EPSCoR Research Infrastructure Improvement Program Track-3: Building Diverse Communities (RII Track-3)

PROGRAM SOLICITATION
NSF 13-553

National Science Foundation

Office of Integrative Activities

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

July 10, 2013

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 16-1), which is effective for proposals submitted, or due, on or after January 25, 2016.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

EPSCoR Research Infrastructure Improvement Program Track-3: Building Diverse Communities (RII Track-3)

Synopsis of Program:

The National Science Foundation (NSF) Experimental Program to Stimulate Competitive Research (EPSCoR) provides significant investment in 28 states (Alabama, Alaska, Arkansas, Delaware, Hawaii, Idaho, Iowa, Kansas, Kentucky, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Carolina, South Dakota, Tennessee, Utah, Vermont, West Virginia, Wyoming), the Commonwealth of Puerto Rico and the Territories of US Virgin Islands and Guam. Building on that investment, EPSCoR seeks to catalyze novel and innovative mechanisms to promote scientific progress nationwide. Key to the improved academic research competitiveness in each EPSCoR jurisdiction has been the increased attention to both innovation and broadening participation. Continued progress can be catalyzed by connecting the multiple sectors of society that influence and/or benefit from the engagement of diverse communities in scientific discovery and economic development.

Research Infrastructure Improvement Track-3: (RII Track-3) awards provide up to $750,000 per award for up to 5 years to support the strategic goal of broadening participation to improve future R&D competitiveness of EPSCoR jurisdictions. RII Track-3 seeks to broaden the participation of underrepresented groups in STEM fields supported by NSF - underrepresented minorities, women, persons with disabilities and those in underserved rural regions of the country.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- Kelvin Chu, Program Director, 940, telephone: (703) 292-7860, email: kchu@nsf.gov

- Sean C. Kennan, Program Director, 940, telephone: (703) 292-7575, email: skennan@nsf.gov

- Audrey Levine, 940, telephone: (703) 292-7374, email: alevine@nsf.gov

- Timothy M. VanReken, 940, telephone: (703) 292-7378, email: tvanreke@nsf.gov

- Uma D. Venkateswaran, Program Director, 940, telephone: (703) 292-7732, email: uvenkate@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.083 --- Office of Integrative Activities (OIA)

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 5

Anticipated Funding Amount: $750,000 maximum per award with an award duration of up to five years is anticipated to be supported pending availability of funds.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Academic institutions or organizations in jurisdictions that meet the EPSCoR eligibility criteria for RII may submit proposals to the Research Infrastructure Improvement Program Track-3: Building Diverse Communities (RII Track-3) competition.

Who May Serve as PI:

In all cases, Principal Investigators of proposed projects must be affiliated with research universities, agencies, or organizations within the participant jurisdiction.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI:

There are no restrictions or limits.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not required

- **Preliminary Proposal Submission:** Not required

- **Full Proposals:**

    - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
    - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)

B. Budgetary Information

- **Cost Sharing Requirements:**

    Inclusion of voluntary committed cost sharing is prohibited.

- **Indirect Cost (F&A) Limitations:**

    Not Applicable

- **Other Budgetary Limitations:**

    Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):

    July 10, 2013

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions:

Standard NSF award conditions apply.

Reporting Requirements:

Standard NSF reporting requirements apply.

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I. INTRODUCTION

A. EPSCoR Mission and Goals

The mission of EPSCoR is to assist the National Science Foundation in its statutory function

"to strengthen research and education in science and engineering throughout the United States and to avoid undue concentration of such research and education."

EPSCoR goals are to:

- provide strategic programs and opportunities for EPSCoR participants that stimulate sustainable improvements in their R&D capacity and competitiveness, and
- advance science and engineering capabilities in EPSCoR jurisdictions for discovery, innovation, and overall knowledge-based prosperity.

Review the NSF EPSCoR Website to find additional information about EPSCoR objectives and investment strategies.

B. Criteria for Eligibility to Participate in NSF EPSCoR

The NSF EPSCoR Website provides details describing EPSCoR program eligibility.

Twenty-five states, the Commonwealth of Puerto Rico, and the U.S. Territories of Guam and the Virgin Islands are currently eligible to compete in the NSF EPSCoR RII opportunities. The states are:

Alabama, Alaska, Arkansas, Delaware, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, and Wyoming. Data detailing eligibility are provided in the Eligibility Table.

C. Research Infrastructure Improvement Program: Track-3 (RII Track-3)

EPSCoR is accepting requests to build diverse communities for promoting STEM learning and innovation. The intent is to strengthen the science and engineering (S&E) enterprise by enabling the participation of underrepresented groups and members of organizations serving these groups in emerging fields of science and technology. RII Track-3 focuses on innovative initiatives that can transform the frontiers in science by recruiting, training, mentoring, and retaining diverse populations for full participation in the nation's research and education enterprise. The research agenda of these projects should advance cross-cultural team science, attending to both the diversity of opportunities and educational paths, and engage different types of institutions and other organizations to ensure inclusivity in the nation's S&E endeavors.

