, and fiber needs and contribute to biofuel needs; enhance environmental quality and the resource base; sustain the economic viability of agriculture; and enhance the quality of life for farmers, farm workers, and society as a whole. The Committee states that progress toward these goals will require robust systems which adapt to and continue to function in the face of stresses, are productive, use resources efficiently, and balance all four goals across all scales of farms and enterprises. They further state that if the U.S. is to maintain adequate resources to meet food, feed, fiber, and biofuel needs, progress toward meeting the four goals must be accelerated. This acceleration must be based on research that determines ways to reduce tradeoffs and enhance synergies among the four goals while managing risks associated with their pursuit. The Committee's 2010 report, *Toward Sustainable Agricultural Systems in the 21st Century*, provides a review of the contributions of farming practices and systems; and fields of science that elaborates on these general goals with respect to many of the specific priorities within AFRI programs.

AFRI is intended to promote advances in U.S. food, agriculture and forestry. Agriculture, however, is increasingly worldwide in scope and reach. To attain AFRI's goals for U.S. food and agriculture, applicants to Foundational or Challenge Area RFAs may include international partnerships or engagement in proposals, as appropriate. Applicants are asked to keep in mind that while international activities supported by AFRI may contribute to global food security, as described in the U.S. Government's Feed the Future global food security initiative (www.feedthefuture.gov), any international activity proposed under AFRI such as partnerships, exchanges, training, travel, etc., must first and foremost support AFRI's domestic program goals. Applicants must clearly describe and demonstrate how international activities proposed in applications submitted to AFRI will contribute to and support advances in American agriculture.

If international activities (*e.g.*, partnerships, exchanges, travel, etc.) are proposed, then applicants shall describe indicators that will be used to assess those activities. Appropriate indicators

include but are not limited to those posted at the U.S. Government's Feed the Future global food security initiative Web site (www.feedthefuture.gov/progress).

NIFA is soliciting applications for the 2014 Food Safety Challenge Area Program in the following program priority areas:

- 1) **Enhancing Food safety through Improved Processing Technologies;**
- 2) **Effective Mitigation Strategies for Antimicrobial Resistance; and**
- 3) **Identifying and Targeting Critical Food Safety Needs.**

Background

While the U.S. food supply is generally considered to be one of the safest in the world, foodborne illness continues to be a source of concern for the American consumer, federal government, and industry. The Food Safety Challenge Area promotes and enhances the scientific discipline of food safety, with an overall aim of protecting consumers from microbial, chemical, and physical hazards that may occur during all stages of the food chain, from production to consumption. This requires an understanding of the interdependencies of human, animal, and ecosystem health as it pertains to foodborne hazards.

The AFRI Food Safety Challenge Area directly aligns with the Research, Education, and Economics Action Plan (http://www.ree.usda.gov/ree/news/USDA_REE_Action_Plan_02-2012_2.pdf) and specifically addresses Goal 5 – Food Safety by funding research that will develop outcomes for decisions and policies to contribute to a safe food supply and the reduction of foodborne hazards.

The AFRI Food Safety Program addresses the following priorities of the 2008 Farm Bill: B. Animal Health and Production and Animal Products; C. Food Safety, Nutrition, and Health; and D. Renewable Energy, Natural Resources, and Environment.

To meet these identified needs, the long-term outcome for this program is to reduce foodborne hazards by improving the safety of the food supply, which will result in reduced negative impacts on public health and on our economy. Projects are expected to address one of the stated Program Area Priorities which collectively contribute to the achievement of the following USDA Research, Education and Economics (REE) agencies food safety goal strategies. For more information on the REE Food Safety Goal and associated strategies and actions, please go to http://www.ree.usda.gov/ree/news/USDA_REE_Action_Plan_02-2012_2.pdf.

In order to achieve these program goals, the Food Safety Challenge Area addressed several focused objectives beginning in FY 2010. These specific objectives were intended to allow for a stepwise progression toward effective strategies for prevention and mitigation of contamination, evaluation and demonstration of effective food processing technologies, and rapid detection of food contaminants. In FY 2010, the AFRI Food Safety program focused on the following priority areas: shiga-toxin producing *Escherichia coli* (STEC) in beef, food processing technologies, foodborne viruses, food safety education, and emerging food safety issues. In FY 2011, the AFRI Food Safety Program solicited new grant applications that addressed *Salmonella* and *Campylobacter* in poultry products. Also in FY 2011, the AFRI Food Safety Challenge Area

requested applications for critical and emerging food safety research needs to prevent and control threats to the safety of the U.S. food supply. In the combined FY 2012/2013 AFRI Food Safety Challenge Area Program the program priority areas included *Improving the Safety of Fresh and Fresh-Cut Produce*, *Effective Mitigation Strategies for Antimicrobial Resistance* and *Critical and Emerging Food Safety Issues*. Within this FY 2014 RFA, there is a continued focus on *Effective Mitigation Strategies for Antimicrobial Resistance*. The program has also expanded to include two new program priorities: *Enhancing Food Safety through Improved Processing Technologies* and *Identifying and Targeting Critical Food Safety Needs*. The latter program priority is intended to solicit specific food safety conference grant applications that will identify U.S. research, education and extension needs in the areas of bioinformatics, non-microbial hazards, and improving the effectiveness of food safety science programs. Within this FY 2014 RFA, a total of \$11 million are available for new awards.

The Food Safety Challenge Area Program encourages projects that develop content and programs suitable for delivery through the Cooperative Extension System's eXtension Initiative. You may use funds to contribute to existing Communities of Practice (CoP) or to form a new CoP. Projects must align with the eXtension vision, mission, and values. You must have a letter of acknowledgement from eXtension; you may also need a letter of support from one or more of the Communities of Practice. For detailed guidance on how to partner with eXtension, go to <http://create.extension.org/node/2057>.

C. Program Area Descriptions

1. Enhancing Food Safety through Improved Processing Technologies

Program Area Priority Code – A4131

Letter of Intent Deadline – February 26, 2014 (5:00 p.m., ET), see Part IV, A for instructions

Application Deadline – May 8, 2014 (5:00 p.m., ET)

Proposed Budget Requests –

- Coordinated Agricultural Projects (CAPS) must not exceed \$1.0 million per year, including indirect costs, for project periods of up to 5 years (up to \$5 million total). The program anticipates making up to 7 new awards.
- Conference and Food and Agricultural Science Enhancement (FASE) Grants must adhere to the guidelines outlined beginning in Part II, D. 2 and 3.
- Requests exceeding the budgetary guidelines will not be reviewed.

Requested Project Type – Integrated Projects

Requested Grant Type – CAP, Conference, and FASE Grants

Program Area Priority Contact – Dr. Hongda Chen (hchen@nifa.usda.gov)

Program Area Priority e-mail for Submission of Letter of Intent – A4131FS@nifa.usda.gov

Program Area Priority – Applicants must address the following:

The safety, quality, and nutritional value of foods can be improved through food processing technologies. Commercialization of innovative technologies - through partnerships among government, industry, academia, and others - can benefit consumers by providing new and

improved food products that are safe, nutritious, and affordable. The goal of this integrated program is to further develop, and promote the use of, innovative and sustainable food processing technologies that improve food safety, and simultaneously retain or enhance food quality or nutritional value. Collaboration among government, industry, and other stakeholders is strongly encouraged.

Applications must address one or more of the following:

- Develop and/or improve thermal and non-thermal processing technologies for effective decontamination and inactivation of pathogens in food.
- Develop strategies to prevent cross contamination during one or more of the following: processing, packaging, transportation and/or storage.

Other Program Area Requirements:

- Processing technologies may broadly include thermal, minimally-thermal or non-thermal processes. Adaptability/suitability for commercial and institutional applications should be evaluated.
- Processing technologies should be focused on improving food safety, while preserving other important food value attributes including food quality, shelf-life, consumer acceptance, nutrition, and health and wellness benefits.
- The project team should consider incorporating social science and human behavior theories focused on encouraging food processors, food handlers, foodservice workers, consumers, and others to adopt safe practices associated with novel technologies.
- Technology development should consider sustainability as an important element. Energy saving and water use efficiency should be considered in the designs of processes, technologies, and machinery.
- Multidisciplinary approaches are encouraged and project teams should consider including experts in food science and technology, food engineering, microbiology, chemistry, food and nutrition, food safety and quality evaluation, program performance evaluation, economics, and behavioral and social sciences, among others.
- Public-private partnerships among those from academia, government, the food industry, and others are strongly encouraged. Leading academic and industry experts in the processing technologies addressed must be included in these collaborative partnerships and/or consortia.
- Involvement from those representing allied industries - such as equipment design, automation and control, and others – is encouraged from concept development, to technology development, to validation of technology, and to assessment of adaptability/suitability for commercial success.
- Where appropriate, project teams should consult with food safety regulatory agencies (FDA, FSIS, etc.), and with other government agencies involved in technology development (DOD, NASA, NSF, etc.).
- Development, implementation, and evaluation of education and training programs for graduate and undergraduate students in various aspects of technology development are encouraged.
- For new technologies that have been thoroughly developed and approved by regulatory authorities, project teams are encouraged to seek funding support from

partners and collaborators in the food industry to expand its applicability to wide ranges of food products to the extent possible.

2. Effective Mitigation Strategies for Antimicrobial Resistance

Program Area Priority Code – A4171

Letter of Intent Deadline – February 26, 2014 (5:00 p.m., ET), see Part IV, A for instructions

Application Deadline – May 8, 2014 (5:00 p.m., ET)

Proposed Budget Requests –

- Coordinated Agricultural Projects (CAPS) must not exceed \$750,000 per year, including indirect costs, for project periods of up to 3 years (up to \$2.25 million total). The program anticipates making up to 5 new awards.
 - Conference and Food and Agricultural Science Enhancement (FASE) Grants must adhere to the guidelines outlined beginning in Part II, D. 2 and 3.
- Requests exceeding the budgetary guidelines will not be reviewed.

Requested Project Type – Integrated Projects

Requested Grant Type – **CAP**, Conference, and FASE Grants

Program Area Priority Contact – Dr. Mervalin Morant (mmorant@nifa.usda.gov)

Program Area Priority e-mail for Submission of Letter of Intent – A4171FS@nifa.usda.gov

Program Area Priority – Applicants must address the following:

Therapeutic and sub-therapeutic use of antimicrobials is an integral part of animal production in the United States, and for prevention and control of diseases in humans and plant production (i.e., crops for livestock feed and human consumption). Antimicrobials are used to increase growth rates in animals and to decrease pathogen load at slaughter. The continued therapeutic effectiveness of some antimicrobials, however, is now jeopardized by the emergence of some pathogens that are resistant to antimicrobials.

Potential contributors to emergence of antimicrobial resistance include the widespread use of antimicrobials in human medicine, the presence of antimicrobials in the environment (i.e., soil, water, air, storage environments), and the use of antimicrobials in animals and crops raised for human consumption. Antimicrobial resistant organisms that enter the food chain may pose a risk to the safety of food consumed by humans and animals. Antimicrobial resistance is therefore, a complex problem that can best be addressed by interdisciplinary teams of experts using a systems approach. The goal of this integrated program is to better understand, characterize and mitigate antimicrobial resistance in the food chain, from farm to fork.

Applications must address one or more of the following:

- Develop novel systems approaches to investigate the ecology of microbial resistance gene reservoirs in the environment (i.e., soil, water, air, storage environments), in animals, in food products, and in farm-raised aquaculture products.
- Identify critical control points for mitigating antimicrobial resistance in the pre- and post-harvest food production environment.

- Develop, evaluate, and implement effective and sustainable strategies that mitigate emergence, spread and persistence of antimicrobial resistant pathogens in the ecosystem (including those that investigate the role of insect and arthropod vectors), from farm to fork.
- Design effective training, education, and outreach materials and resources (including web-based resources) that can be easily customized to meet the unique needs of various users across the food chain, from farm to fork, including but not limited to policy makers, producers, processors, retailers and consumers.
- Design and conduct studies that evaluate the impact and efficacy of proposed research, education and extension/outreach interventions on antimicrobial resistance, from farm to fork.

Other Program Area Requirements:

- All applications must adhere to the requirements beginning in Part IV .
- Applications should address strategies that lead to human behavioral change in the food production environment that reduces the occurrence of antimicrobial resistant pathogens and promote food safety.
- Applications should address development, evaluation, and implementation of effective and sustainable antimicrobial resistance mitigation strategies through integrated research, education and or extension/outreach programs, by engaging academe, government agencies, industry, and or consumers.
- Applications that actively engage an inter-disciplinary team, to include, for example, social and behavioral scientists, plant and soil scientists, and engineers are strongly encouraged.
- Applications from and collaborations with Minority Serving Institutions, USDA EPSCoR institutions, and/or small or mid-sized institutions that historically have not been as competitive, are strongly encouraged.

3. Identifying and Targeting Critical Food Safety Needs

Program Area Priority Code – A4172

Letter of Intent Deadline – Letters of Intent are NOT required for this Program Priority Area, but are encouraged – send to A4172FS@nifa.usda.gov by **February 26, 2014 (5:00 p.m., ET)**, see Part IV, A for instructions

Application Deadline – **May 8, 2014 (5:00 p.m., ET)**

Proposed Budget Requests –

- Conference Grants must adhere to the guidelines outlined beginning in Part II, D. 2 and 3. Conference Grants must not exceed \$50,000 (indirect costs are not allowed) for project periods of 1 year.
- Requests exceeding the budgetary guidelines will not be reviewed.
- The program anticipates making up to 3 awards.

