



RESEARCH SEED GRANT FUNDING OPPORTUNITY

Call for Proposal Deadline: Friday, Oct. 13, 2023 (5 p.m. CT)

Notice of Funding Opportunity Summary

The Oklahoma NSF EPSCoR program is announcing the availability of funding to stimulate high-risk, high-impact, and potentially transformative research to develop and test science-based solutions for complex (“wicked”) problems at the intersection of land use, water availability, and infrastructure in OK.

Seed Grant proposals will be accepted by OK NSF EPSCoR from any Oklahoma institution of higher education. Funding will be awarded for projects of up to 1-year duration. The maximum award amount for a single award is \$75,000; however, smaller proposals are encouraged.

Deadline

The deadline under this call for proposals is Friday, October 13, 2023, at 5 p.m. (CT).

We expect to fund at least two proposals depending on availability of funding and competitiveness of submissions.

Proposal materials should be submitted via email to Valerie Phillips, Oklahoma NSF EPSCoR Project Administrator at vphillips@okepscor.org, and Dr. Kevin Wagner, Oklahoma NSF EPSCoR Project Director, at kevin.wagner@okstate.edu.

Important: Proposals must be approved prior to submission by the appropriate grants office (i.e. the office processing the award if funded). If more than one institution is involved, stand-alone, detailed budgets must be submitted for each institution.

Program Description and Objectives

Seed grants are provided via the NSF EPSCoR Research Infrastructure Improvement Track-1 project titled *Socially Sustainable Solutions for Water, Carbon, and Infrastructure Resilience in Oklahoma (S³OK)* and as such should contribute to the broader research of the project.

The unifying research question of this project is: Can science-based assessment of the intersections of wicked problems, coupled with systematic and iterative engagement with OK opinion leaders and input/feedback from members of the OK public, result in development of socially sustainable solutions? Key challenges being addressed by the project include shifting subseasonal to seasonal weather patterns; wastewater reuse; carbon sequestration via terrestrial processes; increasing wildfire threats; resiliency of water, electric, and transportation infrastructure; and related social dynamics.

Research Priorities

Proposals are being requested for research that contributes to the broader research of the S3OK project and addresses the key challenges as outlined above. Research may include physical, biological or social sciences, engineering, as well as projects that advance related data science, data analytics, informatics, and data visualization.

Highest priority will be given to **proposals that:**

1. Advance research that has impacts across at least two of the following areas:

- a. **Water availability concerns**, including but not limited to addressing land use/misuse, cost and feasibility of water re-use, usage linkages to downstream flows (including the recreational context), or advancing preventative measures to combat the effects of climate extremes.
- b. **Water quality concerns**, including but not limited to addressing run-off or marginal quality groundwater, the potential for water recycling and re-use in various contexts, social acceptance of water re-use, emerging contaminants of concern, marginal water re-use in municipal contexts, and opportunities for produced water re-use.
- c. **Aging and inadequate infrastructure** (particularly electric and transportation, including transport and storage of water), including addressing the high costs associated with replacement and maintenance of infrastructure, feasibility within regulatory contexts, the public health context (i.e., air quality), and infrastructure improvements that can withstand climate extremes (resilience)
- d. **Land Management Challenges**, including land use/misuse, impacts of land use and climate extremes on soil health, impacts of climate extremes on land management techniques (water use, wildfire, prescribed burning, etc), acceptance/adoption of new research in agriculture, and advancing preventative measures to combat the effects of climate extremes.

2. Achieve broader impacts:

- a. Involve Primarily Undergraduate Institutions and/or Minority Serving Institutions (PUI-MSI) in Oklahoma (at least one project led by or involving PUI-MSI faculty will be supported)
- b. Involve early career faculty (particularly new EPSCoR faculty hires) and/or underrepresented groups
- c. Involve multi-stakeholder collaboration (expert-industry-public) with an applied focus.

3. Preference will be given to proposals that:

- a. **Employ a cross-disciplinary, and/or multi-sector approach (academic, industry, government, nonprofit, tribal) to:**
 - i. **Develop or enhance technical tools for planning**, including but not limited to user-friendly technical tools that provide accurate, real-time, and easily accessible forecasting information that can be used as inputs for planning and mitigation efforts across the impacts from climate extremes at the intersection of weather, infrastructure, water, and land management.
 - ii. **Leverage or augment ongoing or in-development efforts in industry and the public sector** designed to mitigate the impacts from climate extremes at the intersection of weather, infrastructure, water, and land management.
- b. **Integrate insights on public opinion/awareness to inform the research approach**, using data or results from existing S3OK research products such as the MSISNet, Deep

Dives Conversations or S3OK Academy meetings, or other public data with an Oklahoma focus.

