

EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement Program (E-CORE RII)

PROGRAM SOLICITATION

NSF 23-587



National Science Foundation
Office of Integrative Activities

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

December 06, 2023

July 09, 2024

July 08, 2025

Second Tuesday in July, Annually Thereafter

IMPORTANT INFORMATION AND REVISION NOTES

Important Update: A Dear Colleague Letter (DCL) informing the community about cost share requirements for the EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement (E-CORE RII) Program ([NSF 23-587](#)) and EPSCoR Research Incubators for STEM Excellence Research Infrastructure Improvement (E-RISE RII) Program ([NSF 23-588](#)) was published on September 7, 2023. Please refer to the DCL ([NSF 23-147](#)) for additional information.

The EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement (E-CORE RII) Program is a new program that responds directly to input from recent national studies and legislation, including the [2022 2M Study of EPSCoR](#), [Envisioning the Future of NSF EPSCoR report](#), and the [CHIPS and Science Act of 2022](#) (Public Law 117 – 167). E-CORE RII, which focuses on the transformation of a jurisdiction's research ecosystem based on jurisdictional need, variation, and integration of core elements, is intended to supplant the [NSF EPSCoR RII Track-1 Program](#), which will be archived in fiscal year 2024.

NSF EPSCoR eligibility is based on a jurisdiction's most recent five-year history of total funds awarded by NSF relative to the Foundation's total research budget for that same period. The [CHIPS and Science Act of 2022 \(P.L. 117-167\)](#) suspends inclusion of new or graduation of existing EPSCoR jurisdictions through fiscal year 2027. Additional details on the EPSCoR eligibility criteria are available on the NSF EPSCoR website (see [RII eligibility](#)).

Any proposal submitted in response to this solicitation should be submitted in accordance with the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) that is in effect for the relevant due date to which the proposal is being submitted. The NSF PAPPG is regularly revised and it is the responsibility of the proposer to ensure that the proposal meets the requirements specified in this solicitation and the applicable version of the PAPPG. Submitting a proposal prior to a specified deadline does not negate this requirement.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

EPSCoR Collaborations for Optimizing Research Ecosystems Research Infrastructure Improvement Program (E-CORE RII)

Synopsis of Program:

The Established Program to Stimulate Competitive Research (EPSCoR) fulfills the mandate of the National Science Foundation (NSF) to promote scientific progress nationwide. Through this program, NSF facilitates the establishment of partnerships among academic institutions, government, industry, and non-profit sectors that are designed to promote sustainable improvements in the research infrastructure, Research and Development (R&D) capacity, and R&D competitiveness of EPSCoR-eligible jurisdictions (i.e., states, territories, and commonwealths).

The E-CORE RII program supports jurisdictions in building capacity in one or more targeted research infrastructure cores that underlie the jurisdiction's research ecosystem. Based on the evidence-based and self-identified need of the jurisdiction, capacity building supported by E-CORE RII may include (but is not limited to) development, enhancement, and/or sustainability of: jurisdiction-wide research administration; research facilities; higher education pathways; STEM education (K-16) pathways; broadening participation; workforce development; national and global partnerships; community engagement and outreach; economic development and use-inspired research; and/or early career research trainee pathways. E-CORE RII projects must be designed to support the sustainability of the infrastructure core(s) beyond the award period. In E-CORE RII's support of one or more research infrastructure cores in an EPSCoR-eligible jurisdiction, the program will also support the development and growth of new jurisdictional networks, and the leveraging of existing jurisdictional networks, that can drive demonstrable and sustainable impact to advance the jurisdiction-wide research ecosystem.

Through the fostering of STEM research ecosystems and research capacity pathways across institution types and sectors in a jurisdiction, E-CORE RII aims to support jurisdiction-wide research infrastructure cores based on jurisdictional variability. A jurisdiction's science, technology, engineering, and mathematics (STEM) research ecosystem encompasses all new and ongoing interactions among its research environment, researchers, stakeholders, and STEM research activities to improve knowledge, or contribute to end-use or societal impacts in the jurisdiction.

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.

- John-David Swanson, telephone: (703) 292-2898, email: jswanson@nsf.gov
- Pinhas Ben-Tzvi, telephone: (703) 292-8246, email: pbentzvi@nsf.gov
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- Casonya M. Johnson, telephone: (703)292-2658, email: casjohns@nsf.gov
- Eric W. Lindquist, telephone: (703) 292-7127, email: elindqui@nsf.gov
- Jeanne R. Small, telephone: (703) 292-8623, email: jsmall@nsf.gov
- Chinonye Whitley, telephone: (703)292-8458, email: cwhitley@nsf.gov

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

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

Award Information

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: 15

Up to 15 awards annually (pending quality of proposals and availability of funds). More than one award per jurisdiction will be considered depending on the quality of the proposals and availability of funds.

Awards will be funded for up to eight years, with an initial commitment for the first four years and a possibility of continuation for four additional years, where the continuation is based on project performance and review of a renewal proposal. Each individual year's continued funding will be contingent on satisfactory progress as based on the annual reporting requirements.

Anticipated Funding Amount: \$37,500,000

Up to \$37,500,000 annually, to support up to 15 newly funded E-CORE RII awards. Number of awards is approximate and subject to the availability of funds and quality of the proposals submitted.

Funding requests must be for a duration of four (4) years, with a maximum budget of \$8 million total for the first four years. Within the maximum award budget, there is no restriction on the amount requested annually.

Note that in only rare and exceptional circumstances will no-cost extensions be granted during the initial or renewal award period.

NSF EPSCoR support of a proposed RII activity should not duplicate other available federal, jurisdictional, or institutional resources and should add significant value to increasing scientific competitiveness at the national or regional level.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions or organizations in jurisdictions that meet the EPSCoR [eligibility](#) criteria and that are without a collaborating role in a current or potentially pending EPSCoR RII Track-1 award unless the current EPSCoR RII Track-1 award is in its final year.
- Institutions of higher education (PhD-granting and non-PhD-granting), acting on behalf of their faculty members, that are accredited in and have a campus in the United States, its territories, or possessions. Distinct academic campuses within multi-campus systems (e.g., campuses that award their own degrees and have independent administrative structures, admissions policies, and alumni associations) qualify as separate submission-eligible institutions. Campuses that plan to submit a proposal through the Sponsored Projects Office of other campuses or organizations should contact NSF EPSCoR to discuss eligibility as early as possible and at least six weeks before submitting such a proposal.
- Non-profit, non-degree-granting domestic U.S. organizations, acting on behalf of their employees, that include (but are not limited to) independent museums and science centers, observatories, research laboratories, professional societies, and similar organizations that are directly associated with the Nation's research or educational activities. These organizations must have an independent, permanent administrative organization (e.g., an office of sponsored research) located in the United States, its territories, or possessions, and have 501(c)(3) tax status.
- Tribal Governments with the governing body of any Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe under the Federally Recognized Indian Tribe List Act of 1994 (25 U.S.C. 479a, et seq.) or Indigenous communities that are not recognized by the Federally Recognized Indian Tribe List Act of 1994 (25 U.S.C. 479a, et seq.).

E-CORE RII submissions should be multi-institutional or multi-organizational, with a lead institution/organization and additional collaborating partner(s), which may include academic and non-academic organizations. Collaborations must be indicative of building or enhancing research infrastructure core(s) within the jurisdiction and an inclusive jurisdiction-wide network that is able to connect major research efforts and individuals in the jurisdiction's research ecosystem.