Requested Project Type – Conference

Requested Grant Type – Conference

Program Area Priority Contact – Dr. Jeanette Thurston (jthurston@nifa.usda.gov)

Program Area Priority – Applications must address the following:

Conference grants that identify food safety science gaps and develop a “roadmap” to solving U.S. Research, Education and/or Extension needs *in one of* the following topic areas:

- **Bioinformatics:** Bioinformatics is the discipline that includes research, application and development of computational tools and approaches for the analysis of massive amounts of complex biological data. The AFRI Food Safety Challenge Area is soliciting conference proposals that bring together food, computer, mathematics, statistics and biology disciplines needed to evaluate the current status and gaps of bioinformatics education and research related to food safety. An effort should be made to assess the current U.S. bioinformatics curricula and programs at the undergraduate and graduate levels and to identify U.S. bioinformatics education requirements needed to produce a capable workforce for the constantly evolving field of bioinformatics related to food safety.
- **Non-microbial hazards (chemicals, allergens, & toxins):** The AFRI Food Safety Challenge Area is soliciting conference proposals that bring together researchers, educators, and extension professionals addressing non-microbial hazards in food and food ingredients, including food allergens. Where appropriate, proper storage and handling practices should be addressed for prohibited substances and/or unavoidable poisonous or toxic substances. Recommendations for risk assessment, risk communication, and risk management are encouraged. Where appropriate, recommendations for education and outreach interventions should be addressed.
- **Unified vision for improving effectiveness of food safety program:** The AFRI Food Safety Challenge Area is soliciting conference proposals that will evaluate the scientific disciplines related to food safety (food science, food engineering, food technology, etc.) to identify where collaborative efforts among these disciplines can have the greatest impact on solving our most pressing food safety challenges. Key knowledge gaps should be identified, and an overall strategy or vision for addressing those gaps should be recommended. Key elements for building and maintaining strong, multidisciplinary collaborations among the relevant scientific disciplines must be addressed.

Other Program Area Requirements:

- The program encourages, where appropriate, applications that leverage resources and enhance achievable outcomes by collaborating with other public or private institutional national science infrastructure assets such as national laboratories and institutes, and nongovernmental organizations.
- **Conferences must include the following activities:**
 - Ensure multi-disciplinary participation and an integrated agenda (addressing research, education, and extension) that encompasses the agricultural, food, biological, social, economic, computer, engineering, and/or

statistical/mathematical sciences, government representatives and nongovernmental organizations, where appropriate.

- Identify food safety science gaps for the topic area and develop a science needs “roadmap” that provides recommendations and/or directions to scientists, the food industry, government, and other partners and stakeholders related to the specific topic of the conference.
- Develop and publish the conference proceedings, an e-published report and/or other publically available document(s) outlining conference outcomes and recommendations.
- Distribute conference outcomes widely among scientists, the food industry, government, and other partners and stakeholders.

NIFA’s AFRI Food Safety Challenge Area Program encourages projects that develop content and programs suitable for delivery through the Cooperative Extension System’s eXtension Initiative. You may use funds to contribute to existing Communities of Practice (CoP) or to form a new CoP focused on a program area priority within the AFRI Food Safety Challenge Area Program. Projects must align with the eXtension vision, mission, and values. You must have a letter of acknowledgement from eXtension; you may also need a letter of support from one or more of the Communities of Practice. For detailed guidance on how to partner with eXtension, go to <http://create.extension.org/node/2057>.

PART II—AWARD INFORMATION

A. Available Funding

In pursuant to H.R. 3547, the Consolidated Appropriations Act, 2014, the amount available to support the AFRI program in FY 2014 will be approximately \$275 million. Of this amount, no less than 30 percent will be made available to fund integrated research, education, and extension projects. Of the AFRI funds allocated to research activities, section 7406 of the FCEA directs 60 percent toward grants for fundamental (or basic) research and 40 percent toward grants for applied research. Of the AFRI funds allocated to fundamental research, not less than 30 percent will be directed toward research by multidisciplinary teams. It is anticipated that no less than 10 percent of the FY 2014 funds will be made available for Food and Agricultural Science Enhancement (FASE) Grants, and no more than two percent of the funds available for fundamental research will be made available for Equipment Grants.

In FY 2014, approximately \$11 million will be made available to support new awards within the AFRI Food Safety Challenge Area.

There is no commitment by USDA to fund any particular application or to make a specific number of awards.

Awards issued as a result of this RFA will have designated the Automated Standard Applications for Payment System (ASAP), operated by the Department of Treasury's Financial Management Service, as the payment system for funds. For more information see www.nifa.usda.gov/business/method_of_payment.html.

B. Types of Applications

In FY 2014, you may submit applications to the AFRI Food Safety Challenge Area Program as one of the following types of requests:

(1) **New application**. This is a project application that has not been previously submitted to the AFRI Food Safety Challenge Area Program. We will review all new applications competitively using the selection process and evaluation criteria described in Part V—Application Review Requirements.; OR

(2) **Resubmitted application**. This is an application that had previously been submitted to the AFRI Food Safety Challenge Area Program but not funded. Project Directors (PDs) must respond to the previous review panel summary (see Response to Previous Review, Part IV). Resubmitted applications must be received by the relevant due dates, will be evaluated in competition with other pending applications in appropriate area to which they are assigned, and will be reviewed according to the same evaluation criteria as new applications.

C. Project Types

Applications must propose one of the project types specified with the Program Area(s) and select the appropriate grant type for the application within the constraints of the grant types solicited. The project and grant types solicited in the AFRI Food Safety Challenge Area are indicated in the table below and described in the Program Area Descriptions beginning in Part I, C.

| Project and Grant Types Solicited by the Food Safety Program Area | | | | | | | | | | | | | |
|---|-------------------------|------------|-----|-----------------------|------------|--|----------------------|-----------|------|----------|-----|---|------------|
| | | Grant Type | | | | | | | | | | | |
| | | Standard | CAP | Other (Collaborative) | Conference | Food and Agricultural Science Enhancement (FASE) Grants ¹ | | | | | | | |
| | | | | | | New Investigator | Strengthening Grants | | | | | | Conference |
| | | | | | | | Sabbatical | Equipment | Seed | Standard | CAP | | |
| Project Type | Research | | | | | | | | | | | | |
| | Education | | | | | | | | | | | | |
| | Extension | | | | | | | | | | | | |
| | Integrated ⁵ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | |

The work proposed for all project types must address a specific Program Area Priority described under Program Area Descriptions beginning in Part I, C., and the application must be submitted directly to that Program Area by the designated deadline date. Additionally, applicants must adhere to the Application and Submission Information beginning in Part IV when preparing applications.

Integrated Research, Education, and/or Extension Projects

An Integrated Project includes at least two of the three functions of the agricultural knowledge system (*i.e.*, research, education, and extension) within a project, focused around a problem or issue. The functions addressed in the project should be interwoven throughout the life of the project and act 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.

- a) The proposed **research** component of an integrated project should address knowledge gaps that are critical to the development of practices and programs to address the stated problem.
- b) The proposed **education** (teaching and teaching-related) component of an Integrated Project should develop human capital relevant to overall program goals for U.S. agriculture. An education or teaching activity is formal classroom instruction, laboratory instruction, and practicum experience in the food and agricultural sciences and other related matters such as faculty development, student recruitment and services, curriculum development, instructional materials and equipment, and innovative teaching methodologies.

Educational activities may include any of the following: conducting classroom and laboratory instruction and practicum experience; faculty research internships for curricula development; cutting-edge agricultural science and technology curriculum development; innovative teaching methodologies; instructional materials development; education delivery systems; student experiential learning (student led-research; internships; externships; clinics); student learning styles and student-centered instruction; student recruitment and retention efforts; career planning materials and counseling; pedagogy; faculty development programs; development of modules for on-the-job training; providing knowledge and skills for professionals creating policy or transferring to the agriculture workforce; faculty and student exchanges; and student study abroad and international research opportunities relevant to overall program goals for U.S. agriculture. Educational activities must show direct alignment with increasing technical competency in AFRI priority area(s) to ensure that U.S. agriculture remains globally competitive in the knowledge age.

Educational components must address one or two of the following key strategic actions:

- Train students for Associate, Baccalaureate, Master's or Doctoral degrees; and/or
- Prepare K-12 teachers and higher education faculty to understand and present food and agricultural sciences.

These projects should synthesize and incorporate a wide range of the latest relevant research results. Note that routine use of graduate students and postdoctoral personnel to conduct research is not considered education for the purposes of this program.

- c) The proposed **extension** component of an Integrated Project should conduct programs and activities that deliver science-based knowledge and informal educational programs to people, enabling them to make practical decisions. Program delivery may range from community-based to national audiences and use communication methods from face-to-face to electronic or combinations thereof. 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.

Extension activities may address, but are not limited to, the following key strategic actions:

- Support informal education to increase food, agricultural, and health literacy of youth and adults;
- Promote science-based agricultural literacy by increasing understanding and use of food and agricultural science data, information, and programs;
- Build science-based capability in people to engage audiences and enable informed decision making;
- Develop new applications of instructional tools and curriculum structures that increase technical competency and ensure global competitiveness;

- Offer non-formal learning programs that increase accessibility to new audiences at the rate at which new ideas and technologies are tested and/or developed at the community-scale; and
- Develop programs that increase public knowledge and citizen engagement leading to actions that protect or enhance the nation's food supply, agricultural productivity, environmental quality, community vitality, food security and/or public health and well-being.

These projects should synthesize and incorporate a wide range of the latest relevant research results. Please note that research-related activities such as publication of papers or speaking at scientific meetings are not considered extension for the purposes of this program.

Integrated Projects aim to resolve today's problems through the application of science-based knowledge and address needs identified by stakeholders. Integrated Projects clearly identify anticipated outcomes and have a plan for evaluating and documenting the success of the project. These projects should lead to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group.

Integrated Project applicants are encouraged to review www.nifa.usda.gov/funding/integrated/integrated.html for additional information on integrated programs, including tips for writing Integrated Project applications and an example of an integrated application. Those interested in submitting Integrated Project applications are encouraged to contact the appropriate Program Area Priority Contact to discuss the anticipated project parameters and outcomes to ensure the application content appropriately meets the requirements of an Integrated Project.

D. Grant Types

Applications must propose one of the project types specified within the Program Areas and select the appropriate grant type for the application within the constraints of the grant types solicited.

1. Coordinated Agriculture Projects

The Coordinated Agricultural Project (CAP) is a type of Research, Education, Extension, or Integrated Project that supports large-scale, multi-million dollar projects to promote collaboration, open communication, and the exchange of information; reduce duplication of effort; and coordinate activities among individuals, institutions, States, and regions. Integrated CAP Grants address problems through multi-function projects that incorporate at least two of the three components of the agricultural knowledge system (i.e., research, extension, and education). In a CAP, participants serve as a team that conducts targeted research, education, and/or extension in response to emerging or priority area(s) of national need. Applications articulate how a CAP will complement and/or link with existing programs or projects at the national level. A CAP contains the needed science-based expertise in research, education, and/or extension, as well as expertise from principal stakeholders and partners, to accomplish project goals and objectives. Applications should outline the potential

of the project, the structure, coordination, and plan of implementation, and propose several research, education, and/or extension areas that will be evaluated during the study period. All Research, Education, Extension, and Integrated Project requirements described earlier apply to CAP Grants. CAP Grants are solicited for all priority areas. Note that Food and Agricultural Science Enhancement Grants (see Part II, D. 3 can be submitted to the program). Refer to Part I, C for Program Area Description.

2. Conference Grants

Conference Grants support scientific meetings that bring together scientists to identify research, education, and/or extension needs, update information, or advance an area of science. These activities are recognized as integral parts of scientific efforts. Support for a limited number of meetings covering subject matter encompassed by this solicitation will be considered for partial or, if modest, total support. Individual conference grants are not expected to exceed \$50,000 for one year and are not renewable. Indirect costs are not permitted on Conference Grant awards.

3. Food and Agricultural Science Enhancement Grants

Food and Agricultural Science Enhancement (FASE) Grants strengthen science capabilities in research, education, and/or extension programs. FASE Grants are designed to help institutions develop competitive projects, and to attract new scientists and educators into careers in high-priority areas of National need in agriculture, food, and environmental sciences. The FASE Grants provide support for Pre- and Postdoctoral Fellowships which will be solicited in a separate NIFA Fellowships Grant Program, New Investigators, and Strengthening Grants. Specific eligibility requirements for these grants are described below.

a. Pre- and Postdoctoral Fellowship Grants

Doctoral candidates and individuals who will soon receive or have recently received their doctoral degree are encouraged to submit an application for a Pre- or Postdoctoral Fellowship Grant, as appropriate, for research, education, extension, or integrated activities to the NIFA Fellowship Grants program. Program information, including the anticipated release date, is available at www.nifa.usda.gov/funding/afri/afri.html.

b. New Investigator Grants

An individual who is beginning his/her career, does not have an extensive scientific publication record, and has less than five years postgraduate, career-track experience is encouraged to submit an application for a New Investigator Grant for research, education, and/or extension activities. The new investigator may not have received competitively awarded Federal research funds with the exception of pre- or postdoctoral grants or USDA NRI or AFRI Seed Grants. The application must contain documentation that lists all prior Federal support. The work proposed for New Investigator Grants must address a specific Program Area Priority described under Program Area Descriptions in Part I, C., and the application must be submitted directly to that Program Area by the designated deadline date.

c. Strengthening Grants

These funds are expected to enhance institutional capacity with the goal of leading to future funding in the project area, as well as strengthen the competitiveness of the investigator’s research, education, and/or extension activities. Strengthening Grants consist of Standard Grant types (both single-function and multi-function projects) as well as Seed Grants, Equipment Grants, and Sabbatical Grants. The work proposed for Strengthening Grants must address a specific Program Area Priority described under Program Area Descriptions in Part I, C., and the application must be submitted directly to that Program Area by the designated deadline date. All applications submitted for Strengthening Grants must fulfill the eligibility requirements described below.

