OKLAHOMA WATER RESOURCES CENTER

USGS 104(b) Annual Base Grants Program
Request for Pre-Proposals PY2024

Deadline: Applications must be submitted online by October 20, 2023, 5:00 PM

More Information:
See the OWRC website
http://water.okstate.edu/
See the USGS website
https://water.usgs.gov/wrri

Questions:
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Program Description and Objectives:

The Oklahoma Water Research Center (OWRC) is seeking preproposals that address high priority water problems in the State of Oklahoma. As one of 54 federally authorized water resource institutes and centers throughout the United States and its territories, it operates under the authority of the Water Resources Research Act of 1964 through the Water Resources Research Institutes Program administered by the USGS.

This Act directed the OWRC to plan, conduct, or otherwise arrange for competent applied and peer reviewed research that fosters improvements in water supply reliability, the exploration of new ideas that address water problems or expands understanding of water and water-related phenomena, the entry of new research scientists, engineers, and technicians into water resources fields, and the dissemination of research results to water managers and the public. **Pre-proposals submitted under this announcement should further these objectives.**

Funding Information:

We anticipate funding a minimum of two faculty projects (up to $25,000 each) and a minimum of two graduate student projects (up to $5,000 each), subject to the following stipulations:

- Funds will be administered through the Oklahoma Water Resources Center.
- All awards are subject to the availability of federal funds and other applicable considerations.
- Applicants must provide a 1:1 match in non-federal funds. All indirect costs (F&A) must be waived but may be counted as match. Salaries, benefits, and other project-related expenses covered by other state sources may also be counted as match. Matching funds for student researcher projects can be provided by the faculty sponsor.
- Student funds may support a new project or supplement an existing research project, allowing for additional supplies and materials, data collection, and/or travel. Student pre-proposals should be written by the student under the direction of a faculty sponsor. If selected, the faculty sponsor will serve as the principal investigator.

Project Period:

Grants will support one-year projects (Note that project extensions are not allowed by USGS for this program). The project year is anticipated to extend from September 1, 2024, to August 31, 2025.

Eligibility:

Researchers at **any** institution of higher education in Oklahoma are eligible for this annual competition. We encourage diverse participation. To broaden participation and achieve our goal of promoting Workforce Development and Water Literacy, preference may be given to early career researchers and/or projects supporting or engaging multiple students. Multiple pre-proposals from the same researcher are welcome if each represents a distinct research project.

Selection Criteria:

40% – Relevance: Degree to which proposals address a top OWRC/Water Research Advisory Board (WRAB) Priority (see priorities below)

30% – 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.

20% – Training Potential: Level of involvement of students, early career professors, underrepresented minorities and/or regional universities

10% – Proposal Quality: Well written, logical flow, complete and adheres to RFP.

Research Priorities

Resilience of small water systems: Improve system-level resilience of small water systems, enabling them to better adapt and respond to severe/extreme weather and evolving regulatory requirements. This topic includes identifying effective strategies and viable technological, policy, institutional, and financial pathways to resiliency, as well as, understanding public perceptions of the value of water and implications for rate structures, evaluating opportunities for advancing the *One Water* framework in small systems, and adapting and improving social acceptability of reuse for small systems.

Emerging Contaminants: Research the sources, fate, transport, and treatment of PFAS, microplastics, and other emerging contaminants in water resources and agro-ecosystems in Oklahoma.

Groundwater resources: Improve understanding of brackish and fresh groundwater resources in Oklahoma, including groundwater use, recharge rates, potential impacts of climate change, opportunities for enhanced aquifer recharge and aquifer storage and recovery, surface water/groundwater interactions, and related topics to support effective management and governance.

Ag water sustainability: Quantify agricultural water needs and opportunities for improving drought resilience, water conservation, and irrigation efficiency. This includes developing and evaluating new and innovative irrigation technologies; understanding the effects of regenerative agricultural practices on soil water, surface water and groundwater resources; and developing or improving approaches for estimating current and future crop evapotranspiration and water needs/use.

Pre-proposal Guidelines:

Project pre-proposals must be submitted online
https://water.okstate.edu/opportunities/104b-applications.html

Information requested includes:

- Type of Application: Faculty or Student
- PI Information (Note: PI must be a Faculty Member): Name, Institution, and Department
- Rank of PI
- Student information (if submitting a student application): Name, Institution, and Department
- Co-PI information: Name(s), Institution(s), and Department(s)
- Project Title (20 word maximum)
- Research Priorities addressed (see list above)
- Statement of State or Regional Water Problem Addressed (200 word maximum)
- Nature, Scope, and Objective(s) of Project (80 words maximum)
- Methods and Procedures (200 words maximum)
- Expected Outcome, Statement of Results or Benefits (80 words maximum)
- Number of Graduate Students Supported
- Funds Requested
- References Cited

Reporting Requirements:

All outputs of your 104(b) supported research must acknowledge both the USGS and OWRC for the 104(b) grant opportunity and must include the project number assigned to your research.

Recipients are expected to submit a poster or presentation to the Governor's Water Conference and Research Symposium, as well as present results to the Water Research Advisory Board.

Award recipients are expected to provide appropriate information needed to produce a short article about completed research to be featured in the OWRC newsletter.

At the completion of the project, recipients will be required to provide:

- Name, major, degree program of all students working on the project.
- One or more publication quality photo(s) of project-related work (and/or student(s) performing such work).
- List of research publications, conference proceedings, patents, fact sheets and other products resulting from project.
- List of training sessions, information transfer, and notable achievements and awards.
- A final abstract (around 250 words) summarizing major findings and implications/impact of the project.

Follow-up reporting will be requested in future years to report on publications and other outcomes that result from this project in subsequent years.