It is encouraged that the lead institution/organization or at least one collaborative partner be an institution from one of the categories below:

- Emerging Research Institutions as defined in [42 §USC 18901](#) as institutions of higher education with an established undergraduate or graduate program that have less than \$50,000,000 in Federal research expenditures;
- Minority-serving institutions, including Historically Black Colleges and Universities (HBCUs), Hispanic-serving institutions (HSIs), Tribal Colleges or Universities (TCUs), and other institutions that enroll a significant percentage of students from underrepresented populations as [defined](#) by the U.S. Department of Education (e.g., Alaska Native-serving institutions, Native Hawaiian-serving institutions, Predominantly Black Institutions, Asian American and Native American Pacific Islander-serving institutions, and Native American-serving non-tribal institutions);
- Primarily Undergraduate Institutions (PUIs), including two-year colleges, that award associates degrees, bachelor's degrees, and/or master's degrees in NSF-supported fields, but have awarded 20 or fewer Ph.D./D.Sci. degrees in all NSF-supported fields during the combined previous two academic years;
- Institutions of higher education that are dedicated to serve students with disabilities, as listed in Table 1, page 5, of NSF's 2008 Broadening Participation report (https://nsf-gov-resources.nsf.gov/2022-03/nsf_frameworkforaction_0808.pdf);
- Degree-granting women's colleges, as listed in the U.S. Department of Education Digest of Education Statistics (https://nces.ed.gov/programs/digest/d21/tables/dt21_312.30.asp).

Collaborations with other EPSCoR jurisdictions, non-EPSCoR jurisdictions, and international entities are allowed provided there is significant justification outlining a critical need that cannot be fulfilled in the home jurisdiction. However, since EPSCoR program funds may only be allocated for activities and personnel within an EPSCoR jurisdiction, participation of collaborators in non-EPSCoR jurisdictions must be as an unfunded collaborator.

Who May Serve as PI:

Principal Investigators must be affiliated and employed by an eligible organization in an EPSCoR jurisdiction.

Each collaborating institution or organization must be represented by a PI or at least one co-PI.

Limit on Number of Proposals per Organization: 1

Only one submission or active award per institution or organization is allowed where the institution or organization serves as the lead either on a single proposal with subawards, or as the lead on a set of separately submitted collaborative proposals.

There is no limit on the number of submissions per jurisdiction.

Limit on Number of Proposals per PI or co-PI: 1

An individual may serve as Principal Investigator (PI) or co-PI on only one submission, including pending and active E-CORE RII projects, but may serve as senior personnel on any number E-CORE RII proposals or awards.

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 Research.gov: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
 - 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: https://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):
 - December 06, 2023
 - July 09, 2024
 - July 08, 2025
 - Second Tuesday in July, Annually Thereafter

Proposal Review Information Criteria

Merit Review Criteria:

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

Award Administration Information

Award Conditions:

Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements:

Additional reporting requirements apply. Please see the full text of this solicitation for further information.

TABLE OF CONTENTS

Summary of Program Requirements

- I. **Introduction**
- II. **Program Description**
- III. **Award Information**
- IV. **Eligibility Information**
- V. **Proposal Preparation and Submission Instructions**
 - A. Proposal Preparation Instructions
 - B. Budgetary Information
 - C. Due Dates
 - D. Research.gov/Grants.gov Requirements
- VI. **NSF Proposal Processing and Review Procedures**
 - A. Merit Review Principles and Criteria
 - B. Review and Selection Process
- VII. **Award Administration Information**
 - A. Notification of the Award
 - B. Award Conditions
 - C. Reporting Requirements
- VIII. **Agency Contacts**
- IX. **Other Information**

I. INTRODUCTION

A. EPSCoR Mission and Goals

The mission of NSF EPSCoR is to enhance the research competitiveness of targeted jurisdictions (states, territories, commonwealths) by strengthening STEM capacity and capability through a diverse portfolio of investments from talent development to local infrastructure. Through its programmatic goals, EPSCoR seeks to:

- Catalyze the development of research capabilities and the creation of new knowledge that expands jurisdictions' contributions to scientific discovery, innovation, learning, and knowledge-based prosperity;
- Establish sustainable STEM education, training, and professional development pathways that advance jurisdiction-identified research areas and workforce development;
- Broaden direct participation of diverse individuals, institutions, and organizations in the project's science and engineering research and education initiatives;
- Effect sustainable engagement of project participants and partners, the jurisdiction, the national research community, and the general public through data-sharing, communication, outreach, and dissemination; and
- Impact research, education, and economic development beyond the project at academic, government, and private sector levels.

B. EPSCoR and E-CORE RII Eligibility Criteria

EPSCoR jurisdiction eligibility is based on the jurisdiction's most recent five-year history of total funds awarded by NSF relative to the Foundation's total research budget for that same period. An EPSCoR-eligible jurisdiction is defined as a state, U.S. territory, or U.S. commonwealth that previously did not qualify via the established eligibility criteria in any prior year but has become eligible under the current NSF EPSCoR eligibility list. The current table of eligible jurisdictions is available on the NSF EPSCoR website (see [EPSCoR eligibility](#)). The CHIPS and Science Act (P.L. 117-167) suspends inclusion of new or graduation of existing EPSCoR jurisdictions through fiscal year 2027. Additional details on EPSCoR eligibility are available on the NSF EPSCoR website (see [RII eligibility](#)).

For entities to be eligible to apply for funding in E-CORE RII, the EPSCoR-eligible jurisdiction must demonstrate its commitment to develop its research foundation and improve the quality of STEM research conducted at its universities and colleges, by:

- Having an active Jurisdictional Steering Committee with current by-laws in place to support jurisdiction-wide STEM research; and
- Having a jurisdictional Science and Technology (S&T) Plan that has been officially accepted and approved by the jurisdiction within the past five years.

E-CORE RII seeks to align EPSCoR programmatic goals with levels of innovation in research ecosystems within EPSCoR-eligible jurisdictions in order to develop a dynamic and sustainable ecosystem. A critical level of innovation in the EPSCoR STEM research ecosystem is the Jurisdiction Research Excellence and Competitiveness (JREC) level ([2M report on EPSCoR, 2022](#)), which provides a framework to capture and connect the range of academic, nonprofit, and private sector organizations that contribute to jurisdiction-wide competitiveness in STEM. Relationships among research institutions, state- or jurisdiction-level policies and incentives, R&D programs and strategies, political and constituency support, infrastructure

quality and maintenance, and investment strategies contribute to this level of competitiveness. All other levels of competitiveness and the overall research ecosystem are embedded within JREC.