1) Strengthening Grant Eligibility

Strengthening grants are limited to 1) small and mid-sized or minority-serving degree-granting institutions that previously had limited institutional success for receiving Federal funds or 2) State Agricultural Experiment Stations or degree-granting institutions eligible for USDA Experimental Program for Stimulating Competitive Research (EPSCoR) funding and are eligible for reserved strengthening funds for Research, Education, Extension, and Integrated Project grants. See Figure 1 following Part VIII to assist with determining eligibility for Strengthening Grants.

2) Strengthening Grant Eligibility Definitions

a) **EPSCoR States**

Every year, NIFA determines the states that are eligible for USDA EPSCoR funding. This list includes states having a funding level no higher than the 38th percentile of all States based on a 3-year rolling average of AFRI funding levels, excluding FASE Strengthening funds granted to EPSCoR States and small-mid-sized and minority-serving degree-granting institutions. This is the fifth year of the AFRI program and while significant FY 2012 funds are unobligated, the eligibility determinations are based on the data obtained from grants made through the AFRI program from 2010 through 2012. For FY 2014, the following States meet the requirements for this category:

| FY 2014 USDA EPSCoR States | | |
|-----------------------------------|---------------|----------------|
| Alabama | Montana | South Carolina |
| Alaska | Nevada | South Dakota |
| Connecticut | New Hampshire | Utah |
| Idaho | New Mexico | Vermont |
| Kentucky | North Dakota | Wyoming |
| Maine | Oklahoma | |
| Mississippi | Rhode Island | |

Other entities eligible for USDA EPSCoR funds in FY 2014 include the following United States commonwealths, territories, possessions and their successors, and the District of Columbia:

| Other Entities eligible for USDA EPSCoR Funds | |
|---|----------------------------|
| American Samoa | Northern Mariana Islands |
| District of Columbia | Puerto Rico |
| Guam | Virgin Islands of the U.S. |
| Micronesia | |

- b) **Small and mid-sized institutions** are academic institutions with a current total enrollment of 17,500 or less, including graduate and undergraduate as well as full- and part-time students. An institution in this instance is an organization that possesses a significant degree of autonomy as defined by being independently accredited in the current version of the Higher Education Directory, published by Higher Education Publications, Inc., 1801 Robert Fulton Drive, Suite 340, Reston, Virginia 20191 (Phone: (888) 349-7715; www.hepinc.com).
- c) **Minority-serving institutions** are academic institutions whose enrollment of a single minority group or a combination of minority groups (as defined in Part VIII, H) exceeds 50 percent of the total enrollment, including graduate and undergraduate as well as full- and part-time *students*.

Applicants applying under this category should indicate the current percentage of applicable minority students enrolled at the institution in a cover letter. An institution in this instance is an organization that possesses a significant degree of autonomy as defined by being independently accredited in the current version of the Higher Education Directory, published by Higher Education Publications, Inc., 1801 Robert Fulton Drive, Suite 340, Reston, Virginia 20191 (Phone: (888) 349-7715; www.hepinc.com). A list of post-secondary minority-serving institutions can be found at www2.ed.gov/about/offices/list/ocr/edlite-minorityinst.html.

- d) **Limited institutional success** is defined as institutions that are not among the most successful universities and colleges for receiving Federal funds for science and engineering research and development. See Table 1 following Part VIII for an alphabetical list of the most successful institutions.

All institutions grouped under one main campus as listed in Table 1 following Part VIII, unless located in an EPSCoR state, are excluded from eligibility for all strengthening funds. The institution may petition for an exemption to this rule as described in Part III, B.

3) Strengthening Grant Types

An individual applicant may submit only one of the following types of strengthening applications (Sabbatical Grants, Equipment Grants, and Seed Grants) as PD this fiscal year. Investigators are encouraged to contact the Program Area Priority Contact of the appropriate program area priority, regarding suitability of project topics to verify that

their submission is appropriate to the program area priority. For Equipment Grants, investigators are also encouraged to contact the appropriate Program Area Priority Contact regarding appropriateness of requested equipment for topics within program area priority requirements.

a) Coordinated Agricultural Projects (CAP)

Refer to Part II, D. 1 for an explanation of CAP grants and refer to Part I, C for Program Area Description.

b) Sabbatical Grants

Sabbatical Grants are to provide an opportunity for faculty to enhance their research, education, and/or extension capabilities by funding sabbatical leaves. Collaborative arrangements are encouraged. Grants will be limited to one year of salary and funds for travel and supplies, where justified, and are not renewable.

NIFA also encourages and will support the concept of “mini-sabbaticals” for faculty and researchers desiring short-term training to learn new techniques that will improve their competitiveness. These short-term training opportunities generally follow all of the sabbatical requirements described beginning in Part IV, C., but for a shorter duration. These grants may be used to participate in short courses offered at various research institutions.

c) Equipment Grants

Equipment Grants are designed to strengthen the research, education, and/or extension capacity of institutions by funding the purchase of one major piece of equipment. These grants are not intended to replace requests for equipment in individual project applications. Rather, they are intended to help fund items of equipment that will upgrade infrastructure. Requests for computer equipment are allowed only if the equipment is to be used in an activity integral to the proposed project. Requests for computer equipment will not be permitted if the equipment will primarily serve as a word processor or perform administrative functions.

Each request shall be limited to one major piece of equipment within the cost range of \$10,000-\$250,000 and are not renewable. The amount of Federal funding requested shall not exceed 50 percent of the cost or \$50,000, whichever is less. Unless a waiver is granted by NIFA using the criteria listed in Part III, C., it is the responsibility of the PD to secure required matching funds with non-Federal funds (see Part III, C for more information). No installation, maintenance, warranty, or insurance expenses may be paid from these grants, nor may these costs be part of the matching funds. Indirect costs are not permitted on Equipment Grant awards.

d) Seed Grants

Seed Grants are to provide funds to enable investigators to collect preliminary data or perform other preliminary activities in preparation for applying for future grants from AFRI. The grants are not intended to fund stand-alone projects, but rather projects that will lead to further work applicable to one of the AFRI Program Areas. Seed Grant applications proposing an Integrated Project only need to include one of the three functions (research, education, extension) and justify how this Seed Grant will allow the applicant to become competitive for future Integrated Project funding.

Seed Grants are limited to a total of \$150,000 (including indirect costs) for two year duration and are not renewable.

e) Strengthening Conference Grants

Conference Grant applications that meet the eligibility requirements for Strengthening Grants are eligible for reserved strengthening funds as a Strengthening Conference Grant. The eligibility requirements only apply to the lead PD and are not required for co-PD(s) associated with the project.

E. Responsible and Ethical Conduct of Research

The responsible and ethical conduct of research (RCR) is critical for excellence, as well as public trust, in science and engineering. Consequently, we consider education in RCR essential to the preparation of future scientists. In accordance with sections 2, 3, and 8 of 7 CFR Part 3022, 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. Per award terms and conditions, grant recipients shall, upon request, make available to NIFA the policies, procedures, and to support the conduct of the training.

Note that the training referred to herein shall be either on-campus or off-campus training. The general content of the ethics training will, at a minimum, emphasize three key areas of research ethics: authorship and plagiarism, data and research integration, and reporting misconduct. Each institution will be responsible for developing its own training system, as schools will need flexibility to develop training tailored to their specific student needs. Grantees should consider the Collaborative Institutional Training Initiative (CITI) program for RCR (<https://www.citiprogram.org/rcrpage.asp>). Typically this RCR education addresses the topics of: Data Acquisition and Management - collection, accuracy, security, access; Authorship and

Publication; Peer Review; Mentor/Trainee Responsibilities; Collaboration; Conflict of Interest; Research Misconduct; Human Subject Research; and Use of Animals in Research.

PART III—ELIGIBILITY INFORMATION

A. Eligible Applicants

Eligibility is linked to the **project type**. All project types are described beginning in Part II, C.

Applicants must respond to the Program Area Priorities and deadlines found in the FY 2014 RFA. Grant recipients may subcontract to organizations not eligible to apply provided such organizations are necessary for the conduct of the project. An applicant's failure to meet an eligibility criterion by the time of an application deadline may result in the application being excluded from consideration or, even though an application may be reviewed, will preclude NIFA from making an award.

1. Conference Projects

Eligible applicants include: 1) State Agricultural Experiment Stations; 2) colleges and universities (including junior colleges offering associate degrees or higher); 3) university research foundations; 4) other research institutions and organizations; 5) Federal agencies, 6) national laboratories; 7) private organizations or corporations; 8) individuals who are U.S. citizens, nationals, or permanent residents; and 9) any group consisting of 2 or more entities identified in 1) through 8). Eligible institutions do not include foreign and international organizations.

2. Integrated Projects

Eligible applicants for Integrated Projects include: 1) colleges and universities; 2) 1994 Land-Grant Institutions; and (3) Hispanic-serving agricultural colleges and universities.

For Integrated Projects, the terms "college" and "university" mean an educational institution in any state which 1) admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate; 2) is legally authorized within such state to provide a program of education beyond secondary education; 3) provides an educational program for which a bachelor's degree or any other higher degree is awarded; 4) is a public or other nonprofit institution; and 5) is accredited by a nationally recognized accrediting agency or association. A research foundation maintained by a college or university is eligible to receive an award under this program.

3. Hispanic-serving Agricultural Colleges and Universities

Section 7101 of the Food, Conservation, and Energy Act of 2008 (Pub. L. 110-246) amended section 1404 of NARETPA (7 U.S.C. 3103) to create a definition for a new group of cooperating institutions: Hispanic-serving Agricultural Colleges and Universities (HSACUs). HSACUs are colleges and universities that qualify as Hispanic-serving Institutions (HSIs) and offer associate, bachelors, or other accredited degree programs in agriculture-related fields. HSACUs do not include 1862 land-grant institutions.

Pursuant to section 406 of the Agricultural Research, Extension, and Education Reform Act of 1998 (AREERA) (7 U.S.C. 7626), which authorized the Integrated Research, Education, and Extension Competitive Grant Program, all four-year HSIs are eligible to apply for integrated projects as identified in the FY 2014 AFRI RFA. Two-year HSIs may also be eligible to apply but only if the institution has been certified as a HSACU for the fiscal year in which funding is being provided.

By January 2014, a list of the institutions certified and therefore eligible to apply as HSACUs for grants under FY 2014 RFAs, including this RFA, will be made available at www.nifa.usda.gov/nea/education/in_focus/hispanic_if_hispanic_HSACU.html. Institutions appearing on this list are granted HSACU certification by the Secretary for the period starting October 1, 2013, and ending September 30, 2014. Certifications are valid for FY 2014 only. Additional questions on HSACU eligibility can be addressed to Mr. Matthew Lockhart, Senior Policy Specialist, by email at mlockhart@nifa.usda.gov or phone at (202) 559-5088.

4. Food and Agricultural Science Enhancement Grants

The Food and Agricultural Science Enhancement (FASE) Grants have additional eligibility requirements. See Part II, D. 3 for details.

B. Request for Determination

If an applicant's institution can be considered a minority-serving institution and wishes to be considered for a Strengthening Grant (as described in Part II, D. 3. c), but does not serve one or more of the minority groups specified in the Definitions section of this RFA (see Part VIII, H), the applicant must submit to NIFA, documentation supporting the request. This documentation must be submitted as part of the requestor's Letter of Intent (if required) and the application package, and must be received by NIFA by the applicable program deadline. The Secretary of Agriculture or designated individual will determine whether the group or groups identified are eligible under this program.

The Request for Determination as a minority-serving institution must be attached with the Letter of Intent (if required) and the final application. The following information must be provided in the order specified below:

1. A description of each minority group that is being submitted for determination;
2. Data or studies supporting this group's designation as a minority group; and
3. Data indicating that enrollment of the minority group(s) exceeds 50 percent of the total enrollment at the academic institution, including graduate and undergraduate and full- and part-time students.

All institutions grouped under one main campus as listed in Table 1 following Part VIII, unless located in an EPSCoR state (listed in Part II, D. 3. c. 2 a.), are excluded from eligibility for all strengthening funds. However, if any campus within a multi-campus listing can provide information demonstrating that it is administratively independent or has an independent

accreditation, then the institution may petition for an exemption to this rule and request eligibility for strengthening funds. The Letter of Intent (if required) and the application must include a letter indicating how the institution is independent of the main campus, either through accreditation or administration. In addition, the letter should stipulate that the institution is eligible as a small and mid-sized or minority-serving institution due to enrollment and total federal funds received for science and engineering research and development. The letter must be signed by the Authorized Representative (AR) and included with the Letter of Intent (if required) and the completed application.

C. Cost Sharing or Matching

If a funded **applied Research and Integrated Projects** are commodity-specific and not of national scope, 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.