- c. **Include implications for public or stakeholder education/engagement** as a result of the year-long project or include a mechanism to publicly communicate project results.

Funding Information

Proposals totaling up to \$75,000 (direct plus IDC) will be accepted; however, smaller proposals are encouraged.

Project Period

Grants will support projects up to one year.

Special Budgetary Guidelines and Constraints

- PI salary dollar requests cannot exceed 2 months of funding.
- Grant recipients are allowed to charge institutionally negotiated indirect cost rate on the prime award.
- If more than one institution is involved: Stand-alone, detailed budgets must be submitted for each institution. *(Not included in page count.)*
- If a subaward is needed: A brief justification must be submitted with the proposal; subawards must be issued by EPSCoR. *(Not included in page count.)*

Eligibility

Individual researchers and research teams comprised of researchers at any institutions of higher education in Oklahoma are eligible to apply. We encourage diverse participation particularly early career faculty (e.g., new EPSCoR faculty hires) and PUI-MSI faculty in Oklahoma. Multiple proposals from the same researcher(s) are welcome as long as each application represents a distinct research project.

Review and Selection Process

Proposals will be evaluated in conjunction with the three deadlines described previously by the Oklahoma NSF EPSCoR Program Council, and strategically awarded by the Oklahoma NSF EPSCoR project director in consultation with the Administrative Council.

Selection Criteria

Evaluation elements will include the following:

REVIEW CRITERIA
Relevance: Degree to which proposal addresses research priorities and/or advances S ³ OK research
Scientific Merit: Innovative &/or significantly contributes to knowledge in field; scientifically sound and

appropriate methods used; cognizant of past work and status of the science
Qualifications of Project Personnel, Adequacy of Facilities, and Project Management
Potential for Expanding Funding: Likelihood that large grants and/or corporate investment will result. Projected timeline for developing a subsequent proposal to a federal agency or a private entity must be mentioned in the proposal.
Broadening Participation: Level of involvement of OK PUI-MSI faculty, early career faculty (including new EPSCoR faculty hires), underrepresented groups, Tribal partners, and multi-stakeholder engagement; implications for public or stakeholder education/engagement

Proposal Guidelines

Proposals must adhere to the following formatting guidelines:

- Font size must be at least 12 point
- Margins must be at least one inch in all directions
- Line spacing must not exceed six lines of text per vertical inch
- Page size must be letter (i.e., 8.5 inches × 11 inches)

Proposals are limited to 5 pages and must include the following:

- PI Information: Name, Title, Institution, and Department
- Co-PI information: Name(s), Title(s), Institution(s), and Department(s)
- Project Title
- Proposed period of performance
- Research Priority(ies) Addressed (see list above)
- Statement of Problem Addressed
- Nature, Scope, and Objective(s) of Project
- Methods and Procedures
- Expected Outcome, Statement of Results or Benefits
- Potential for Expanding Funding
- Number of undergrad students, graduate students and/or post docs supported
- Detailed budget (not included in page count)
 - **If more than one institution is involved: Stand-alone, detailed budgets must be submitted for each institution.**
 - If a subaward is needed/requested: A brief justification must be submitted with the proposal; subawards must be issued by EPSCoR.
- References Cited (not included in page count)
- 3-pg CVs (per NSF format) for PIs and co-PIs (not included in page count)

Important: Prior to submission, proposals must be approved by the appropriate grants office (i.e. the office processing the award if funded).

Reporting and Other Programmatic Requirements

All outputs of your supported research must acknowledge OK NSF EPSCoR. Recipients will be required to report on research results and impacts, including students supported, publications, presentations, conference proceedings, etc. using the OK NSF EPSCoR online reporting system. Further, recipients may be requested to provide a presentation to the OK NSF EPSCoR Annual Meeting, respond to a survey questionnaire from the program evaluators, and provide appropriate information needed to produce a short article about completed research to be featured in the OK NSF EPSCoR newsletter.