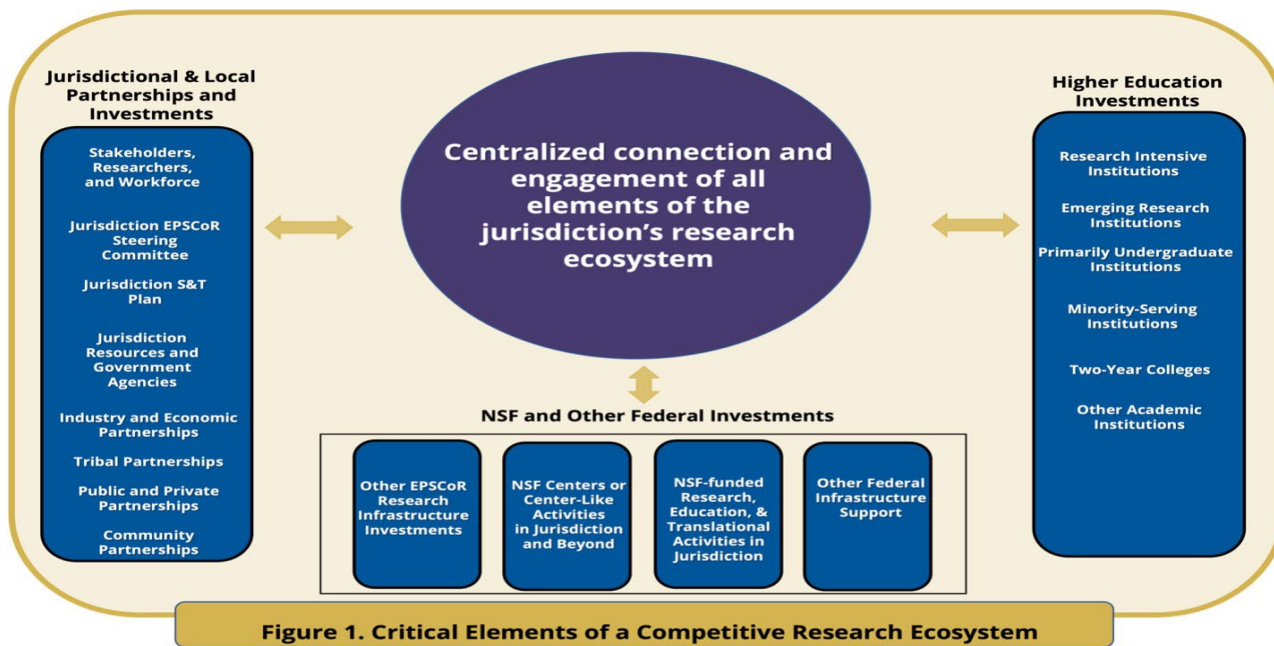


Figure 1. Critical Elements of a Competitive Research Ecosystem. E-CORE RII supports a centralized administrative core that connects and engages all elements of the jurisdiction's research ecosystem. E-CORE RII is designed to connect the multiple components of the research ecosystem through focused activities intended to build jurisdiction-identified research infrastructure cores.

C. Jurisdictional EPSCoR Steering Committee and Science & Technology (S&T) Plan

The success and ultimate sustainability of an E-CORE RII project is rooted in the project's responsiveness to the underlining research capacity needs and priorities of its jurisdiction. As such, a jurisdictional EPSCoR Steering Committee serves as a fundamental and inherent collaborator and partner in an E-CORE RII projects. The Steering Committee, working closely with diverse jurisdictional leaders in academia, government, and the private sector, is expected to work towards identifying R&D improvement strategies that will advance the development of nationally competitive capabilities in jurisdictional S&T aligned with EPSCoR goals and mission. This work must expand to all areas of an E-CORE RII project's proposed research capacity building and fulfill jurisdictional needs associated with workforce development, broadening participation in STEM, preparing a K-16 STEM pipeline, and enhancing the economic impact of the jurisdiction's R&D enterprise.

The EPSCoR Steering Committee should be cognizant of all federal and state investments in the jurisdiction to facilitate linkages and provide pathways of communication in E-CORE RII projects and to allow for jurisdiction-wide participation of diverse entities. To support successful submissions, the Steering Committee should routinely conduct an evidence-based, comprehensive analysis of the jurisdiction's R&D strengths, opportunities that exist to further develop R&D capacity, and challenges that must be overcome to take advantage of those opportunities. The Steering Committee must have also evaluated the maturity of existing R&D efforts in the jurisdiction as well as the potential of new research directions that align with jurisdictional needs. Where needed, the committee is expected to ensure that jurisdictional networks, other NSF and federal investments, and E-CORE RII award(s) in the jurisdiction are working in concert to maximize these investments and ultimately lead to increasing research competitiveness. To allow for E-CORE RII projects to appropriately align with the priorities and needs of the jurisdiction, the jurisdiction's S&T Plan should be routinely revisited to document and record the changing ecosystem of the jurisdiction. To aid in this effort, five percent (5%) of the total E-CORE RII budget should be allocated towards supporting the Jurisdictional EPSCoR Steering Committee in terms of aiding with the continual assessment of jurisdiction-wide research needs and the continual development of the S&T plan as the jurisdiction develops its research ecosystem.

II. PROGRAM DESCRIPTION

A. E-CORE RII Program Goals

E-CORE RII projects are expected to improve a jurisdiction's R&D competitiveness through the creation of a coordinated jurisdiction-wide culture of inclusion that builds a network to connect core components of the jurisdiction's research environment, while also providing opportunities for researchers and stakeholders in the jurisdiction to participate meaningfully within the research ecosystem.

The E-CORE RII Program aims to support EPSCoR-eligible jurisdictions to:

1. Address challenges and opportunities in research infrastructure specific to the current and evolving needs of a jurisdiction's science and technology research ecosystem;
2. Build capacity for jurisdiction-wide investigator expertise into critical masses for sustained, effective, research and education partnerships and funding; and
3. Develop pathways to broaden the participation of institutions and individuals in the jurisdiction's research ecosystem.

Successful E-CORE RII proposals should establish a time-bound sustainable vision for how the planned effort will substantively and wholistically enhance the R&D competitiveness of the jurisdiction's colleges and universities, including its emerging research institutions (which include primarily undergraduate institutions, two-year institutions, and minority-serving institutions), and other key players in the jurisdiction's research ecosystem. E-CORE RII projects should create sustainable core efforts that will be continued beyond the award period and include opportunities to re-evaluate and develop as the needs of the jurisdiction-wide research ecosystem evolve.

B. Core Components of E-CORE RII

E-CORE RII projects will be expected to build research competitiveness in core areas that are most responsive to current challenges and opportunities in the jurisdiction. In addition to clearly detailing how the project aligns with a specific research priority of the jurisdiction's current Science & Technology Plan, E-CORE RII proposals must also detail alignment of the project with all five [EPSCoR program goals](#). The project's targeted core components should be identified and justified by the project in concert with acknowledgement of the strengths of the proposing team, priorities and needs of the jurisdiction as identified in the jurisdiction Science & Technology Plan, and opportunities for alignment with NSF emphasis areas across NSF directorates (e.g., climate change, advanced manufacturing, advanced wireless, artificial intelligence, biotechnology, microelectronics, and quantum information science).

Required Core. Each E-CORE RII project must have the following core component.

- *Administrative Core* – This core should provide mechanisms to connect individuals, teams, institutions, and sectors to improve a jurisdiction's R&D competitiveness through creating a coordinated jurisdiction-wide culture of inclusion that builds a network that connects and democratizes the research environment for all participants. This is expected to provide an opportunity for all researchers in the jurisdiction to participate meaningfully within its research ecosystem.

Additional Core(s): Based on demonstratable research capacity needs in the jurisdiction, E-CORE RII project components should target one or more additional core(s). The proposal should provide a justifiable and data-driven rationale for the incorporation of the targeted core(s). Additional cores may be selected from the following options.

- *Research Support Core* – This core should provide management in administrative, fiscal, and scientific aspects of the proposed network. This may especially focus on administrative elements that are not available to the entire network of partners, and if available, will allow them to fully engage and participate in the jurisdiction-wide scientific enterprise, including enhancing research support infrastructure.
- *Academic Infrastructure and Research Facilities Core* – This core should either leverage existing, or, aid in the coordination and establishment of any jurisdiction-wide core facility or facilities. The core should facilitate the research focus of any center-like activities, EPSCoR funded projects, and/or research activities related to the S&T plan for the jurisdiction. This core may also support the acquisition or equipment, and/or the Alteration and Renovation (A&R) costs to improve existing research infrastructure and laboratories.
- *Higher Education Pathways Core* – This core should provide clear connections of students and common curriculum to scientific fields of interest to the jurisdiction and in support of any center-like activities, EPSCoR-funded projects, and/or activities related to the S&T plan for the jurisdiction. This core may include a targeted focus on graduate student recruitment and retention.
- *STEM Education (K-16) Core* – This core should aid in the development of sustainable and clear pathways to allow the access and participation of all K-16 students in the jurisdiction to exemplary STEM education. Strategies should also include those that emphasize engagement of members of groups underrepresented in STEM.
- *Workforce Development Core* – This core should provide opportunities that allow the jurisdiction to build pathways towards STEM careers that are relevant to ongoing industries and STEM sectors in the jurisdiction.
- *Broadening Participation Core* – This core should provide unique opportunities to create a jurisdiction-wide culture of inclusion for populations from diverse talent pools that have not yet been fully tapped in STEM and provide meaningful opportunities to recruit, retain, and engage these individuals in STEM research. While it is expected that a culture of inclusion must be a component of any E-CORE RII project, this core is expected to provide a more focused opportunity for a jurisdiction to engage and work with these populations and allow for the leveraging of all potential scientific talent in the jurisdiction and provide environments and cultures where they may thrive.
- *National and Global Partnerships Core* – This core should provide opportunities for developing the scientific reputation of ongoing research activities in the jurisdiction through national and global partnership-building. Non-EPSCoR and international collaborations may be

included with appropriate justification, but no EPSCoR funds may be directed to these organizations.