For Equipment Grants: The amount of Federal funds provided may not exceed 50 percent of the cost of the equipment acquired using funds from the grant, or \$50,000, whichever is less. Grantees are required to match 100 percent of Federal funds awarded from non-Federal sources. The Secretary may waive all or part of the matching requirement if all three of the following criteria are met: 1) applicants must be a college, university, or research foundation maintained by a college or university that ranks in the lowest one third of such colleges, universities, and research foundations on the basis of Federal research funds received (see Table 2 following Part VIII for eligibility); 2) if the equipment to be acquired using funds from the grant costs not more than \$25,000; and 3) has multiple uses within a single research project or is usable in more than one research project. If the institution believes it is eligible for the waiver for matching funds, the budget justification must include a letter signed by the institution's AR stating this information.

PART IV—APPLICATION AND SUBMISSION INFORMATION

A. Letter of Intent Instructions

A letter of Intent is required and is a prerequisite for submission of an application. The letter of intent must be submitted following the guidelines below. Failure to follow the guidelines below may result in the Letter of Intent being removed from consideration.

1. The Letter of Intent must adhere to the following formatting guidelines:
 - a. Font size must be at least 12 point
 - b. Margins must be at least one inch in all directions
 - c. Line spacing must not exceed six lines of text per vertical inch
2. The Letter of Intent is limited to **three pages** for all CAP projects and **two pages** for all other project types.
 - a. On Page 1, provide **only** the following information:
 - i. the name, professional title, department, institution and *e-mail* address of the lead project director (PD) and name, professional title, department, and institution of all collaborating investigators
 - ii. the Program Area and the Priority Area within that Program Area most closely addressed in the application
 - b. On **Pages 2-3 for CAP projects only**, and **Page 2 for all other project types** include:
 - i. a descriptive title
 - ii. rationale
 - iii. overall hypothesis or goal
 - iv. specific objectives
 - v. approach
 - vi. potential impact and expected outcomes
3. NIFA will only accept Letters of Intent in the portable document format (PDF). Attach the PDF Letter of Intent to an *e-mail* addressed to the appropriate Program Area *e-mail* for Submission of Letter of Intent. In the *e-mail* subject line, write: *Letter of Intent [Program Area Priority Code] _ [PD's Last Name]*.
4. A letter is required for **all** grant types except Conference Grant applications. See Part II, D for a detailed description of grant types.
5. Submission of more than one Letter of Intent to the program is discouraged.
6. An acknowledgement receipt will be sent by replying to the sender within 5 business days.
7. Letters of Intent will be reviewed by scientific program staff in order to plan for appropriate expertise for the peer review panel and ensure that the proposed project fits appropriately within the Program Area Priorities.

8. Within three weeks after the Letter of Intent deadline, the PD will receive a response from the Program Area Priority Contact.
9. Where a Letter of Intent is required, applications submitted without a prior Letter of Intent submission will not be reviewed.
10. Applicants must notify the appropriate Program Contact of any changes to project key personnel, title, or objectives from the Letter of Intent to the submission of a full application.

B. Electronic Application Package

Only electronic applications may be submitted via Grants.gov to NIFA in response to this RFA. We urge you to submit early to the Grants.gov system. For an overview of the Grants.gov application process see <http://www.grants.gov/web/grants/applicants/grant-application-process.html>.

New Users of Grants.gov

Prior to preparing an application, we recommend that the PD/PI first contact an Authorized Representative (AR, also referred to as Authorized Organizational Representative or AOR) to determine if the organization is prepared to submit electronic applications through Grants.gov. If not (e.g., the institution/organization is new to the electronic grant application process through Grants.gov), then the one-time registration process must be completed PRIOR to submitting an application. It can take as long as 2 weeks to complete the registration process so it is critical to begin as soon as possible. In such situations, the AR should go to **“Register” in the top right corner of the Grants.gov web page (or go to <http://www.grants.gov/web/grants/register.html>) for information on registering the institution/organization with Grants.gov.** Item 2. below mentions the “NIFA Grants.gov Application Guide.” Part II.1. of the NIFA Grants.gov Application Guide contains additional explanatory language regarding the registration process.

Steps to Obtain Application Package Materials

To receive application materials:

1. You must download and install a version of Adobe Reader compatible with Grants.gov to access, complete, and submit applications. For basic system requirements and download instructions, see <http://www.grants.gov/web/grants/support/technical-support/software/adobe-reader-compatibility.html>. Grants.gov has a test package that will help you determination whether your current version of Adobe Reader is compatible.
2. To obtain the application package from Grants.gov, go to <http://www.grants.gov/web/grants/applicants/apply-for-grants.html>. Under Step 1 click on “Download a Grant Application Package,” and enter the funding opportunity number **USDA-NIFA-AFRI-004434** in the appropriate box and click “Download Package.” From the search results, click “Download” to access the application package.

Contained within the application package is the “NIFA Grants.gov Application Guide.” This guide contains an introduction and general Grants.gov instructions, information about how to use a Grant Application Package in Grants.gov, and instructions on how to complete the application forms.

If you require assistance to access the application package (e.g., downloading or navigating Adobe forms) **or submitting the application**, refer to resources available on the Grants.gov website (<http://www.grants.gov/web/grants/applicants/applicant-resources.html>). Grants.gov assistance is also available at:

Grants.gov customer support

800-518-4726 Toll-Free or 606-545-5035

Business Hours: 24 hours a day, 7 days a week. Closed on [federal holidays](#).

Email: support@grants.gov

Grants.gov iPortal: Top 10 requested help topics (FAQs), Searchable knowledge base, self-service ticketing and ticket status, and live web chat (available 7 am - 9 p.m. ET). Get help now!

Have the following information available when contacting Grants.gov:

- Funding Opportunity Number (FON)
- Name of agency you are applying to
- Specific area of concern

See <http://www.nifa.usda.gov/funding/electronic.html> for additional resources for applying electronically.

C. Content and Form of Application Submission

You should prepare electronic applications following Parts V and VI of the NIFA Grants.gov Application Guide. This guide is part of the corresponding application package (see Section A. of this Part). The following is **additional information** needed to prepare an application in response to this RFA. **If there is discrepancy between the two documents, the information contained in this RFA is overriding.**

Note the attachment requirements (e.g., PDF) in Part III section 3. of the guide. ANY PROPOSALS THAT ARE NON-COMPLIANT WITH THE REQUIREMENTS (e.g., content format, PDF file format, file name restrictions, and no password protected files) WILL BE AT RISK OF BEING EXCLUDED FROM NIFA REVIEW. Partial applications will be excluded from NIFA review. We will accept subsequent submissions of an application until close of business on the closing date in the RFA (see Part V, 2.1 of the NIFA Grants.gov Application Guide for further information).

Grants.gov provides online tools to assist if you do not own PDF-generating software. You will find PDF conversion software at <http://test.grants.gov/web/grants/support/technical-support/software/pdf-conversion-software.html>.

For any questions related to the preparation of an application, review the NIFA Grants.gov Application Guide and the applicable RFA. If assistance is still needed for preparing application forms content, contact:

- Email: electronic@nifa.usda.gov
- Phone: 202-401-5048
- Business hours: Monday through Friday, 7 a.m. – 5 p.m. ET, excluding federal holidays.

1. SF 424 R&R Cover Sheet

Information related to the questions on this form is dealt with in detail in Part V, 2. of the NIFA Grants.gov Application Guide.

Field 12. Proposed Project – **For the start date of the project, select a date at least six months after the submission deadline date for the program. Choose the end date to correspond to the correct duration of the project.**

a)

Field 20. Pre-application – **Do not fill out this portion of the form. While AFRI is not accepting pre-applications in FY 2014 in any of the programs, the Program Areas under this RFA require a Letter of Intent. See the Program Area Descriptions in Part I, C and Part IV, A for more details.**

2. SF 424 R&R Project/Performance Site Location(s)

Information related to the questions on this form is dealt with in detail in Part V, 3. of the NIFA Grants.gov Application Guide.

3. R&R Other Project Information

Information related to the questions on this form is dealt with in detail in Part V, 4. of the NIFA Grants.gov Application Guide.

a. *Fields 1 and 2. Are Human Subjects Involved? and Are Vertebrate Animals Used?*

☼ ***For Sabbatical Grant Applications* – Applicants whose research requires use of human subjects or vertebrate animals must have their project reviewed by the appropriate committee(s) at the institution where the research will be conducted.**

- b. *Field 7. Project Summary/Abstract* – PDF Attachment.** The summary should also include the relevance of the project to the goals of the Food Safety challenge area. The Project Summary is limited to **250** words. Title the attachment as ‘ProjectSummary’ in the document header and save file as ‘Project Summary’. See Part V, 4.7 of NIFA Grants.gov Application Guide for further instructions and a link to a suggested template.

A recommended template for the Project Summary/Abstract can be found at:

www.nifa.usda.gov/funding/templates/project_summary.doc.

The Project Summary must list the names and institutions of the PD and co-PDs and **indicate which specific FY 2014 Program Focus Area the proposed project addresses**. Program Area Priorities are stated within each Program Area Description (see Part I, C). Applications that do not address at least one Program Area Priority will not be reviewed.

☼ *For Conference Grant Applications* – State the objectives of the conference, symposium, or workshop, as well as the proposed location and probable inclusive date(s) of the conference. Please state in the summary the specific Program Area Priority to which the project applies.

☼ *For Sabbatical Grant Applications* – Indicate overall project goals and supporting objectives.

☼ *For Equipment Grant Applications* – Indicate equipment sought and overall project goals for its use.

- c. **Field 8. Project Narrative – PDF Attachment. 18-Page or 7-Page Limit** (explained below). Title the attachment as ‘Project Narrative’ in the document header and save file as ‘ProjectNarrative’.

For Conference, New Investigator, Coordinated Agricultural Project (CAP), and Strengthening CAP and Conference Grant applications, the Project Narrative section may not exceed a total of 18 pages with 12-point font and line spacing not exceeding six lines of text per vertical inch, including all figures and tables.

For Sabbatical, Equipment, and Seed Grant applications, the Project Narrative section may not exceed a total of 7 pages with 12-point font and line spacing not exceeding six lines of text per vertical inch, including all figures and tables.

To ensure fair and equitable competition, applications exceeding the applicable page limitation will be returned without review.

Each Project Narrative is expected to be complete; however, preprints (see Part IV, C. 4. g) related to the Project Narrative are allowed if they are directly germane to the proposed project. Information may not be appended to an application to circumvent page limitations prescribed for the Project Narrative.

Project Narrative must include all of the following:

1) Response to Previous Review (if applicable)

This requirement only applies to Resubmitted Applications as described in Part II, B. The Project Narrative attachment should include two components: 1) a one-page response to the previous review panel summary titled “Response to Previous Review” included as the first page of the Project Narrative attachment and 2) the **7- or 18-page** Project Narrative, as required (see Part IV, C. 4. c above).

2) Introduction

Include a clear statement of the long-term goal(s) and supporting objectives of the proposed project. Summarize the body of knowledge or past activities that substantiate the need for the proposed project. Describe ongoing or recently completed activities significant to the proposed project including the work of key project personnel. Include preliminary data/information pertinent to the proposed project. All works cited should be referenced (see Bibliography & References Cited in Part IV, C. 4. d).

3) Rationale and Significance

- a) Concisely present the rationale behind the proposed project;
- b) Describe the specific relationship of the project’s objectives to one of the Program Area Priorities. Applications that do not address at least one Program Area Priority will not be reviewed; and
- c) The potential long-range improvement in and sustainability of U.S. agriculture and food systems should be shown clearly. These purposes are described under Purpose and Priorities in Part I, B. Any novel ideas or contributions that the proposed project offers should also be discussed in this section.

4) Approach

The activities proposed or problems being addressed must be clearly stated and the approaches applied are to be clearly described. Specifically, this section must include:

- a) A description of the activities proposed and the sequence in which the activities are to be performed;
- b) Methods to be used in carrying out the proposed project, including the feasibility of the methods;
- c) Expected outcomes;
- d) Means by which results will be analyzed, assessed, or interpreted;

- e) How results or products will be used;
- f) Pitfalls that may be encountered;
- g) Limitations to proposed procedures;
- h) A full explanation of any materials, procedures, situations, or activities related to the project that may be hazardous to personnel, along with an outline or precautions to be exercised to avoid or mitigate the effects of such hazards; and
- i) A timeline for attainment of objectives and for production of deliverables that includes annual milestones with specific, measurable outcomes.

☀ *For Integrated Project Applications –*

- Integrated Project applications must include at least two of the three functions of the agricultural knowledge system (i.e., research, education, and extension). Each function should be represented by one or more objectives within the application.
- Projects must budget sufficient resources to carry out the proposed set of research, education, and/or extension activities that will lead to the desired outcomes. No more than two-thirds of a project’s budget may be focused on a single function.
- Integrated Projects must include individuals on the project team with significant expertise in each component of the project (research, education, and/or extension).
- A plan for evaluating progress toward achieving project objectives must be included. The plan must include milestones, which signify the completion of a major deliverable, event, or accomplishment and serve to verify that the project is on schedule and on track for successful conclusion. The plan should also include descriptions of indicators that you will measure to evaluate whether the research, education, and/or extension activities are successful in achieving project goals and in contributing to achievement of the stated program goals and outcomes.
- In addition to the Project Narrative requirements above, the proposed Integrated Project should clearly articulate:
 - Stakeholder involvement in project development, implementation, and evaluation, where appropriate;
 - Objectives for each function included in the project (note that extension and education activities are expected to differ and to be described in separate project objectives; see enumerated descriptions in Part II, C.); and
 - A dissemination plan describing the methods that will be used to communicate findings and project accomplishments.
- AFRI encourages Integrated Projects that develop content suitable for delivery through eXtension. This content is for “end users” as opposed to staff development and must follow the eXtension Guiding Principles and guidelines for including eXtension in a proposal presented at http://about.extension.org/wiki/NIFA_RFA_Information. Funds may be used to 1) enhance an existing Community of Practice or 2) to establish a new Community of Practice, as appropriate.
- AFRI encourages Integrated Projects that are suitable for 4-H audiences and stakeholder groups while meeting identified program priorities. The 4-H Youth Development is the programmatic outreach of the Land Grant Universities and Institutions to our youngest

citizens in their communities and provides opportunities for youth to develop skills, practical knowledge, and wisdom with an emphasis on practical application of knowledge or “learning by doing.” By engaging 4-H in AFRI projects, applicants engage young people as citizen scientists; increase their awareness of the role of agriculture; and prepare young people for higher education and the 21st century work environment. Opportunities for engaging 4-H in AFRI proposals should align with the 4-H Mission Mandates of Science, Engineering and Technology; Healthy Living; and Citizenship. See guiding principles at www.national4-hheadquarters.gov or contact your university Cooperative Extension headquarters and/or State 4-H Program Office.