To ensure maximum impact of limited EPSCoR resources, requests for EPSCoR funding must:

- Engage the full diversity of the jurisdiction's resources in the STEM enterprise;
- Contribute to the jurisdiction's strategy for future research and innovation; and
- Present a detailed strategy and implementation plan with realistic metrics and achievable milestones for subsequent, sustained non-EPSCoR funding from federal, jurisdictional, or private sector sources.

As a testbed for statewide or regional agendas for advancing diversity in S&E, this solicitation supports the Foundation's long-term

commitment to strengthen the S&E enterprise by broadening the participation of diverse communities. RII Track-3 is an activity in which researchers and educators at academic institutions or organizations in EPSCoR jurisdictions will lead efforts for broadening participation of underrepresented groups and underserved communities in emerging fields of science and education. Initiatives may focus on, but are not limited to, one or more of the following:

- Evidence-based use of new and improved virtual learning venues, including the blending of formal, cyber, and informal learning experiences from middle school to career advancement levels
- Use of cybertechnology to attract, retain, and advance learners from underrepresented groups for increased engagement in potentially transformative research
- Building on EPSCoR's strengths in broadening participation of underrepresented groups in S&E to advance participation of underrepresented minorities, women, persons with disabilities, and rural communities in STEM research and education
- Employing innovative concepts for community engagement that include higher education/K-12/community partnerships of STEM students from underrepresented groups in emerging fields of science
- Producing and using curricular and pedagogical materials, learning technologies, and institutional models for preparing and engaging diverse STEM communities motivated to participate at the frontiers of science and engineering. These products should be models that can be broadly adaptable/adoptable, and lead to publications on outcomes that inform others of promising approaches

II. PROGRAM DESCRIPTION

A. Project Components

Proposals must describe cohesive frameworks that contribute to broadening participation strategies and adaptable exemplary practices in STEM learning and innovation within and beyond EPSCoR jurisdictions. The evidence-based approach of the projects should lead to adoptable models to prepare institutions for successful broadening participation in STEM. Strategies to increase the recruitment, retention, and graduation/career progression of underrepresented groups in STEM in institutions of higher learning must be described.

Proposals should consider new evidence-based strategies and practices, and institutional structure models for broadening participation in STEM. Projects developing new methods and strategies for improving the participation of underrepresented groups in STEM should be guided by research on the differential participation and success rates of students from underrepresented groups. Projects should yield evaluation results sufficiently conclusive and descriptive so that successful strategies and interventions can be adopted and distributed nationally.

Projects should contribute to the national understanding about how new strategies are transferred to diverse settings and about how they impact STEM learning and innovation by underrepresented groups in STEM. Evaluation plans should explore the challenges and opportunities for adapting new strategies in diverse institutional settings. Projects should specifically address the challenges to achieving widespread adoption of proven practices.

Proposals should describe goals that are translated into a set of expected measurable outcomes that can be monitored using quantitative or qualitative approaches, or both. These outcomes should be used to track progress, guide the project, and evaluate its impact. The proposals should describe and develop instruments to assess whether those achievements can be attributed to the methods adapted or developed by the project.

B. Important Project Features

Although projects may vary considerably in the approaches undertaken, the number of academic institutions involved, the number of faculty, staff and students who participate, and in their stage of development, all promising projects share certain characteristics:

- Projects should address a recognized need or opportunity, clearly indicate how the need will be met, and be innovative in the production and use of new materials, methods, processes, and/or in the implementation of such products/processes.
- Projects should have a clear relation to student learning, with definite links between project activities and improvements in the success and retention of the target population(s) in STEM endeavors.
- Projects must engage underrepresented groups in frontier research, clearly specifying the innovative STEM opportunity/experience afforded to students and scholars.
- Projects should have a clear and compelling rationale and present evidence supporting the approach to increasing the engagement of underrepresented groups in interdisciplinary science. They also should have an effective dissemination strategy for sharing results-driven approaches for broadening participation.
- Proposals should address long-term sustainability and should demonstrate that there is a reasonable expectation of persistent effects of the funded work, consistent with the aims of the project.
- Projects should have goals that have been translated into a set of expected measurable outcomes that can be monitored using quantitative or qualitative approaches, or both. These outcomes should be used to track progress, guide the project, and evaluate its impact.
- Projects should have an evaluation plan that includes both a strategy for monitoring the project's progress as it evolves to provide feedback to guide these efforts (formative evaluation) and a strategy for evaluating the effectiveness of the project in achieving its goals (summative evaluation). The complexity of the evaluation will depend on the size and scope of the project, and these efforts should be led by independent, external evaluators, who have the credentials to look objectively at the project's progress and outcomes.