- *Community Engagement and Outreach Core* – This core should create and provide frameworks to be able to connect, communicate, and develop research priorities via co-production with researchers in the jurisdiction and/or the outcome of the scientific enterprise to stakeholders in the jurisdiction.
- *Economic Development and Use-inspired Core* – This core should create opportunities to connect research and research products directly to outcomes. This can be focused on the development of new startups, patents, or contributions to industry, or alternatively, developing policy or agency that connects the outcomes of research to the economic development of the jurisdiction.
- *Early Career Research Trainee Pathway Core* – This core should create opportunities at the undergraduate, graduate, post-doctoral or early career faculty levels to help individuals at this level be recruited, retained, and set for success in research careers. It is expected that efforts in this core will establish trainees and faculty in leadership positions within the scientific community.
- *Other Core(s)* – Depending on a jurisdiction's specific needs, additional evidence-based challenges, or unique opportunities for building research competitiveness, an additional core not identified above may be targeted.

An E-CORE RII project may focus on any given number of cores relevant to the proposed scope of work and budget request. It is not expected that a project will focus on all cores identified above, but rather identify key areas of need and create core(s) to build substantial infrastructure in these identified areas. E-CORE RII projects should focus on depth rather than breadth in their selection of cores. The selection of a core must be based on evidence-based analysis and be justifiable in terms of data illustrating the need for that core within the jurisdiction. Additionally, a criterion for successful renewal funding is to secure additional funding to continue the development and implementation of successful programs initially supported by the project's cores. Additionally, NSF EPSCoR will support multiple opportunities for jurisdictions to add new cores throughout the duration of the project, in particular at the renewal stage where additional cores may be added with the appropriate reassessment of shifting jurisdictional needs.

C. Key Elements of E-CORE RII Projects through the Administrative Core

To build and support research networks to connect core activities within the jurisdiction and through the required Administrative Core, E-CORE RII projects must operationalize five design elements of collaborative infrastructure in ways that catalyze and accelerate systemic change and lead to substantially broadened participation in STEM research capacity. The five design elements of E-CORE RII collaborative infrastructure are outlined below.

1. **Broadening Participation and Collaboration:** Networks and partnerships should work collaboratively across the jurisdiction to develop a strategic plan centered on a shared vision to address an identified broadening participation challenge and achieve related outcomes. E-CORE RII projects must build collaborative infrastructure into their approach to broadening participation in research and thus building and strengthening research capacity.
2. **Connections:** Project teams should consist of a broad swath of individuals, projects, or center-like activities across partnering organizations, which will include a diverse representation of academic institution types (e.g., research-intensive institutions, emerging research institutions, primarily undergraduate institutions, minority-serving institutions, two-year colleges) and/or sectors (e.g., non-academic, governmental, industry) within the jurisdiction. These teams, in collaboration with the Jurisdictional Steering Committee, will engage in jurisdiction-wide network-building activities to accomplish project goals. Additionally, partnerships with other federal, state, or non-profit programs are encouraged.
3. **Goals, Metrics, and Evaluation:** Project teams must develop a set of measurable goals and objectives aligned with jurisdictional needs. A plan documenting the alignment of well-defined, relevant goals and objectives with project outcomes is critical.
4. **Leadership and Communication Capacity:** Projects must include internal and external communication plans and explain how they will develop leadership capacity and distribute leadership within and among partnering organizations.
5. **Jurisdictional Development:** Projects must describe their overall contribution to developing research capacity in the jurisdiction and thus contribute to the nation's STEM workforce and research ecosystem.

Seed funding and workshops are expected to be a major mechanism that will be used in the Administrative Core to connect and provide support for individuals and teams to engage with the jurisdiction-wide research ecosystem. Some strategies for the use of seed funding and workshops may include, but are not limited to, the connection of individuals or teams of individuals from multiple institution types to engage with existing research efforts in the jurisdiction; the development of seed funding that forms new partnerships that translate to new endeavors; the connection of individuals, labs, and networks to other efforts outside the jurisdiction; opportunities for student and postdoctoral fellowships; and the creation of workshops to bring individuals together to forge new partnerships. Chosen strategies and investments need to be clearly outlined and plans to maximize the participation across the entire jurisdiction (irrespective of institution or sector) must be clear. Seed funding should be used to connect teams and individuals across the jurisdiction in alignment with the NSF mission as outlined in the [PAPPG](#).

Continual Improvement and Assessment of Jurisdiction Research Ecosystem

The success of E-CORE projects and the wider improvement and creation of a jurisdiction-wide research ecosystem is rooted in the implementation of a continual process improvement cycle. To facilitate the continued assessment of the project, each E-CORE project must include an evaluator that is able to assess progress towards all elements of the project. Additionally, proposals must include a preliminary timetable and/or strategic plan for achieving those goals, and/or a logic model with a clearly articulated theory of change that identifies appropriate indicators of progress towards the desired outcomes. If awarded, the project will create a comprehensive Strategic Plan according to NSF guidance that will be used to identify when project milestones and goals are met and identify resulting outcomes that will be approved by NSF EPSCoR. Outputs and outcomes will be assessed yearly by the team and if needed, corrections may be made in consultation with NSF EPSCoR and subsequently incorporated into the Strategic Plan and reported to NSF EPSCoR accordingly through the EPSCoR Data Outcomes Collection System (EDOCS). Even though the award will be initially made for four years, each year's increment is dependent on progress towards the goals of the project and mitigation of challenges encountered as demonstrated through the continuous improvement cycle and reported through annual reporting to NSF EPSCoR.

Moreover, the E-CORE project is expected to partner with the Jurisdictional EPSCoR Steering Committee to continually assess and identify evolving strengths within the research landscape of the jurisdiction. These assessments should be data-driven and evidence-based and help inform the Jurisdictional EPSCoR Steering Committee as they prepare the continually evolving S&T plan for the jurisdiction.

Renewal

In the third quarter of the third year of the award, funded E-CORE projects will be eligible to apply for a renewal award to support a second four-year period for the project. Projects that wish to do this will need to contact their cognizant Program Officer for additional guidance. The submission of the proposal and potential award will be concurrent with an assessment of progress by NSF EPSCoR or its designee in the form of a Site Visit or other similar mechanism. Renewal requests will be assessed through merit review and the Site Visit assessment. Awards will be based on the quality of the submitted proposal, progress towards stated project goals, the creation and maintenance of research networks that involve the entire jurisdiction in all research areas of the jurisdiction, connection and assessment of the changing research landscape within the jurisdiction, and the development of clear pathways to sustainability as assessed through proposal merit review and the Site Visit.

III. AWARD INFORMATION

Up to \$37,500,000 annually, to support up to 15 newly funded E-CORE RII awards. Number of awards is approximate and subject to the availability of funds and quality of the proposals submitted.

Note that in only rare and exceptional circumstances will no-cost extensions be granted during the initial or renewal award period.