☀ *For Conference Grant Applications* – In addition to the Project Narrative requirements above, substitute the following in the Approach section:

- A justification for the meeting;
- Recent meetings on the same subject with dates and locations;
- Names and organizational affiliations of the chair and other members of the organizing committee;
- A proposed program (or agenda) for the conference, including a listing of scheduled participants and their institutional affiliations; and
- The method of announcement or invitation that will be used.

☀ *For Sabbatical Grant Applications* – In addition to the Project Narrative requirements above, substitute the following in the Approach section:

- A general description of the research, education, and/or extension interests and goals of the applicant in order to provide perspective for the application;
- A description of the project to be pursued while on the sabbatical leave;
- A statement of how the sabbatical leave will enhance the capabilities of the applicant; and
- A statement of future research goals and objectives once the sabbatical is complete and how the sabbatical will enable the applicant to pursue these goals.

☀ *For Equipment Grant Applications* – In addition to the Project Narrative requirements above, include a general description of the project(s) for which the equipment will be used, how the equipment will fit into or enhance the research, education, and/or extension program, and how the equipment will allow the applicant to become competitive for future funding or move into new research areas. Also include a description of other similar or complementary equipment available to the PD at the institution and why the requested equipment is necessary.

☀ *For Seed Grant Applications* – Include all of the components detailed in the Project Narrative section above and present enough detail to allow adequate evaluation. In order to be competitive, long-term goals and a statement describing how this Seed Grant will allow the applicant to become competitive for future funding must be included.

- d. **Field 9. Bibliography & References Cited – PDF Attachment. No Page Limit.** Title the attachment as ‘Bibliography & References Cited’ in the document header and save file as ‘BibliographyReferencesCited’.

All work cited in the text should be referenced in this section of the application. All references must be complete; include titles and all co-authors; conform to an acceptable journal format; and be listed in alphabetical order using the last name of the first author or listed by number in the order of citation.

- e. **Field 10. Facilities & Other Resources – PDF Attachment. No Page Limit.** Title the attachment as ‘Facilities & Other Resources’ in the document header and save file as ‘FacilitiesOtherResources’.

- f. **Field 11. Equipment – PDF Attachment. No Page Limit.** Title the attachment as ‘Equipment’ in the document header and save file as ‘Equipment’.

In addition to describing available equipment, items of nonexpendable equipment necessary to conduct and successfully complete the proposed project should be listed in Field C. of the R&R Budget and described in the Budget Justification (Field K. of the R&R Budget).

- g. **Field 12. Other Attachments**

1. **Project Type – PDF Attachment. 1-Page Limit.** Title the attachment as ‘Project Type’ and save file as ‘ProjectType’.

Identify the type of project and the type of grant you are submitting by completing the Project Type template located at: www.nifa.usda.gov/funding/templates/project_type.doc. Before doing so, however, please refer to Part I, C of this RFA to determine which project types are requested under each Program Area Description. Also please see Part II of this RFA for a full description of each project and grant type.

2. **Key Personnel Roles – PDF Attachment. 2-Page Limit.** Title the attachment as ‘Key Personnel’ and save file as ‘KeyPersonnel’.

Clearly describe the roles and responsibilities of the PD, co-PD(s), collaborator(s), and other key personnel. Biographical sketches for key personnel should be attached in the R&R Senior/Key Person Profile described in Part IV, C. 5. If it will be necessary to enter into formal consulting or collaborative arrangements with others, such arrangements should be fully explained and justified. If the consultant(s) or collaborator(s) are known at the time of application, a biographical sketch should be provided in the R&R Senior/Key Person Profile. Collaborators simply providing services or materials should not be listed in the R&R Senior/Key Person Profile and a biographical sketch is not required. Evidence (letters of support) for this type of collaboration should be provided in the

'Documentation of Collaboration' (see number 5 below). These signed letters should provide evidence that the collaborators involved have agreed to render these services.

☀ *For Integrated Grant Applications* – state for key personnel an estimate of the percent of time devoted to research, education, and/or extension activities.

- 3. Logic Model – PDF Attachment. Required for Integrated Project Grants Only. Allowable for Research Projects. 2-Page Limit. Title the attachment as 'Logic Model' and save file as 'LogicModel'.**

Applications proposing Education, Extension, or Integrated Projects must include the elements of a logic model detailing the activities, outputs, and outcomes of the proposed project. The logic model planning process is a tool that should be used to develop your project before writing your application. This information may be provided as a narrative or formatted into a logic model chart. More information and resources related to the logic model planning process are provided at www.nifa.usda.gov/funding/integrated/integrated_logic_model.html.

- 4. Management Plan – PDF Attachment. Required for Integrated Project Grants Only. 3-Page Limit. Title the attachment as 'Management Plan' and save file as 'ManagementPlan'.**

The application must contain a clearly articulated project management plan to ensure efficient functioning of the team that includes an organizational chart, administrative timeline, and a description of how the project will be governed, as well as a strategy to enhance coordination, collaboration, communication, and data sharing and reporting among members of the project team and stakeholder groups. Applications must include a plan for sustaining the program beyond the termination of the project.

The management plan should also include an advisory group of principal stakeholders, partners, and professionals to assess and evaluate the quality, expected measurable outcomes, and potential impacts for the proposed research, education, and/or extension. Please include letters of commitment (in Documentation of Collaboration below), rationale for their role, and how they will function effectively to support the goals and objectives of the project. The plan must demonstrate how partners and stakeholders contribute to project assessment on an annual basis.

- 5. Documentation of Collaboration – PDF Attachment. No Page Limit. Title the attachment as 'Documentation of Collaboration' in the document header and save file as 'Collaboration'.**

Evidence, e.g., letter(s) of support, should be provided that the collaborators involved have agreed to render services. The applicant also will be required to provide additional information on consultants and collaborators in the budget portion of the application.

☼ *For Sabbatical Grant Applications* – Provide documentation that arrangements have been made with an established investigator(s) to serve as host, including:

- A letter from the home institution detailing the particular arrangements at the home institution with respect to salary and date and duration of sabbatical;
- A letter from the scientific host(s) indicating willingness to serve in this capacity and a description of the host's contribution to the proposed activities both scientifically and with regard to use of facilities and equipment; and
- A statement signed by the Department Head or equivalent official at the host institution indicating a commitment to provide research space and facilities for the period of the applicant's presence.

☼ *For Equipment Grant Applications* – The application must contain a letter(s) from the organization(s) committed to providing the non-Federal matching funds. Provide evidence of institutional commitment for operation and maintenance of requested equipment. Arrangements for sharing equipment among faculty are encouraged. However, it must be evident that the PD is a principal user of the requested equipment.

- 6) ***Preprints – PDF Attachment. Limited to 2 preprints.*** Title the attachment as ‘Preprints’ in the document header and save file as ‘Preprints’.

Preprints related to the Project Narrative are allowed if they are directly germane to the proposed project. Information may not be appended to an application to circumvent page limitations prescribed for the Project Narrative. **Extraneous materials will not be used during the peer review process.** Only manuscripts in press for a peer-reviewed journal will be accepted and must be accompanied by letters of acceptance from the publishing journals). Preprints attached in support of the application should be **single-spaced**. Each preprint must be identified with the name of the submitting organization, the name(s) of the PD(s), and the title of the application.

4. R&R Senior/Key Person Profile (Expanded)

Information related to the questions on this form is dealt with in detail in Part V, 5. of the NIFA Grants.gov Application Guide. This section of the Guide includes information about the people who require a Senior/Key Person Profile, and details about the Biographical Sketch and the Current and Pending Support, including a link to a suggested template for the Current and Pending Support.

A Senior/Key Person Profile should be completed for the PD and each co-PD, senior associate, and other professional personnel, including collaborators playing an active role in the project. Collaborators only providing services or materials should not be listed in the R&R Senior/Key Person Profile. Evidence (letters of support) for this type of collaboration should be provided in the Documentation of Collaboration (see Part IV, C. 4. g. 5).

a. Project Role Field – Complete appropriately.

☼ *For Sabbatical Grant Applications* – Select “PD/PI” for the Sabbatical Grant applicant. Select “Other” for the corresponding scientific host(s) and any other personnel whose qualification merit consideration in the evaluation of the application.

☼ *For Equipment Grant Applications* – Select “PD/PI” for the Equipment Grant applicant. Select “Faculty” for the other major users of the equipment.

b. Other Project Role Category Field – Complete appropriately, if applicable.

c. **Attach Biographical Sketch Field – PDF Attachment. 2-Page Limit** (excluding publications listings) per PD, co-PD, senior associate, and other professional personnel. Title the attachment as ‘Biographical Sketch’ in the document header and save file as ‘BiographicalSketch’.

A biographical sketch (vitae) of the PD and each co-PD, senior associate, and other professional personnel should be included.

The Conflict of Interest list should not be included in the biographical sketch, but it must be provided as a separate document (see Part IV, C. 8. c for more information).

☼ *For Sabbatical Grant Applications* – A Biographical Sketch must be submitted for the Sabbatical Grant applicant, the scientific host(s), and any other personnel whose qualifications merit consideration in the evaluation of the application.

☼ *For Equipment Grant Applications* – A Biographical Sketch for both the Equipment Grant applicant and other major users of the equipment must be submitted.

d. **Attach Current and Pending Support Field – PDF Attachment. No Page Limit.** Title the attachment as ‘Current and Pending Support’ in the document header and save file as ‘CurrentPendingSupport’.

A recommended template for the Current and Pending Support can be found at: www.nifa.usda.gov/funding/templates/current_pending.doc.

Current and Pending Support information is only required for personnel with PD or co-PD indicated as their Project Role on the R&R Senior/Key Person Profile. All applications must contain a list of all Current and Pending Support detailing public or private support (including in-house support) to which personnel identified in the application have committed portions of their time, whether or not salary support for person(s) involved is included in the budget. Please note that the project being proposed should be included in the pending section of the form. Total project listed for each PD should be indicated as percent effort and not exceeds 100% for concurrent (Current and Pending) projects.

The AFRI program will not fund an application that duplicates or overlaps substantially with other NIFA funding (including non-competitive funds such as Special Grants or Hatch formula funds) or other Federal funding. As an addendum to the Current and Pending Support, provide a brief summary for any completed, current, or pending projects that appear similar to the current application, especially previous NRI or AFRI awards.

☼ *For Sabbatical Grant Applications* – Current and Pending Support for both the Sabbatical Grant applicant and the scientific host(s) (as documentation of on-going work in the host's laboratory) must be completed.

☼ *For Equipment Grant Applications* – Current and Pending Support for both the Equipment Grant applicant and other major users of the equipment must be completed. If the applicant has significant funding from other sources, a justification must be provided in the Project Narrative for how this equipment will strengthen the applicant's research program or institution.

5. R&R Personal Data

As noted in Part V, 6. of the NIFA Grants.gov Application Guide, the submission of this information is voluntary and is not a precondition of award.

6. R&R Budget

Information related to the question on this form is dealt with in detail in Part V, 7. of the NIFA Grants.gov Application Guide.

a. Budget Periods. Applications must contain a budget for each budget period for the entire duration of the proposed project. Annual budgets and a cumulative budget are required.

If a project is funded, beginning in the first year of funding, the project director will be required to attend annual investigator meetings for the duration of the award (excluding Conference, Sabbatical, and Equipment Grant applications). The project directors for Seed Grant applications are required to attend beginning in the second year of funding. The project directors for Exploratory Grant applications are required to attend the investigator meeting near the termination time of the award. Reasonable travel expenses should be included as part of the project budget.

☼ *For Integrated Project Applications* – Projects must budget sufficient resources to carry out the proposed set of research, education, and/or extension activities that will lead to the desired outcomes. No more than two-thirds of a project's budget may be focused on a single component. Projects that include partnering with eXtension must include financial support for the Community of Practice core functions as well as project-specific activities.

☼ *For Conference Grant Applications* – The budget for the conference may include an appropriate amount for transportation and subsistence costs for participants and for other conference-related costs. Conference awards are not expected to exceed \$50,000 and are not

renewable. Indirect costs are not permitted on Conference Grant awards. Include an itemized breakdown of all support requested from the AFRI in the Budget Justification (Field K. of the R&R Budget).

☀ *For Sabbatical Grant Applications* – Limit to one year's salary and funds for travel and supplies.