C. Project Focus

This activity will serve as EPSCoR's testbed for building approaches for broadening participation, grounded in learning, cognitive, or social science research, to develop and advance participation of those underrepresented in the nation's S&E enterprise. Funded projects are expected to inform and engage broad audiences in building diverse STEM communities and should lead to promising strategies, models, and/or technologies for broadening participation. Projects are expected to deliver sustainable learning activities that complement existing NSF investments in broadening participation. The long-term intent is for RII Track-3 to demonstrate novel and effective strategic approaches for inclusiveness in S&E that can be adapted and replicated nationally.

III. AWARD INFORMATION

$750,000 maximum per award with an award duration of up to 5 years is anticipated to be supported. Estimated program budget, number of awards and average award size/duration are subject to scope of project and availability of funds.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Academic institutions or organizations in jurisdictions that meet the EPSCoR eligibility criteria for RII may submit proposals to the Research Infrastructure Improvement Program Track-3: Building Diverse Communities (RII Track-3) competition.

Who May Serve as PI:

In all cases, Principal Investigators of proposed projects must be affiliated with research universities, agencies, or organizations within the participant jurisdiction.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI:

There are no restrictions or limits.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

Important Proposal Preparation Information: FastLane will check for required sections of the proposal, in accordance with *Grant Proposal Guide* (GPG) instructions described in Chapter II.C.2. The GPG requires submission of: Project Summary; Project Description; References Cited; Biographical Sketch(es); Budget; Budget Justification; Current and Pending Support; Facilities, Equipment & Other Resources; Data Management Plan; and Postdoctoral Mentoring Plan, if applicable. If a required section is missing, **FastLane will not accept the proposal.**

Please note that the proposal preparation instructions provided in this program solicitation may deviate from the GPG instructions. If the solicitation instructions do not require a GPG-required section to be included in the proposal, insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.

Separately submitted collaborative RII Track-3 proposals will **not** be accepted and will be returned without review.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

Whereas the proposed project may employ collaborations between EPSCoR and non-EPSCoR participants, EPSCoR funding can only be requested and used for the EPSCoR-based components. In addition, all activities carried out under an EPSCoR award are subject to the restrictions concerning eligible science, technology, engineering, and mathematics disciplines and activities detailed in Chapter I of the NSF Grant Proposal Guide (GPG).

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. submitter's local time):

    July 10, 2013

D. FastLane/Grants.gov Requirements

For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: http://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

Proposers that submitted via FastLane are strongly encouraged to use FastLane to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: http://www.nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (GPG Chapter II.C.2.d.i. contains additional information for use by proposers in development of the Project Description section of the proposal.) Reviewers are strongly encouraged to review the criteria, including GPG Chapter II.C.2.d.i., prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
   a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
   b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

In reviewing RII Track-3 proposals, the standard criteria will be expanded to include the following additional review criteria as appropriate to the type of the proposed work:

- Does the intellectual framework promote transformative research experiences for underrepresented groups?
- Will the project produce exemplary methods, processes, interventions or models that enhance STEM learning and innovation success by underrepresented minorities and other demographic groups on which the project focuses?

Can these products be adapted easily by other sites?
- Does the project build on existing knowledge about issues affecting the differential participation and success rates of students from underrepresented groups in STEM?
- Is the project customized to the demographic landscape of the proposer's EPSCoR jurisdiction and are mechanisms for broader national adoption described?
- Are appropriate expected measurable outcomes explicitly stated and are they integrated into an evaluation plan?
- Is the evaluation effort likely to produce useful information?
- Are the plans for institutionalizing the approach appropriate?
- Does the project involve a significant effort to facilitate adaptation at other sites, both in EPSCoR and non-EPSCoR jurisdictions?
- Will the project help contribute to interventions to broaden participation in STEM education and research?
- Does the project have the potential to contribute to a paradigm shift in how underrepresented minorities are engaged to participate and succeed in STEM?
- Does the project describe approaches/mechanisms that will result in increased engagement of diverse communities for STEM learning and innovation?

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Panel Review.

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

After programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications. After an administrative review has occurred, Grants and Agreements Officers perform the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process).

B. Award Conditions

An NSF award consists of: (1) the award notice, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award notice; (4) the applicable award conditions, such as Grant General Conditions (GC-1)*; or Research Terms and Conditions* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award notice. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Kelvin Chu, Program Director, 940, telephone: (703) 292-7860, email: kchu@nsf.gov

- Sean C. Kennan, Program Director, 940, telephone: (703) 292-7575, email: skennan@nsf.gov

- Audrey Levine, 940, telephone: (703) 292-7374, email: alevine@nsf.gov

- Timothy M. VanReken, 940, telephone: (703) 292-7378, email: tvanreke@nsf.gov

- Uma D. Venkateswaran, Program Director, 940, telephone: (703) 292-7732, email: uvenkate@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

IX. OTHER INFORMATION

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "NSF Update" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "NSF Update" also is available on NSF's website.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

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NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels

and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

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- **Location:**   4201 Wilson Blvd. Arlington, VA 22230

- **For General Information**   (703) 292-5111
  (NSF Information Center)**:**

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The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

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