NSF EPSCoR support of a proposed RII activity should not duplicate other available federal, jurisdictional, or institutional resources and should add significant value to increasing scientific competitiveness at the national or regional level.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions or organizations in jurisdictions that meet the EPSCoR [eligibility](#) criteria and that are without a collaborating role in a current or potentially pending EPSCoR RII Track-1 award unless the current EPSCoR RII Track-1 award is in its final year.
- Institutions of higher education (PhD-granting and non-PhD-granting), acting on behalf of their faculty members, that are accredited in and have a campus in the United States, its territories, or possessions. Distinct academic campuses within multi-campus systems (e.g., campuses that award their own degrees and have independent administrative structures, admissions policies, and alumni associations) qualify as separate submission-eligible institutions. Campuses that plan to submit a proposal through the Sponsored Projects Office of other campuses or organizations should contact NSF EPSCoR to discuss eligibility as early as possible and at least six weeks before submitting such a proposal.
- Non-profit, non-degree-granting domestic U.S. organizations, acting on behalf of their employees, that include (but are not limited to) independent museums and science centers, observatories, research laboratories, professional societies, and similar organizations that are directly associated with the Nation's research or educational activities. These organizations must have an independent, permanent administrative organization (e.g., an office of sponsored research) located in the United States, its territories, or possessions, and have 501(c)(3) tax status.
- Tribal Governments with the governing body of any Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe under the Federally Recognized

Indian Tribe List Act of 1994 (25 U.S.C. 479a, et seq.) or Indigenous communities that are not recognized by the Federally Recognized Indian Tribe List Act of 1994 (25 U.S.C. 479a, et seq.).

E-CORE RII submissions should be multi-institutional or multi-organizational, with a lead institution/organization and additional collaborating partner(s), which may include academic and non-academic organizations. Collaborations must be indicative of building or enhancing research infrastructure core(s) within the jurisdiction and an inclusive jurisdiction-wide network that is able to connect major research efforts and individuals in the jurisdiction's research ecosystem.

It is encouraged that the lead institution/organization or at least one collaborative partner be an institution from one of the categories below:

- Emerging Research Institutions as defined in [42 USC 18901](#) as institutions of higher education with an established undergraduate or graduate program that have less than \$50,000,000 in Federal research expenditures;
- Minority-serving institutions, including Historically Black Colleges and Universities (HBCUs), Hispanic-serving institutions (HSIs), Tribal Colleges or Universities (TCUs), and other institutions that enroll a significant percentage of students from underrepresented populations as [defined](#) by the U.S. Department of Education (e.g., Alaska Native-serving institutions, Native Hawaiian-serving institutions, Predominantly Black Institutions, Asian American and Native American Pacific Islander-serving institutions, and Native American-serving non-tribal institutions);
- Primarily Undergraduate Institutions (PUIs), including two-year colleges, that award associates degrees, bachelor's degrees, and/or master's degrees in NSF-supported fields, but have awarded 20 or fewer Ph.D./D.Sci. degrees in all NSF-supported fields during the combined previous two academic years;
- Institutions of higher education that are dedicated to serve students with disabilities, as listed in Table 1, page 5, of NSF's 2008 Broadening Participation report (https://nsf.gov/resources/nsf.gov/2022-03/nsf_frameworkforaction_0808.pdf);
- Degree-granting women's colleges, as listed in the U.S. Department of Education Digest of Education Statistics (https://nces.ed.gov/programs/digest/d21/tables/dt21_312.30.asp).

Collaborations with other EPSCoR jurisdictions, non-EPSCoR jurisdictions, and international entities are allowed provided there is significant justification outlining a critical need that cannot be fulfilled in the home jurisdiction. However, since EPSCoR program funds may only be allocated for activities and personnel within an EPSCoR jurisdiction, participation of collaborators in non-EPSCoR jurisdictions must be as an unfunded collaborator.

Who May Serve as PI:

Principal Investigators must be affiliated and employed by an eligible organization in an EPSCoR jurisdiction.

Each collaborating institution or organization must be represented by a PI or at least one co-PI.

Limit on Number of Proposals per Organization: 1

Only one submission or active award per institution or organization is allowed where the institution or organization serves as the lead either on a single proposal with subawards, or as the lead on a set of separately submitted collaborative proposals.

There is no limit on the number of submissions per jurisdiction.

Limit on Number of Proposals per PI or co-PI: 1

An individual may serve as Principal Investigator (PI) or co-PI on only one submission, including pending and active E-CORE RII projects, but may serve as senior personnel on any number E-CORE RII proposals or awards.

Additional Eligibility Info:

For entities to be eligible to apply for funding in E-CORE RII, the EPSCoR-eligible jurisdiction must demonstrate its commitment to develop its research foundation and improve the quality of STEM research conducted at its universities and colleges, by:

- Having an active Jurisdictional Steering Committee with current by-laws in place to support jurisdiction-wide STEM research; and
- Having a jurisdictional Science and Technology (S&T) Plan that has been officially accepted and approved by the jurisdiction within the past five years.

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 Research.gov or Grants.gov.

- Full Proposals submitted via Research.gov: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal and Award Policies and Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov. The Prepare New Proposal setup will prompt you for the program solicitation number.
- 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: (https://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) 292-8134 or by e-mail from nsfpubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via Research.gov. PAPPG Chapter II.E.3 provides additional information on collaborative proposals.

See PAPPG Chapter II.D.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

The following instructions are specific to proposals submitted to the EPSCoR E-CORE RII competition and supplement the NSF PAPPG and NSF Grants.gov Application Guide:

- E-CORE RII proposals may only be submitted by organizations in eligible EPSCoR jurisdictions listed in Section IV of this solicitation. An organization may only serve as lead on one proposal, either as the lead on a single proposal with subawards, or as the lead on a set of separately submitted collaborative proposals.

Proposal Set-Up: Select "Prepare New Full Proposal" in Research.gov. Search for and select this solicitation title in Step One of the Full Proposal wizard. In the proposal details section, select "Single proposal (with or without subawards)" or "Separately submitted collaborative proposal". The project title must begin with "E-CORE RII:" and follow with an informative title in the topic area.

1. Senior Personnel. The lead PI must have relevant expertise and their primary employment is with the submitting institution/organization within the jurisdiction and all other participating institutions/organizations should have at least one individual designated as PI or co-PI on the proposal with relevant expertise.

2. Project Summary. In accordance with the guidance in the NSF PAPPG, the Project Summary must include three separate sections labeled Overview, Intellectual Merit, and Broader Impacts. In the Project Summary, briefly describe: the vision and goals of the project; targeted research infrastructure core(s) for the project and a supporting rationale for their inclusion; a plan for building a jurisdiction-wide research ecosystem to support and connect the jurisdiction's research infrastructure activities (e.g., cores) and other efforts that support the landscape of research currently present in the jurisdiction; a statement of the objectives and methods to be employed; expected impacts of the proposed activities; and plans for sustaining collaborations, networks, activities, and impacts beyond the initial four-year award period.

3. Project Description (20 pages maximum). This section should present the proposed activities in a clear, compelling way and describe how the activities will advance jurisdiction-wide research competitiveness and lead to a sustainable jurisdiction-wide network to support the needs of the jurisdiction. In addition to the requirements contained in the NSF PAPPG, **including a separate section labeled Broader Impacts**, the Project Description must articulate clear plans (adequately labeled in the narrative) for the elements described below.

I. State of the Jurisdiction and E-CORE RII Vision

A. Jurisdiction-wide status, strengths, and challenges

Describe the state of the jurisdiction's academic R&D enterprise, including the strengths, barriers, and opportunities for the development of the academic institutions in support of overall jurisdiction-wide R&D objectives. Provide an evidence-based assessment of jurisdiction-wide research areas of strength already represented in the jurisdiction, as well as opportunities to grow those strengths or create new opportunities. In addition to strengths and opportunities, this section should discuss potential barriers in terms of broadening the participation of individuals, institutions, or sectors in the jurisdictional research ecosystem. This description should be inclusive of different areas of science, as well as other components

critical to building research capacity within the jurisdiction. This description should be in alignment with the jurisdiction's S&T plan.