☀ *For Equipment Grant Applications* – Each request shall be limited to one major piece of equipment within the cost range of \$10,000-\$250,000. Equipment grants are not renewable. The amount requested shall not exceed 50 percent of the cost or \$50,000, whichever is less. Unless waived, it is the responsibility of the PD to secure the required matching funds with non-Federal funds (see Part III, C for more information). No installation, maintenance, warranty, or insurance expenses may be paid from these awards, nor may these costs be part of the matching funds. Indirect costs are not permitted on Equipment Grant awards.

☀ *For Seed Grant Applications* – These awards will be limited to a total of \$150,000 (including indirect costs) for two years and are not renewable.

b. Field H. Indirect Costs – NIFA is prohibited from paying indirect costs exceeding 30 percent of the total Federal funds provided under each award. This limitation is equivalent to 0. 42857 of the total direct costs of an award. See Part IV, E for additional information.

c. Field K. Budget Justification – PDF Attachment. No Page Limit. Title the attachment as ‘Budget Justification’ in the document header and save file as ‘BudgetJustification’.

All cumulative budget categories, with the exception of Indirect Costs, for which support is requested must be individually listed (with costs) in the same order as the cumulative budget. NOTE: For continuation awards, all budget categories for year one must also be fully justified. If consulting, collaborative, or subcontractual arrangements are included in the application, these arrangements should be fully explained and justified. The rate of pay for any consultant must be included, if known at the time of application. Please include a cost breakdown for the consultant, including the number of days in service, travel, and per diem, as well as the rate of pay. Letters of consent or collaboration and other evidence should be provided in the Documentation of Collaboration (see Part IV, C. 4. g. 5) to show that collaborators have agreed to participate. A proposed statement of work, biographical sketch, and a budget for each arrangement involving the transfer of substantive programmatic work or the provision of financial assistance to a third party must be supplied. In multi-institutional applications, a budget and budget narrative must be included for each institution involved. The lead institution and each participating institution must be identified.

☀ *For Integrated Project Applications* – Each function should be represented by one or more objectives within the application. Projects must budget sufficient resources to carry out the proposed set of research, education, and/or extension activities that will lead to the desired outcomes. No more than two-thirds of a project’s budget may be focused on a single component.

☀ *For Equipment Grant Applications* – The Budget Justification should describe the instrument requested including the manufacturer and model number, if known; provide a detailed budget breakdown of the equipment and accessories required; and indicate the amount of funding requested from USDA for each component of equipment requested. A letter signed by the institution’s AR stating that the necessary non-Federal matching funds will be made available from an institutional or other source is required. An institution that believes it is eligible for the waiver of the matching funds should include a letter stating and documenting the eligibility that is signed by the institution’s AR (see Table 2 following Part VIII for eligibility). A justification must be given for how this equipment will strengthen the applicant's research program or institution.

d. Subcontract Arrangements

If it will be necessary to enter into a formal subcontract agreement with another institution, financial arrangements must be detailed in the “R&R Subaward Budget Attachment(s) Form.” Annual and a cumulative budget, budget justification and a letter of commitment signed by the Authorized Representative (AR) are required for each subcontract agreement. Refer to Part V, 8. of the NIFA Grants.gov Application Guide for instructions on completing this form.

e. Matching

Equipment Grants requiring matching funds, as specified in Part III, C., must include a letter in the budget justification signed by the institution’s AR stating that the necessary non-Federal matching funds will be made available from the institution or other source. The amount of Federal funds provided may not exceed 50 percent of the cost of the equipment acquired using funds from the grant, or \$50,000, whichever is less. Grantees are required to match 100% of federal funds awarded from non-Federal sources. If the institution believes it is eligible for the waiver for matching funds (see Part III, C. for waiver eligibility), the budget justification must include a letter signed by the institution’s AR stating this information. NIFA will consider this justification when ascertaining final matching requirements or in determining if required matching can be waived. NIFA retains the right to make final determinations regarding matching requirements.

If a funded project is commodity-specific and not of national scope, 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.

The sources and the amount of all matching support from outside the applicant organization should be summarized on a separate page and placed in the application immediately following the Budget Justification. All pledge agreements must be placed in the application immediately following the summary of matching support.

The value of applicant contributions to the project shall be established in accordance with applicable cost principles. Applicants should refer to OMB Circular A-21 (2 CFR Part 220),

Cost Principles for Educational Institutions, for further guidance and other requirements relating to matching and allowable costs.

7. Supplemental Information Form

Information related to the questions to the questions on this form is dealt in detail in Part VI, 1. of the NIFA Grants.gov Application Guide.

- a. **Field 2. Program to which you are applying – Enter the Program code name: and the Program Code.** It is extremely important that the Program Code Name and Program Code are spelled correctly and match this RFA. If you have a question about which topic area is appropriate for your application, please contact the Program Contact.
- b. **Field 8. Conflict of Interest List – PDF Attachment. No Page Limit.** Title the attachment as ‘Conflict of Interest’ in the document header and save file as ‘ConflictofInterest’. See Part VI, 1.8 of the NIFA Grants.gov Application Guide for further instructions and link for suggested template.

The Conflict of Interest List should be provided as a separate PDF attachment and not included in the vitae or resume. A Conflict of Interest List must be completed individually for all personnel who have submitted a Biographical Sketch in the R&R Senior/Key Personnel Profile. **Collate all individual Conflict of Interest lists into a single document file.** The lists can only be submitted as a single PDF attachment.

A recommended template for the Conflict of Interest List can be found at:
www.nifa.usda.gov/funding/templates/conflict_of_interest.doc.

☼ *For Equipment Grant Applications* – Conflict of Interest list for the Equipment Grant applicant and other major users of the equipment must be completed.

D. Submission Dates and Times

Instructions for submitting an application are included in Part IV, Section 1.9 of the NIFA Grants.gov Application Guide.

Letters of Intent must be received by 5:00 pm Eastern Standard Time on February 26, 2014. Applications must be received by Grants.gov by 5:00 pm Eastern Standard Time on May 8, 2014. Letters of Intent and Applications received after this deadline will normally not be considered for funding.

If you have trouble submitting an application to Grants.gov, you should FIRST contact the Grants.gov Help Desk to resolve any problems. Keep a record of any such correspondence. See Part IV. A. for Grants.gov contact information.

We send email correspondence to the AR regarding the status of submitted applications. Therefore, applicants are strongly encouraged to provide accurate e-mail addresses, where designated, on the SF-424 R&R Application for Federal Assistance.

If the AR has not received correspondence **from NIFA** regarding a submitted application within 30 days of the established deadline, contact the Agency Contact identified in Part VII of the applicable RFA and request the proposal number assigned to the application. **Failure to do so may result in the application not being considered for funding by the peer review panel. Once the application has been assigned a proposal number, this number should be cited on all future correspondence.**

E. Funding Restrictions

Section 7132 of the Food, Conservation, and Energy Act of 2008 (Pub. L. 110-246) amended section 1462(a) of the National Agricultural Research, Extension, and Teaching Policy Act of 1977 (7 U.S.C. 3310(a)) on recovery of indirect costs. The recovery of indirect costs on awards made by NIFA under this program may not exceed the lesser of the institution's official negotiated indirect cost rate or the equivalent of 30 percent of total Federal funds awarded.

Funds made available for grants under the AFRI program shall not be used for the construction of a new building or facility or the acquisition, expansion, remodeling, or alteration of an existing building or facility (including site grading and improvement, and architect fees).

F. Other Submission Requirements

1. Successful Application Submission

You should follow the submission requirements noted in Part IV, section 1.9 in the document entitled "NIFA Grants.gov Application Guide."

2. Application Status

For information about the status of a submitted application, see Part III., section 6. of the NIFA Grants.gov Application Guide.

3. Multiple Submissions

Duplicate, essentially duplicate or predominantly overlapping applications submitted to one or more program areas within the AFRI (including FASE Grants) in any one fiscal year will not be reviewed. In addition, applicants may not submit to AFRI an application that is considered duplicate, essentially duplicate, or predominantly overlapping with an application submitted to another NIFA program in the same fiscal year.

PART V—APPLICATION REVIEW REQUIREMENTS

A. General

We evaluate each application in a 2-part process. First, we screen each application to ensure that it meets the administrative requirements as set forth in this RFA. Second, a review panel will technically evaluate applications that meet these requirements.

We select reviewers based upon their training and experience in relevant scientific, extension, or education fields, taking into account the following factors: (a) 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; (b) the need to include as reviewers experts from various areas of specialization within relevant scientific, education, or extension fields; (c) the need to include as reviewers 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; (d) the need to include as reviewers 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; (e) the need to maintain a balanced composition of reviewers with regard to minority and female representation and an equitable age distribution; and (f) the need to include reviewers who can judge the effective usefulness to producers and the general public of each application.

B. Evaluation Criteria

Projects supported under this program shall be designed, among other things, to accomplish one or more of the purposes of agriculture research, education, and extension, subject to the varying conditions and needs of States. Therefore, in carrying out its review, the peer review panel will take into account the following factors.

1. Integrated Project Applications

These evaluation criteria will be used for the review of all multi-function Integrated Project applications.

a. Merit of the Application for Science Research, Education, and/or Extension

- 1) Project objectives and outcomes are clearly described, adequate, and appropriate. All project components (i.e., research, education, extension) – at least two are required – are reflected in one or more project objectives;
- 2) Proposed approach, procedures, or methodologies are innovative, original, clearly described, suitable, and feasible;
- 3) Expected results or outcomes are clearly stated, measurable, and achievable within the allotted time frame;
- 4) Proposed research fills knowledge gaps that are critical to the development of practices and programs to address the stated problem or issue;
- 5) Proposed extension leads to measurable, documented changes in learning, actions, or conditions in an identified audience or stakeholder group; and

- 6) Proposed education (teaching) has an impact upon and advances the quality of food and agricultural sciences by strengthening institutional capacities and curricula to meet clearly delineated needs and train the next generation of scientists and educators.

b. Qualifications of Project Personnel, Adequacy of Facilities, and Project Management

- 1) Roles of key personnel are clearly defined;
- 2) Key personnel have sufficient expertise to complete the proposed project, and where appropriate, partnerships with other disciplines (e.g., social science or economics) and institutions are established;
- 3) Evidence of institutional capacity and competence in the proposed area of work is provided;
- 4) Support personnel, facilities, and instrumentation are sufficient;
- 5) A clear plan is articulated for project management, including time allocated for attainment of objectives and delivery of products, maintenance of partnerships and collaborations, and a strategy to enhance communication, data sharing, and reporting among members of the project team; and
- 6) The budget clearly allocates sufficient resources to carry out a set of research, education (teaching), and/or extension activities that will lead to desired outcomes, with no more than two-thirds of the budget focused on a single project component. Supporting funds for Community of Practice core functions and project-specific activities are included for partnerships with eXtension.

c. Project Relevance

- 1) Documentation that the project is directed toward specific Program Area Priority identified in this RFA and is designed to accelerate progress toward the productivity and economic, environmental, and social sustainability of U.S. agriculture with respect to natural resources and the environment, human health and well-being, and communities;
- 2) Project components (research, education, and/or extension) – at least two are required – are fully integrated and necessary to address the problem or issue;
- 3) The proposed work addresses identified stakeholder needs;
- 4) Stakeholder involvement in project development, implementation, and evaluation is demonstrated, where appropriate;
- 5) Plan and methods for evaluating success of project activities and documenting potential impact against measurable short and mid-term outcomes are suitable and feasible;
- 6) For extension or education (teaching) activities, curricula and related products will sustain education or extension functions beyond the life of the project; and
- 7) For extension or education (teaching) activities, the resulting curricula or products share information and recommendations based on knowledge and conclusions from a broad range of research initiatives.

2. Conference Grant Applications

- a) Relevance of the proposed conference to agriculture and food systems in the U.S. and appropriateness of the conference in fostering scientific exchange;
- b) Qualifications of the organizing committee and appropriateness of invited speakers to topic areas being covered; and
- c) Uniqueness, timeliness of the conference, and appropriateness of budget requests.

3. New Investigator Grant Applications

Refer to the review criteria listed above for the applicable Project Type (Research or Integrated) to which you are applying.

4. Sabbatical Grant, Equipment Grant, and Seed Grant Applications

- a) The merit of the proposed activities or equipment as a means of enhancing the capabilities and competitiveness of the applicant and/or institution;
- b) The applicant's previous experience and background along with the appropriateness of the proposed activities or equipment for the goals proposed; and
- c) Relevance of the project to long-range improvements in and sustainability of U.S. agriculture, the environment, human health and well-being, and rural communities.

C. Conflicts of Interest and Confidentiality

During the peer evaluation process, we take extreme care to prevent any actual or perceived conflicts of interest that may impact review or evaluation. For the purpose of determining conflicts of interest, we determine the academic and administrative autonomy of an institution by reference to the current Higher Education Directory, published by Higher Education Publications, Inc., 1801 Robert Fulton Drive, Suite 340, Reston, VA, 20191. Phone: (888) 349-7715. Web site: <http://www.hepinc.com>.

Names of submitting institutions and individuals, as well as application content and peer evaluations, are kept confidential, except to those involved in the review process, to the extent permitted by law. In addition, the identities of peer reviewers will remain confidential throughout the entire review process, to the extent permitted by law; therefore, the names of the reviewers will not be released to applicants.

D. Organizational Management Information

Specific management information relating to an applicant shall be submitted on a one-time basis, with updates on an as needed basis. This requirement is part of the responsibility determination prior to the award of a grant identified under this RFA, if such information has not been provided previously under this or another NIFA program. We will provide copies of forms recommended for use in fulfilling these requirements as part of the preaward process. Although an applicant may be eligible based on its status as one of these entities, 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 involved or a determination that an applicant is not responsible based on submitted organizational management information).