B. E-CORE RII Goals and Vision

Using evidence described in response to the requirements outlined in Section II, describe the goals and vision of the E-CORE RII project, including identification of targeted research infrastructure cores to support the advancement of the jurisdiction's research competitiveness and a description of how the project will serve as a connector of research and education activities across the jurisdiction. This section of the proposal should provide a concise description of the long-term network development in sufficient detail to enable the intellectual merit and broader impacts to be assessed. Include a specific discussion of the vision of how the collaborative project effort will positively impact the bolstering of the jurisdiction's research capacity. Finally, discuss how the E-CORE RII project aligns with the five NSF EPSCoR programmatic goals.

C. Sustainability

Describe the overall goals for sustaining the key outcomes of the project beyond the award period. Provide a rationale for the goals that are identified and indicate the desired trajectory toward reaching these goals during the first four-year period of the award and beyond, including milestones and timelines. The plans should explain how advances through the Administrative Core and additional selected Cores are realized during the project, how activities are established, and how each will serve to advance the S&T competitiveness of the jurisdiction. As appropriate, the general plans for maintaining activities and their outcomes into the future should emphasize the project's strategies for identifying priority areas, its innovative approaches to securing necessary financial support, and its creativity in leveraging other NSF, federal, state, and private resources. The realization of some of these strategies will be a requirement for renewal funding.

II. Strategic Plan, Assessment, and Evaluation

A. Strategic Plan

The Strategic Plan must clearly define the status of the jurisdictional research ecosystem and describe how the features of the project will be integrated to achieve the vision. In particular, the plan for building networks to connect participants in the jurisdictional research ecosystem must be presented with clear strategies that are Specific, Measurable, Achievable, Relevant, and Time-Bound (SMART).

The Strategic Plan should include the high-level goals of each of the networking and core components described in previous sections and the interrelationships among those goals, as well as the strategic role of each of the partner institutions in achieving these goals. The plan should also include the high-level expected progress of the E-CORE RII efforts across the first four years of support. The E-CORE RII Strategic Plan should provide a roadmap with major milestones and describe how the E-CORE RII leadership will know when it has been successful in meeting its goals. Finally, the E-CORE RII Strategic Plan should also articulate the logical reasoning that connects the proposed activities to the identified goals and how they will be connected across the jurisdictional partners. The overall strategy must have the flexibility and the agility to evolve over time as these goals are met, or challenges are encountered.

B. Evaluation and Assessment Plan

An independent (to the project) expert evaluator must provide annual evaluation and assessment of the project. In addition, quantitative collection is required as part of the EPSCoR Data Outcomes Collection System (EDOCS) inputs and should be used in concert with any additional quantitative or qualitative data collected by the required independent evaluator.

The Evaluation and Assessment Plan should be an integral part of the project design and be connected to the Strategic Plan to aid in the identification of outcomes, impacts, goals, and objectives. The Evaluation and Assessment Plan should be a tool for providing effective feedback to the project's management team by the independent evaluator. Evaluation plans should include formative and summative assessments. The plan must include additional metrics aligned with EPSCoR's programmatic goals.

In addition to the project-specific evaluation, E-CORE RII awardees will also be required to participate in the EDOCS data-collection activity coordinated by NSF EPSCoR and carried out by its designated entity. This activity is intended to facilitate standardized, accurate metrics tracking across projects and across time and to complement the projects' individual evaluation and assessment efforts.

E-CORE RII proposals must include as a part of the Evaluation and Assessment Plan, how the project will work with the Jurisdictional EPSCoR Steering Committee to continually assess and co-develop the jurisdiction-wide research ecosystem. This work should guide the jurisdiction and provide a mechanism to continually revisit the S&T plan as the jurisdiction's research ecosystem evolves through the duration of the award.

III. Leadership, Organization, and Management

A. Leadership Team

To properly support the identified cores in building research capacity within the jurisdiction, the proposal should include a clear description of the composition and expertise of the leadership team. The E-CORE RII Leadership Team must include individuals with: (a) proven success in building or managing large teams and connecting individuals to networks; (b) leadership in STEM capacity-building activities; (c) expertise in specific core components; and (d) experience in diversity and inclusion activities.

B. Management Plan

Proposals must include a management plan that describes the administration of the E-CORE RII project, including the functions of the leadership team, key personnel, and the role of any advisory committees, executive committee(s), or their equivalent. While the details of the structure are left to the proposers, the management structure should be designed to facilitate and integrate the program's mission of building networks to support the jurisdiction's research ecosystem and build capacity in one or more chosen core components. In addition, the proposed management plan should address the roles, authorities, and accountability for the leadership team that will mitigate the potential for bottlenecks in decision making.

Specifically, the successful proposal will delineate:

- Overall management and reporting structure of the E-CORE RII.
- Identification of personnel or groups, including leadership team members, responsible for each component of the project and the relevant experience and expertise of these individuals.

C. Diversity and Culture of Inclusion

Describe the vision and plans for nurturing a culture of inclusion to ensure diverse participation in the E-CORE RII. A culture of inclusion has many important aspects that are essential for deep collaboration, including the participation of members from a variety of scientific backgrounds and training, which is necessary for true convergent research and innovation. A culture of inclusion must also foster the participation of members from diverse talent pools that have not yet been fully tapped in STEM, and a diversity of partner institutions, including industry and practitioner, that will bring different perspectives to bear on the goals of the project. The vision for diversity and inclusion should go well beyond numbers and include a description of the integration and roles of diverse participants in the project.

E-CORE RII is committed to enhancing the diversity and inclusion of all underrepresented populations in STEM. The proposal should describe plans to create and nurture a culture of inclusion to foster the engagement of all E-CORE RII participants, including those from a diverse range of scientific backgrounds and training and those from groups that are historically underrepresented in the scientific topic of choice. This section should include evidence-based and intentional programming to support diversity and a culture of inclusion that integrate with the entire E-CORE RII. Suitable metrics to assess the E-CORE RII's diversity and inclusion goals should be described, and feedback loops should be in place for independent assessment and continuous improvement of diversity and inclusion in all dimensions of E-CORE RII operation. This section should also include a description of plans for recruiting, mentoring, and retaining undergraduates, graduate students, and members of the research and leadership team from groups historically underrepresented in STEM.

IV. Results from Relevant Prior Support

Describe results from relevant prior NSF support and other prior federal or other investments of the PIs and co-PIs in the last five years. This section should include a description of the activities and impacts of relevant previous NSF awards, including major accomplishments in both intellectual merit and broader impacts towards the chosen core components of the E-CORE RII.

4. Budget and Budget Justification.

A four-year cumulative budget will be automatically generated by Research.gov or Grants.gov. Separate budget and budget justification pages must also be provided for each organization receiving a subaward. All faculty-level and equivalent personnel expected to receive greater than two months of salary annually must be identified, and justification must be provided. Support for all members of the project's leadership team must be included in the budget.

Budgets should allow for travel and contracting expenses necessary to participate in NSF EPSCoR award monitoring and oversight activities, and to engage in national and jurisdictional EPSCoR events. In particular:

- The independent evaluator must be retained as a consultant to the project.
- Newly awarded E-CORE RII projects are required to hold a strategic planning meeting within 90 days of the project award date. Funds should be allocated to host this meeting, with the entire leadership team in attendance.
- E-CORE RII projects will be required to host a Site Visit in Project Year 3. Funds should be allocated to ensure an appropriate team of project participants can attend Site Visit, and to provide meeting space for the Site Visit.
- The travel budget should include funds for an appropriate team of project participants to attend annual EPSCoR PI meetings and the biennial National EPSCoR Conference.
- Funds must be included to host or facilitate jurisdiction-wide meetings in the home jurisdiction, such as EPSCoR all-hands workshops and/or science symposia that include support for student (undergraduate and graduate as appropriate) participants of the E-CORE RII project.
- Five percent (5%) of the budget should be allocated towards supporting the Jurisdictional EPSCoR Steering Committee in terms of aiding with the continual assessment of jurisdiction-wide research needs and the continual development of the S&T plan as the jurisdiction develops its research ecosystem.

See Section V.B. below for additional information and guidance.