PART VI—AWARD ADMINISTRATION

A. General

Within the limit of funds available for such purpose, the NIFA awarding official shall make grants to those responsible, 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 shall 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 (parts 3015 and 3019 of 7 CFR), and NIFA General Awards Administration Provisions at 7 CFR part 3430, subparts A through E.

B. Award Notice

The award document will provide pertinent instructions and information including, at a minimum:

- (1) Legal name and address of performing organization or institution to whom the director has issued an award under the terms of this request for applications;
- (2) Title of project;
- (3) Name(s) and institution(s) of PDs chosen to direct and control approved activities;
- (4) Identifying award number assigned by NIFA;
- (5) Project period, specifying the amount of time NIFA intends to support the project without requiring recompetition for funds;
- (6) Total amount of financial assistance approved for the award;
- (7) Legal authority(ies) under which the award is issued;
- (8) Appropriate Catalog of Federal Domestic Assistance (CFDA) number;
- (9) Applicable award terms and conditions (see <http://www.nifa.usda.gov/business/awards/awardterms.html> to view NIFA award terms and conditions);

(10) Approved budget plan for categorizing allocable project funds to accomplish the stated purpose of the award; and

(11) Other information or provisions deemed necessary by NIFA to carry out its respective awarding activities or to accomplish the purpose of a particular award.

C. Administrative and National Policy Requirements

Several federal statutes and regulations apply to grant applications considered for review and to project grants awarded under this program. These include, but are not limited to:

2 CFR Part 220—Cost Principles for Educational Institutions (OMB Circular A-21).

2 CFR Part 225—Cost Principles for State, Local, and Indian Tribal Governments (OMB Circular A-87).

2 CFR Part 230—Cost Principles for Non-profit Organizations (OMB Circular A-122).

7 CFR Part 1, subpart A—USDA implementation of the Freedom of Information Act.

7 CFR Part 3—USDA implementation of OMB Circular No. A-129 regarding debt collection.

7 CFR Part 15, subpart A—USDA implementation of Title VI of the Civil Rights Act of 1964, as amended.

7 CFR Part 331 and 9 CFR Part 121—USDA implementation of the Agricultural Bioterrorism Protection Act of 2002.

7 CFR Part 3015—USDA Uniform Federal Assistance Regulations, implementing OMB directives (i.e., OMB Circular Nos. A-21, A-87, and A-122, now codified at 2 CFR Parts 220, 225 and 230), and incorporating provisions of 31 U.S.C. 6301-6308 (formerly the Federal Grant and Cooperative Agreement Act of 1977, Pub. L. No. 95-224), as well as general policy requirements applicable to recipients of departmental financial assistance.

7 CFR Part 3016—USDA Implementation of Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

7 CFR Part 3017—USDA implementation of Governmentwide Debarment and Suspension (Nonprocurement).

7 CFR Part 3018—USDA implementation of Restrictions on Lobbying. Imposes prohibitions and requirements for disclosure and certification related to lobbying on recipients of federal contracts, grants, cooperative agreements, and loans.

7 CFR Part 3019—USDA implementation of OMB Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements With Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations (2 CFR Part 215).

7 CFR Part 3021—USDA Implementation of Governmentwide Requirements for Drug-Free Workplace (Grants).

7 CFR Part 3022—Research Institutions Conducting USDA-Funded Extramural Research; Research Misconduct.

7 CFR Part 3052—USDA implementation of OMB Circular No. A-133, Audits of States, Local Governments, and Nonprofit Organizations.

7 CFR Part 3407—USDA procedures to implement the National Environmental Policy Act of 1969, as amended.

7 CFR 3430—Competitive and Noncompetitive Non-formula Financial Assistance Programs--General Award Administrative Provisions.

29 U.S.C. 794 (section 504, Rehabilitation Act of 1973) and 7 CFR Part 15b (USDA implementation of statute) —prohibiting discrimination based upon physical or mental handicap in federally-assisted programs.

35 U.S.C. 200 et seq. —Bayh Dole Act, controlling allocation of rights to inventions made by employees of small business firms and domestic nonprofit organizations, including universities, in federally-assisted programs (implementing regulations are contained in 37 CFR Part 401).

D. Expected Program Outputs and Reporting Requirements

Grantees are to submit initial project information and annual and summary reports to NIFA's electronic, Web-based inventory system that facilitates both grantee submissions of project outcomes and public access to information on Federally-funded projects. The details of these reporting requirements are included in the award terms and conditions. Details of annual and final technical reporting requirements also are included in the award terms and conditions.

If a project is funded, beginning in the first year of funding, the project director will be required to participate in the annual investigator meetings (excluding Conference, Sabbatical and Equipment Grant awards). Seed Grant applications are required to participate beginning in the second year of funding. Reasonable travel expenses should be included as a part of the project budget.

PART VII—AGENCY CONTACTS

For general questions related to the AFRI Programs, applicants and other interested parties are encouraged to contact:

AFRI Program Office:

Mr. Brad Rein, Acting Assistant Director, Institute of Bioenergy, Climate, and Environment

Dr. Robert E. Holland, Assistant Director, Institute of Food Safety and Nutrition

Dr. Muquarrab Qureshi, Assistant Director, Institute of Youth, Family, and Community

Dr. Deborah Sheely, Assistant Director, Institute of Food Production and Sustainability

Telephone: (202) 401-5022

Fax: (202) 401-6488

E-mail: AFRI@nifa.usda.gov

Specific questions pertaining to technical matters may be directed to the appropriate Program Area Contacts:

| Program Area | Program Area Contact: |
|--|---|
| Enhancing Food Safety through Improved Processing Technologies | Dr. Hongda Chen Title: National Program Leader Unit: Division of Food Safety Location: 2438 Waterfront Center Phone: (202) 401-6497 Fax: (202) 401-4888 Email: hchen@nifa.usda.gov |
| Effective Mitigation Strategies for Antimicrobial Resistance | Dr. Mervalin Morant Title: National Program Leader Unit: Division of Food Safety Location: 2342 Waterfront Center Phone: (202) 401-6602 Fax: (202) 401-4888 Email: mmorant@nifa.usda.gov |
| Identifying and Targeting Critical Food Safety Needs | Dr. Jeanette Thurston Title: National Program Leader Unit: Division of Food Safety Location: 2448 Waterfront Center Phone: (202) 720-7166 Fax: (202) 401-4888 Email: jthurston@nifa.usda.gov |

PART VIII—OTHER INFORMATION

A. Access to Review Information

We will send copies of reviews, not including the identity of reviewers, and a summary of the panel comments to the applicant PD after the review process has been completed.

B. Use of Funds; Changes

1. 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.

2. Changes in Project Plans

a. The permissible changes by the awardee, PD(s), or other key project personnel in the approved project shall be limited to changes in methodology, techniques, or other similar aspects of the project to expedite achievement of the project's approved goals. If the awardee or the PD(s) is uncertain as to whether a change complies with this provision, the question must be referred to the Authorized Departmental Officer (ADO) for a final determination. The ADO is the signatory of the award document, not the program contact.

b. The awardee must request, and the ADO must approve in writing, all changes in approved goals or objectives prior to effecting such changes. In no event shall requests be approved for changes that are outside the scope of the original approved project.

c. The awardee must request, and the ADO must approve in writing, all changes in approved project leadership or the replacement or reassignment of other key project personnel, prior to effecting such changes.

d. The awardee must request, and the ADO must approve in writing, all transfers of actual performance of the substantive programmatic work in whole or in part and provisions for payment of funds, whether or not federal funds are involved, prior to instituting such transfers, unless prescribed otherwise in the terms and conditions of the award.

e. The project period may be extended without additional financial support, for such additional period(s) necessary to complete or fulfill the purposes of an approved project, but in no case shall the total project period exceed any applicable statutory limit or expiring appropriation limitation. The terms and conditions of award include information about no-cost extensions of the award and when ADO's prior approval is necessary.

f. Changes in Approved Budget: Unless stated otherwise in the terms and conditions of award, changes in an approved budget must be requested by the awardee and approved in writing by the

ADO prior to instituting such changes, if the revision will involve transfers or expenditures of amounts requiring prior approval as set forth in the applicable Federal cost principles, Departmental regulations, or award.

C. Confidential Aspects of Applications and Awards

When an application results in an award, it becomes a part of the record of NIFA transactions, available to the public upon specific request. Information that the Secretary determines to be of a confidential, privileged, or proprietary nature will be held in confidence to the extent permitted by law. Therefore, any information that the applicant wishes to have considered as confidential, privileged, or proprietary should be clearly marked within the application. The original copy of an application that does not result in an award will be retained by the Agency for a period of three years. Other copies will be destroyed. Such an application will be released only with the consent of the applicant or to the extent required by law. An application may be withdrawn at any time prior to the final action thereon.

D. Regulatory Information

For the reasons set forth in the final Rule related Notice to 7 CFR part 3015, subpart V (48 FR 29114, June 24, 1983), this program is excluded from the scope of the 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.

E. Application Disposition

When each peer review panel has completed its deliberations, the responsible program staff of AFRI will recommend that the project: (a) be approved for support from currently available funds or (b) be declined due to insufficient funds or unfavorable review.

AFRI reserves the right to negotiate with the PD and/or with 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 project for funding.

An application may be withdrawn at any time before a final funding decision is made regarding the application; however, withdrawn applications normally will not be returned. One copy of each application that is not selected for funding, including those that are withdrawn, will be retained by AFRI for a period of three years.

F. Materials Available on the Internet

AFRI program information will be made available on the NIFA Web site: www.nifa.usda.gov/funding/afri/afri.html. The following are among the materials available on the AFRI More Information Page:

1. More information about upcoming AFRI 2014

2. Requests for Applications
3. AFRI Abstracts of Funded Projects
4. AFRI Annual Reports

G. Electronic Subscription to AFRI Announcements

If you would like to receive notifications of all new announcements pertaining to AFRI RFA, you can register via Grants.gov at www.grants.gov/search/subscribeAdvanced.do.

- Enter the e-mail address at which you would like to receive the announcements
- Enter “10.310” for *CFDA Number*
- Select “Subscribe to Mailing List”

Other criteria may be selected; however, your e-mail address and the CFDA number are the only data required to receive AFRI announcements. You do not need to be a registered user of Grants.gov to use this service. You may modify your subscriptions or unsubscribe at any time.

H. Definitions

Please refer to [7 CFR 3430, Competitive and Noncompetitive Non-formula Grant Programs--General Grant Administrative Provisions](#) for the applicable definitions for this NIFA Grant Program.

For the purpose of this program, the following additional definitions are applicable:

Director means the Director of the National Institute of Food and Agriculture (NIFA) and any other officer or employee of NIFA to whom the authority involved is delegated.

Food and Agricultural Science Enhancement (FASE) Grants mean funding awarded to eligible applicants to strengthen science capabilities of Project Directors, to help institutions develop competitive scientific programs, and to attract new scientists into careers in high-priority areas of National need in agriculture, food, and environmental sciences. FASE awards may apply to any of the three agricultural knowledge components (i.e., research, education, and extension). FASE awards include Pre- and Postdoctoral Fellowships, New Investigator grants, and Strengthening grants.

Integrated project means a project incorporating two or three functions of the agricultural knowledge system (research, education, and extension) around a problem or activity.

Limited institutional success means institutions that are not among the most successful universities and colleges for receiving Federal funds for science and engineering research. A list of successful institutions will be provided in the RFA.

Minority-serving institution means an accredited academic institution whose enrollment of a single minority or a combination of minorities exceeds fifty percent of the total enrollment, including graduate and undergraduate and full- and part-time students. An institution in this instance is an organization that is independently accredited as determined by reference to the

current version of the Higher Education Directory, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042.

Minority means Alaskan Native, American Indian, Asian-American, African-American, Hispanic American, Native Hawaiian, or Pacific Islander. The Secretary will determine on a case-by-case basis whether additional groups qualify under this definition, either at the Secretary's initiative, or in response to a written request with supporting explanation.

Multidisciplinary project means a project on which investigators from two or more disciplines collaborate to address a common problem. These collaborations, where appropriate, may integrate the biological, physical, chemical, or social sciences.

Small and mid-sized institutions are academic institutions with a current total enrollment of 17,500 or less including graduate and undergraduate and full- and part-time students. An institution, in this instance, is an organization that possesses a significant degree of autonomy. Significant degree of autonomy is defined by being independently accredited as determined by reference to the current version of the *Higher Education Directory*, published by Higher Education Publications, Inc., 6400 Arlington Boulevard, Suite 648, Falls Church, Virginia 22042 (703-532-2300).

Strengthening Grants mean funds awarded to institutions eligible for FASE Grants to enhance institutional capacity, with the goal of leading to future funding in the project area, as well as strengthening the competitiveness of the investigator's research, education, and/or extension activities. Strengthening grants consist of Standard and Coordinated Agricultural Project Grant types as well as Seed Grants, Equipment Grants, and Sabbatical Grants.

USDA EPSCoR States (Experimental Program for Stimulating Competitive Research) means States which have been less successful in receiving funding from AFRI, having a funding level no higher than the 38th percentile of all States based on a 3-year average of AFRI funding levels, excluding FASE Strengthening funds granted to state agricultural experiment stations and degree-granting institutions in EPSCoR States and small, mid-sized, and minority-serving degree-granting institutions. The most recent list of USDA EPSCoR States is provided in this RFA.