5. Facilities, Equipment, and Other Resources.

Provide a description of relevant available facilities, equipment, and other resources relevant to the project for each EPSCoR jurisdiction in the collaboration.

6. Senior Personnel Documents

Biographical Sketches. In accordance with the guidance contained in the NSF PAPPG, a separate biographical sketch must be provided for each individual designated as senior personnel on the project. It is permitted to include biographical sketches for any named collaborator ("Other Personnel") whose expertise is crucial to the success of the project, including the independent evaluator(s). If doing so, these biographical sketches must be uploaded in the Other Personnel Biographical Information section in Research.gov and they must conform to NSF guidelines for biographical sketches. Biographical sketches for members of External Advisory Committees or Boards should not be included.

Current and Pending Support. In accordance with the guidance contained in the NSF PAPPG, current and pending support information must be separately provided for each individual designated as senior personnel on the project.

7. Supplementary Documentation

7.1. Lists of Participants and Participating Organizations.

a. List of Participants. Provide an alphabetical (by last name) list of all participating senior investigators (faculty-level and equivalent), anyone named in the proposal who will receive financial support through the project (including subcontractors), and other key personnel (including advisory board members, independent evaluators, and collaborators). This list must identify the roles of participants as follows:

- PI: the Principal Investigator (PI) of the project as indicated on the Cover Sheet;
- Co-PI: a co-Principal Investigator as indicated on the Cover Sheet;
- Funded: any funded participant whose name appears in the proposal including Budget lines A or B;
- Evaluator: any individual independent evaluator who is named in the proposal;
- Consultant: any named individual (other than the independent evaluator(s)), who will receive a subcontract or consultant fees under budget lines G.3 or G.6;
- Advisory: any individual named in the proposal as an advisor to the project including as a member of an external advisory board; and,
- Unfunded: any collaborator or participant named in the proposal with a specified role but who will not receive salary or other payment.

Give the full first and last names and organizational affiliations of all such individuals. List only those individuals who are named and have roles specified in the proposal.

b. List of Participating Organizations. Provide a list of all organizations (including, but not limited to, academic and research institutions, companies, government agencies, and non-profit organizations) that will participate in, contribute to, or directly benefit from the proposed project. This list must identify the roles of the participating organizations as follows:

- Primary awardee(s): the submitting organization as indicated on the Cover Sheet if submitting as a "Submission of a collaborative proposal from one organization," or as indicated on the Cover Sheets of each Cover Sheet submission if submitting as a "Submission of a collaborative proposal from multiple organizations";
- Subawardee: any organization funded through a subaward on budget line G.5;
- Subcontractor: any organization that will contract with the project through budget line G.3 or G.6, including the independent evaluators if the contract will go to an organization; and,
- Unfunded: any organization named in the proposal that will provide facilities or support including access to laboratory equipment or internships, but which will not receive funding or other payment.
- Give the full name and place of business (city, state) of all such organizations. List only those organizations that are named and have roles specified in the proposal.

Examples for the lists of participants and participating organizations:

- Person A from institution X will provide data and assist in analyses but will not be funded by the project. Person A is named in the proposal and the role is described – list person A as a participant (collaborator); do not list X as a participating organization.
- Organization Y, which will not receive any funds from the project, submits a letter, via person B, committing specific resources to the project (such as internships or use of lab space) – list Y as a participating organization (unfunded); if person B has a role in providing this support, specified either in the proposal or the letter, then list person B as a participant (unfunded), otherwise do not.
- Person C, affiliated with organization Z, is the independent evaluator for the project and is named in the proposal. List person C as a participant (evaluator). If person C will be compensated via organization Z, then also list Z as a participating

organization (subcontractor), otherwise do not.

7.2. Letters of Collaboration.

Letters of support are not permitted as the roles of both the established and new collaborations and extent of involvement in the project should be clearly outlined in the Project Description. However, up to a maximum of five Letters of Collaboration of two pages or less from other partners or jurisdictional officials may be included to document the commitment of resources that will be relied upon beyond the collaboration among the core project investigators.

7.3. Science and Technology Plan.

In the Other Supplementary Documents Section, include a copy of the jurisdiction's current S&T Plan. The S&T Plan must have been officially accepted or approved within at least the past five (5) years either via the EPSCoR jurisdiction steering committee or a governing official or body acting on behalf of the jurisdiction. Evidence of official acceptance or approval by the designated body or official, including the effective date and signature(s) of the approver(s), must be clearly indicated, either in the S&T Plan itself or via an official document (or letter) uploaded separately as a Supplementary Document. In addition, the effective date of the S&T plan must be clearly indicated on the cover page of the plan. Note that no one who is a named participant on the project may serve as an official approver of the jurisdiction's S&T Plan. The S&T Plan should establish the jurisdiction-wide research priorities, including specific goals and objectives, and provide the framework that is expected to guide the jurisdiction's use of R&D infrastructure improvement resources. The S&T Plan should also be informed by the jurisdiction's economic development priorities and should describe pathways for bringing research outputs and outcomes to the marketplace where appropriate. The S&T Plan must identify the STEM research priorities of the jurisdiction. Alignment between the research and capacity-building activities of the proposal and the STEM research priorities in the S&T Plan will be considered during proposal review with respect to the additional solicitation specific review criteria, particularly Jurisdictional Impacts (see VI.A.2 Merit Review Criteria, below).

7.4. Postdoctoral Researcher Mentoring Plan (if postdocs will be supported by the project) and Data Management Plan. See the NSF PAPPG for details.

8. Single Copy Documents.

Collaborators & Other Affiliations (COA) Information. Each individual identified as senior project personnel must submit information on collaborators and other affiliations as single copy documents (see the NSF PAPPG). Please note that if submitting via Research.gov, COA information for Senior Personnel is uploaded in the Senior Personnel Documents section of the proposal. This information must be submitted for each individual identified as senior project personnel in the List of Participants (the PI, co-PIs, and Funded Participants). Do not submit COA Information for independent evaluators, external advisory board members, or unfunded collaborators.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

- Funding requests must be for a duration of four (4) years, with a maximum budget of \$8 million total for the first four years. There is no restriction on the amount requested annually
- EPSCoR funding may not be used to support participants from non-EPSCoR jurisdictions.
- Subawards to organizations in non-EPSCoR jurisdictions are not permitted since EPSCoR funds may not be allocated for non-EPSCoR jurisdictions.
- Financial compensation for the independent evaluator(s) must be included in the budget of the submitting organization under NSF budget line G.3 (Consultant Services).
- Only the budget of the submitting organization may include subawards (i.e., no subawards may appear in the budgets of subawardee organizations).
- If the proposal is being submitted as a "Submission of a collaborative proposal from one organization," budgets for participating organizations must be included as subawards to the budget of the submitting organization. Only the budget of the submitting organization may include subawards (i.e., no subawards may appear in the budgets of sub awardee organizations). Each subaward must include a separate budget justification of no more than five pages (see PAPPG Chapter II.D.2.f).
- If the proposal is being submitted as a "Submission of a collaborative proposal from multiple organizations," follow the instructions in PAPPG Chapter II.E.3 regarding budget submissions.
- Proposal budgets must comply with guidance in 2 CFR 200 and the current NSF Proposal and Award Policies and Procedures Guide (PAPPG). Proposing entities are cautioned to ensure that all costs proposed are allowable (allocable, reasonable, and necessary), especially those costs associated with participants (Line F on the Proposal Budget). Costs typically considered to be for entertainment, incentive, or promotional purposes should be sufficiently detailed in the budget justification to support the programmatic relevance and need. In general, costs for entertainment, amusement, advertising/promotional purposes are unallowable and may not be requested. However, among EPSCoR's programmatic goals are emphases on establishing STEM development pathways and broadening participation

of diverse groups in STEM, that can include "Bridge" programs designed to prepare high school students for the transition to college. This may include entertainment, amusement, and/or promotional costs related to STEM enrichment activities covering a range of possible career paths or activities focusing on cohort-building and maintaining healthy work-life balance. These categories of activities are consistent with the overall program goal of preparing students for the difficult high school to college transition. This may include residential programs for minor students whose supervisory requirements may require different choices than would be appropriate for adult students. When costs typically considered as entertainment, amusement, and promotion are necessary to accomplish the proposed objectives, they must be included in the budget and justified in the budget justification.

- Jurisdictions submitting proposal budgets with Subawards (Line G5 on the Proposal Budget) must be able to verify that the lead institution has established a system to monitor the subawards issued on Federally sponsored projects and that appropriate agreements are in place with sub-recipients.

C. Due Dates

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

December 06, 2023

July 09, 2024

July 08, 2025

Second Tuesday in July, Annually Thereafter

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

To prepare and submit a proposal via Research.gov, see detailed technical instructions available at:

https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For Research.gov user support, call the Research.gov Help Desk at 1-800-673-6188 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov 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: <https://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 Research.gov for further processing.

Proposers that submitted via Research.gov may use Research.gov 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 PAPPG Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: https://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 *Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research - NSF Strategic Plan for Fiscal Years (FY) 2022 - 2026*. 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. (PAPPG Chapter II.D.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 PAPPG Chapter II.D.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 other underrepresented groups 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

Reviewers for the E-CORE RII competition will also consider the following specific aspects of intellectual merit and broader impacts, as applicable:

- Connection and potential impact of E-CORE RII to both jurisdictional needs and research capacity, as well as EPSCoR Mission and Goals
 - Are all cores well justified to the needs of the jurisdiction? Is there the potential, as evidenced by data, for each core to substantially benefit the jurisdictional research capacity? Are the cores aligned to EPSCoR mission and goals? Are the efforts sustainable, with a clear pathway to sustainability?
- Support of diversity and a culture of inclusion of different institution types and sectors (e.g., academia, industry, and government)
 - How well does the proposal describe how the project and project leadership embody diversity, equity, inclusion, and accessibility throughout all of its activities to create a jurisdiction-wide vision? Are clear, measurable goals and metrics specified?
- Plan for project management, leadership, and partnerships
 - Does the proposal provide a reasonable plan for forming a visionary and effective leadership team? Does the proposal describe a well-informed process by which all necessary disciplines, skills, perspectives, and capabilities will be brought together to form an interdependent, multidisciplinary, and diverse leadership team that can work and communicate effectively? Is the set of partners identified appropriate for addressing the proposed work? Does the proposal have a set of partners from multiple organizations that have clear, deep and meaningful roles? Does the Strategic Plan and Evaluation and Assessment Plan provide evidence that each project element will be well executed and will allow for clear and meaningful co-production with the Jurisdictional EPSCoR Steering Committee?

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or 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 or the Division of Acquisition and Cooperative Support 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 an NSF Grants and Agreements Officer. 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 https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 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 *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Administrative and National Policy Requirements

Build America, Buy America

As expressed in Executive Order 14005, [Ensuring the Future is Made in All of America by All of America's Workers](#) (86 FR 7475), it is the policy of the executive branch to use terms and conditions of Federal financial assistance awards to maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States.

Consistent with the requirements of the Build America, Buy America Act (Pub. L. 117-58, Division G, Title IX, Subtitle A, November 15, 2021), no funding made available through this funding opportunity may be obligated for an award unless all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For additional information, visit NSF's [Build America, Buy America](#) webpage.

Special Award Conditions:

E-CORE projects are expected to partner with the Jurisdictional EPSCoR Steering Committee to continually assess and identify evolving strengths within the research landscape of the jurisdiction. These assessments should be data-driven and evidence-based and help inform the Jurisdictional EPSCoR Steering Committee as they prepare the continually evolving S&T plan for the jurisdiction

Any cooperative agreement awarded in response to this solicitation will contain the following term and condition:

Ensuring Adequate COVID-19 Safety Protocols

(a) This clause implements Section 3(b) of Executive Order 14042, Ensuring Adequate COVID Safety Protocols for Federal Contractors, dated September 9, 2021 (published in the Federal Register on September 14, 2021, 86 FR 50985). Note that the Department of Labor has included "cooperative agreements" within the definition of "contract-like instrument" in its rule referenced at Section 2(e) of this Executive Order, which provides:

For purposes of this order, the term "contract or contract-like instrument" shall have the meaning set forth in the Department of Labor's proposed rule, "Increasing the Minimum Wage for Federal Contractors," 86 Fed. Reg. 38816, 38887 (July 22, 2021). If the Department of Labor issues a final rule relating to that proposed rule, that term shall have the meaning set forth in that final rule.

(b) The awardee must comply with all guidance, including guidance conveyed through Frequently Asked Questions, as amended during the performance of this award, for awardee workplace locations published by the Safer Federal Workforce Task Force (Task Force Guidance) at <https://www.saferfederalworkforce.gov/contractors/>.

(c) *Subawards*. The awardee must include the substance of this clause, including this paragraph (c), in subawards at any tier that exceed the simplified acquisition threshold, as defined in Federal Acquisition Regulation 2.101 on the date of subaward, and are for services, including construction, performed in whole or in part within the United States or its outlying areas. That threshold is presently \$250,000.

(d) *Definition*. As used in this clause, *United States or its outlying areas* means:

- (1) The fifty States;
- (2) The District of Columbia;
- (3) The commonwealths of Puerto Rico and the Northern Mariana Islands;
- (4) The territories of American Samoa, Guam, and the United States Virgin Islands; and
- (5) The minor outlying islands of Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Islands, Navassa Island, Palmyra Atoll, and Wake Atoll.

(e) The Foundation will take no action to enforce this article, where the place of performance identified in the award is in a U.S. state or outlying area subject to a court order prohibiting the application of requirements pursuant to the Executive Order (hereinafter, "Excluded State or Outlying Area". A current list of such Excluded States and Outlying Areas is maintained at <https://www.saferfederalworkforce.gov/contractors/>.

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](https://www.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](https://www.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](https://www.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 Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

It will be a requirement of the award that the annual or final report must include an estimate of the funds expected to remain unobligated at the end of the current report period, as part of the "Changes/Problems" section ("Changes that have significant impact on expenditures"). If that estimate is greater than 20% of the current year award amount, the PI also must provide a plan and timeline for expenditure of those funds in the annual/final report.

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:

- John-David Swanson, telephone: (703) 292-2898, email: jswanson@nsf.gov
- Pinhas Ben-Tzvi, telephone: (703) 292-8246, email: pbentzvi@nsf.gov
- Jose Colom-Ustariz, telephone: (703) 292-7088, email: jcolom@nsf.gov
- Andrea Johnson, telephone: (703) 292-5164, email: ANDJOHNS@nsf.gov
- Casonya M. Johnson, telephone: (703)292-2658, email: casjohns@nsf.gov
- Eric W. Lindquist, telephone: (703) 292-7127, email: elindqui@nsf.gov
- Jeanne R. Small, telephone: (703) 292-8623, email: jsmall@nsf.gov
- Chinonye Whitley, telephone: (703)292-8458, email: cwhitley@nsf.gov

For questions related to the use of NSF systems contact:

- NSF Help Desk: 1-800-673-6188
- Research.gov Help Desk e-mail: rgov@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 <https://www.grants.gov>.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

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.

Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.F.7 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be

accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at <https://www.nsf.gov>

- **Location:** 2415 Eisenhower Avenue, Alexandria, VA 22314
- **For General Information** (703) 292-5111
(NSF Information Center):
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
Send an e-mail to: nspubs@nsf.gov
or telephone: (703) 292-8134
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

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 [System of Record Notices, NSF-50](#), "Principal Investigator/Proposal File and Associated Records," and [NSF-51](#), "Reviewer/Proposal File and Associated Records." Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Policy Office, Division of Institution and Award Support
Office of Budget, Finance, and Award Management
National Science Foundation
Alexandria, VA 22314

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