TABLE 1 Most Successful Universities and Colleges Receiving Federal Funds*.

Use to Determine Eligibility for Strengthening Grants

| | | |
|--|---|---|
| Arizona State University (all campuses) | Princeton University | University Maryland, College Park |
| Baylor College of Medicine | Purdue University (all campuses) | University Massachusetts, Amherst |
| Boston University | Rutgers, The State University New Jersey (all campuses) | University Massachusetts, Worcester |
| Brown University | Scripps Research Institute, The | University Miami |
| California Institute of Technology | Stanford University | University Miami (all campuses) |
| Carnegie Mellon University | State University of New York, Stony Brook (main campus) | University Minnesota (all campuses) |
| Case Western Reserve University | Texas A&M University (main campus) | University Missouri, Columbia |
| Colorado State University | Tufts University | University New Mexico (all campuses) |
| Columbia University | University Alabama, Birmingham | University North Carolina, Chapel Hill |
| Consortium for Ocean Leadership | University Alaska, Fairbanks | University of Medicine & Dentistry New Jersey |
| Cornell University (all campuses) | University Arizona | University Pennsylvania |
| Dartmouth College | University California, Berkeley | University Pittsburgh (all campuses) |
| Duke University | University California, Davis | University Rochester |
| Emory University | University California, Irvine | University South Florida |
| Florida State University | University California, Los Angeles | University Southern California |
| George Washington University, The | University California, San Diego | University Texas, Austin |
| Georgia Institute of Technology (all campuses) | University California, San Francisco | University Texas Health Science Center, Houston |
| Harvard University | University California, Santa Barbara | University Texas Health Science Center, San Antonio |
| Indiana University - Purdue University, Indianapolis | University Chicago | University Texas M. D. Anderson Cancer Center |
| Iowa State University | University Cincinnati (all campuses) | University Texas Medical Branch |
| Johns Hopkins University, The | University Colorado (all campuses) | University Texas Southwestern Medical Center |
| Louisiana State University (all campuses) | University Connecticut (all campuses) | University Utah |
| Massachusetts Institute of Technology | University Corporation for Atmospheric Research | University Virginia (main campus) |
| Medical College, Wisconsin | University Delaware | University Washington |
| Medical University, South Carolina | University Florida | University Wisconsin, Madison |
| Miami State University | University Georgia | Vanderbilt University |
| Mount Sinai School of Medicine | University Hawaii, Manoa | Virginia Commonwealth University |
| New York University | University Illinois, Chicago | Virginia Polytechnic Institute and State University |
| North Carolina State University | University Illinois, Urbana-Champaign | Wake Forest University |
| Northwestern University | University Iowa | Washington University, St. Louis |
| Ohio State University (all campuses) | University Kansas (all campuses) | Woods Hole Oceanographic Institution |
| Oregon Health & Science University | University Kentucky (all campuses) | Yale University |
| Oregon State University | University Maryland, Baltimore | Yeshiva University |
| Pennsylvania State University (all campuses) | | |

*Data obtained from the table of Federal obligations for science and engineering research and development to the 100 universities and colleges receiving the largest amounts, ranked by total amount received in FY 2009 of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions (National Science Foundation). Campuses that are part of a larger university system as listed in Table 1 may petition for an exemption to this rule (see Part III, B for information).

TABLE 2 Lowest One Third of Universities and Colleges Receiving Federal Funds*. Use to Determine Eligibility for Possible Waiver of Matching Funds Requirement for Equipment Grants

| | | |
|---|---|---|
| A. T. Still University of Health Sciences | Hendrix College | Regis University |
| Abilene Christian University | HI Pacific University | Rhodes College |
| Agnes Scott College | Highline Community College | RI College |
| AK Pacific University | Hinds Community College | Ridgewater College |
| Albright College | Hood College | Roanoke College |
| Allegheny College | Houston Community College | Rocky Mountain College |
| American Indian Higher Ed. Consortium | Hudson Valley Community College | Rollins College |
| American University Puerto Rico | IL College of Optometry | Roosevelt University |
| Angelo State University | IL Wesleyan University | Saginaw Valley State University |
| Anne Arundel Community College | Immaculata University | Saint Augustine's College |
| Antioch University all campuses | IN University-Purdue University Ft. Wayne | Saint Cloud State University |
| AR Tech University | IN Wesleyan University | Saint Edward's University |
| Arapahoe Community College | Independent College Fund | Saint Lawrence University |
| Arizona Western College | Indian River State College | Saint Mary's College (Notre Dame, IN) |
| Arrowhead Community Colleges | Institute of American Indian and Alaska Native Culture and Arts Development | Saint Mary's College CA |
| Art Ctr. College of Design | Iona College | Saint Mary's College MD |
| Assumption College | Ithaca College | Saint Mary's University (San Antonio, TX) |
| Atlanta Metropolitan College | Ivy Tech Community College IN all campuses | Saint Mary's University MN |
| Atlantic College | John Brown University | Saint Michael's College |
| Augusta State University | John Carroll University | Saint Norbert College |
| Augustana College (Rock Island, IL) | Johnson & Wales University (Providence, RI) | Saint Vincent Catholic Medical Ctrs. NY |
| Augustana College (Sioux Falls, SD) | Juniata College | Saint Vincent College |
| Austin College | Kalamazoo College | Salem State University |
| Austin Community College | Kansas City KS Community College | Salisbury University |
| Avila University | Kansas City University of Medicine and Biosciences | Salve Regina University |
| Babson College | Kean University | San Diego Mesa College |
| Baker University | Keene State College | Sarah Lawrence College |
| Baltimore City Community College | Kenyon College | SC Sea Grant Consortium |
| Bard College | Knox College | Seattle Community Colleges all campuses |
| Bard College at Simon's Rock | Kutztown University PA | Seattle Pacific University |
| Bay Mills Community College | LA Universities Marine Consortium | Seminole State College |
| Beaufort County Community College | Lake Forest College | Seminole State College FL |
| Beloit College | Lake Superior State University | Shawnee State University |
| Benedictine University | Lakeshore Technical College | Simmons College |
| Bennett College | Landmark College | Skagit Valley College |
| Bennington College | Laramie County Community College | Slippery Rock University PA |
| Bentley University | Lasell College | Sojourner-Douglass College |
| Bethany College (Bethany, WV) | Le Moyne College | South Mountain Community College |
| Bethune-Cookman University | Lebanon Valley College | Southeast MO State University |
| Birmingham-Southern College | Lee College | Southeastern OK State University |

| | | |
|--|--|---|
| Bismarck State College | Lehigh Carbon Community College | Southern CT State University |
| Bowie State University | LeMoyne-Owen College | Southern Polytechnic State University |
| Bridgewater State University | LeTourneau University | Southern UT University |
| Butler County Community College (Butler, PA) | Lewis-Clark State College | Southwest FL College |
| Butler University | Lock Haven University PA | Southwestern Assemblies of God University |
| Butte College | Longwood University | Southwestern College (Chula Vista, CA) |
| Cabrini College | Loras College | Southwestern Indian Polytechnic Institute |
| Calhoun Community College | Los Rios Community College District (all campuses) | Southwestern OK State University |
| Canisius College | Lyndon State College | Springfield College (Springfield, MA) |
| Capitol College | Lyon College | Springfield Technical Community College |
| Carl Albert State College | MA College of Liberal Arts | State University of New York College Old Westbury |
| Carroll College | Manhattan College | State University of New York College Oswego |
| Carroll University | Mansfield University PA | State University of New York College Potsdam |
| Central Arizona College | Marietta College | State University of New York Empire State College |
| Central College | Marist College | State University of New York Farmingdale |
| Central Community College | Martin University | State University of New York Fredonia |
| Central CT State University | Mary Baldwin College | State University of New York Institute of Technology Utica-Rome |
| Central OR Community College | Marygrove College | State University of New York New Paltz |
| Centre College | Maryville University Saint Louis | State University of New York Purchase College |
| Chadron State College | McNeese State University | Stevenson University |
| Chestnut Hill College | Mercyhurst College | Stonehill College |
| Christian Brothers University | Mesa State College | Suffolk University |
| Clarion University PA all campuses | Mesabi Range Community and Technical College | Susquehanna University |
| Clark State Community College | Metropolitan State College Denver | Sweet Briar College |
| CO College | Middle TN School of Anesthesia | Taylor University |
| CO State University all campuses | Mid-South Community College | Thiel College |
| Cochise College | Midwestern State University | Tohono O'odham Community College |
| Coe College | Midwestern University (Chicago, IL) | Tri-College University |
| College of Lake County | Millersville University PA | Troy University main campus |
| College of Saint Benedict | Millsaps College | Truckee Meadows Community College |
| College of Saint Elizabeth | Milwaukee School of Engineering | TX A&M University-Texarkana |
| College of Saint Scholastica | Misericordia University | TX College |
| College of the Atlantic | Mohave Community College | TX Wesleyan University |
| College Southern NV | Monmouth College | Tyler Jr. College |
| College Wooster | Montgomery County Community College | Union Graduate College |
| Columbia College (Columbia, MO) | Mountain State University | University AK System of Higher Ed. |
| Columbia College (Columbia, SC) | MS University for Women | University AR Monticello |
| Columbia College of Nursing | MT State University Billings | University Central MO |

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| Columbus State University | MT Tech College of Technology | University Charleston |
| Commonwealth Medical College,The | MT University System all campuses | University Consortium for Geographic Information Science |
| Concord University | Mt. Saint Mary's University | University Dallas |
| Concordia College (Moorhead, MN) | Muhlenberg College | University Evansville |
| CUNY Bronx Community College | Nashville State Community College | University Hartford |
| CUNY Kingsborough Community College | National College of Natural Medicine | University Houston Clear Lake |
| Cuyahoga Community College all campuses | National-Louis University | University IL Springfield |
| Dakota State University | NE Indian Community College | University Indianapolis |
| Del Mar College | Neumann University | University Mary Washington |
| Dickinson State University | New England School of Acupuncture | University MD Ctr. for Environmental Science |
| Doane College | Nicholls State University | University MD University College |
| Dominican University | North GA College & State University | University ME Augusta |
| Drury University | North IA Area Community College | University NE Kearney |
| East Stroudsburg University PA | Northampton Community College | University North AL |
| Eastern Arizona College | Northeast Community College | University of Saint Mary |
| Eastern IL University | Northeast TX Community College | University of the Incarnate Word |
| Eastern Mennonite University | Northern MI University | University of the South |
| Eastern OR University | Northern WY Community College District | University Phoenix |
| Eastern University | Northwest FL State College | University PR, Cayey |
| East-West University | Northwest MO State University | University Puget Sound |
| Eckerd College | Northwestern Health Sciences University | University Redlands |
| Edison State College | Northwestern MI College | University Rio Grande |
| Edward Via College of Osteopathic Medicine | Northwestern OK State University | University Sagrado Corazón |
| El Camino College Compton Ctr. | Northwestern State University | University Tampa |
| Elgin Community College | NY Institute of Technology all campuses | University West GA |
| Elon University | NY Law School | University WI-Parkside |
| Emerson College | Ocean County College | University WI-River Falls |
| Emporia State University | OH Northern University | University WI-Whitewater |
| Essex County College | OH Wesleyan University | UniversityS. Naval Academy |
| Fairleigh Dickinson University all campuses | Orangeburg-Calhoun Technical College | VA Military Institute |
| Fayetteville Technical Community College | Otterbein University | Valdosta State University |
| Ferrum College | PA College of Technology | Victoria College |
| Fitchburg State University | Pace University all campuses | Viterbo University |
| FL State College Jacksonville | Pacific Lutheran University | VT Technical College |
| Florence-Darlington Technical College | Pacific States University | Wabash College |
| Fox Valley Technical College | Paine College | Warren Wilson College |
| Francis Marion University | Palau Community College | Washburn University |
| Franciscan University Steubenville | Pasadena City College | Washington and Lee University |
| Fresno City College | Pearl River Community College | Washington State Community College |
| Ft. Hays State University | Peninsula College | Waukesha County Technical College |
| Ft. Lewis College | Pepperdine University Malibu | Weber State University |
| GA Southwestern State University | Philadelphia College of Osteopathic Medicine | Western Carolina University |
| Gadsden State Community College | Philadelphia University | Western New England College |
| Gainesville State College | Philander Smith College | Western University of Health Sciences |
| Galveston College | Pikes Peak Community College | Westfield State College |

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| Gateway Technical College | Pitzer College | Westminster College (New Wilmington, PA) |
| Gettysburg College | Plymouth State University | Westmont College |
| Gonzaga University | Polk State College | Wheaton College (Norton, MA) |
| Gordon College (Wenham, MA) | Portland Community College | Wheaton College (Wheaton, IL) |
| Goucher College | Presbyterian College | White Earth Tribal and Community College |
| Grand View University | Prescott College | Widener University all campuses |
| Greenville Technical College | Providence College | Wiley College |
| Hamilton College (Clinton, NY) | Quinsigamond Community College | William Carey University |
| Hamline University | Radford University | Winona State University |
| Haywood Community College | Red Rocks Community College | Wofford College |
| Heartland Community College | Reed College | Worcester State University |

*Data obtained from the table of Federal obligations, including American Recovery and Reinvestment Act obligations for science and engineering research and development to universities and colleges, ranked by total amount received, by agency from the FY 2009 Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions (National Science Foundation).

FIGURE 1. Flow Chart for Strengthening Grant Eligibility

