Request for Proposals

Research, Extension, and Engineering: Water Research Investment Program for fiscal years 2024-2025

Overview

Texas A&M AgriLife Research (AgriLife Research), the Texas A&M AgriLife Extension Service (AgriLife Extension), and Texas A&M Engineering Experiment Station (TEES) are seeking multidisciplinary proposals for FY 2024 and 2025. Focus areas of this program were derived from a combination of state and federal water priorities and outcomes from a February 22, 2023, workshop that included AgriLife Research, AgriLife Extension, and TEES faculty. It is anticipated that an initial investment in these focus areas will result in critical research and outreach needed to advance water resources management in Texas. In addition, this funding is expected to be leveraged through the pursuit of external funding sources, leading to project expansion. This program is administered by the Texas Water Resources Institute (TWRI), which is a part of AgriLife Research and AgriLife Extension.

Eligibility

Proposals will be accepted from multidisciplinary teams that must include at least one participant from all three agencies — AgriLife Research, AgriLife Extension, and TEES — in Principal Investigator (PI) and Co-PI roles. The project PI must hold an appointment in one of the three identified agencies. Individuals with dual appointments (e.g., joint between AgriLife Research and AgriLife Extension) may serve as PI or Co-PI for either agency, but not both. Participants from other entities, colleges, universities, and entities may participate in the project if deemed necessary to the success of the project but are not eligible to receive funding. Directories for the agencies are listed here:

- AgriLife Research and Extension - https://agrilifepeople.tamu.edu/
- TEES - https://tees.tamu.edu/people/index.html#All

Project Focus Areas

Successful proposals will identify a demonstrated need from stakeholders' or potential sponsors' compiled resources that identifies a project in alignment with a defined priority area. Examples of such resources may include, but are not limited to the 2022 State Water Plan, Texas Nonpoint Source Management Program, and agency strategic roadmaps, such as, the EPA Per-and Polyfluoroalkyl Substances (PFAS) strategic roadmap. In addition, the demonstration of stakeholder engagement, preliminary data collection, or other measures for better positioning teams to secure external funding are encouraged. Selected projects will be required to submit competitive grant proposals requesting a 2:1 match (extramural sources: internal funding) during the project period.

One or more projects for the following water resource research and outreach focus areas may be selected:

- *Agricultural Efficiency and Water Management* – Agriculture is the largest user of water in the State of Texas and is at risk due to climate change, population growth, and many other threats. Projects under this focus area will develop new strategies and technologies to increase resiliency and efficiency, make better use of alternative water sources, better understand water availability and usage, manage degraded water quality, or provide science-based evidence to inform policy.
- *Water Infrastructure and Climate Resilience* – In recent history, Texas has experienced drastic weather events in the form of flood, drought, and freezing temperatures resulting from a changing climate. This, coupled with aging infrastructure (both municipal and irrigation), has the potential to impact Texans in many ways. To mitigate potential negative impacts, work is needed to improve current infrastructure, better design systems for the future, better prepare Texas for future natural disasters, and improve disaster response. Projects under this area may, but will not be limited to, develop enhanced distribution models, leak detection methods, and integrate data science to maximize understanding and usage of new and large datasets.
- *Water and Wastewater Treatment* – Water and wastewater treatment is becoming increasingly more important, and that importance is amplified when water is scarce. Many water users rely on adequate water quality such as aquatic life, recreators, and irrigators, not to mention humans for consumption. As such, it is imperative that we advance water and wastewater treatment technologies. Projects under this area will advance technology to continue to achieve drinking water and wastewater standards through traditional and alternative water sources; address future emerging contaminants such as PFAS; reduce energy demands; and add value to water and wastewater treatment byproducts.
- *Aquatic Invasive Species* – Aquatic invasive species such as zebra mussels pose a major threat to water infrastructure, recreational waters, aquatic life, and many others. Projects under this area will aim to address current and future aquatic invasive species by advancing detection methods, such as eDNA, predictive analysis for future target areas of concern and treatment, treatment methods and technologies, and other areas to reduce threats.

Timeline and Deadlines

The completed application must be e-mailed in PDF format to Danielle Kalisek at Danielle.Kalisek@ag.tamu.edu. Applications must be received electronically by **11:59 p.m. on June 30, 2023,** for consideration. Start date of projects will be September 1, 2023. One- or two-year projects are allowable, but once selected, no extensions will be granted.

Project Funding Limitations

Each proposal should have one clearly identified PI from AgriLife Research, AgriLife Extension or TEES, and at least one Co-PI from each of the other two agencies. No participants outside of the three agencies are eligible to receive funding, but they may participate in the project if their

contribution is deemed necessary by the project team. Fringe benefits, tuition and fees, food (excluding per diem for travel), indirect costs and new hires are not allowed in the budget. Funding for each project will be incrementally awarded by fiscal year, starting September 1 and ending August 31 of the following year. Due to restrictions of these funds, year 1 funds cannot be carried over into the new budget period; therefore, no extensions will be granted.

Graduate Student Tuition and Fees

Since graduate student tuition and fees are not allowed to be paid with state funds, PIs and Co-PIs are encouraged to work with their department heads or unit leaders to identify alternative sources of funds for tuition and fees if graduate students are included in the project.

Types of Proposals

Type 1 Proposals – Support Grant

The intention is to provide resources for positioning teams to be successful in securing extramural resources that advance water priorities. Applicants who demonstrate a well thought out idea that directly fits the priority areas of an identified federal request for proposals will be most successful. Support may be used to conduct scientific meetings that bring together experts to identify research and outreach needs; support salary for staff for developing major components of proposals; purchase equipment that demonstrates adequate capabilities needed to conduct research; collect preliminary data; or procure other allowable expenses that may result in securing extramural funding.

Budgets for Type 1 applicants are limited to $50,000 for a one-year project during state fiscal year 24, or $25,000 in each state fiscal years 24 and 25 for a two-year project, depending upon external proposal due dates. **Budgets <u>SHALL NOT</u> be routed through SRS since funds are already internal.** Applicants are encouraged to consult with Allen Berthold, Ph.D., at taberthold@ag.tamu.edu, regarding the suitability of the application for submission.

Type 2 Proposals – Investment Grant

The intention is to support multidisciplinary teams to assist in positioning them to be leaders in emerging fields and successfully secure large, competitive, extramural resources that advance water management in Texas. As such, proposals should consider future needs of water research (and/or technology) and outreach; the trends in state and federal grant programs; and attempt to match project goals with anticipated grant program priorities. Projects under this type may include the development of technology, collection of preliminary data, purchase of equipment necessary for project success, salary support for staff and students, travel, and other expenses allowable by state funds.

In this type, funding should not exceed $125,000 per year for a two-year funding period from September 1, 2023, to August 31, 2025, for a total funding request not to exceed $250,000 per project. **Budgets <u>SHALL NOT</u> be routed through SRS since funds are already internal.**

Award Recipient Expectations

Award recipients are expected to participate in quarterly meetings with TWRI and TEES to discuss project objectives and timelines, beginning with a kickoff meeting in September 2023. Awardees will be provided with a quarterly report template that is due the 15th day of December, March, June and September during the project period. Quarterly meetings will be held to discuss progress reported in the quarterly reports and upcoming activities. Funding in FY 2025 will be contingent on satisfactory progress being made on project objectives and deliverables in FY 2024. Prior to the project end date of August 31, 2025, each awardee will submit a final report, using a template provided, detailing project outputs, outcomes, impacts, dollars leveraged, and how the project advanced water management in Texas.

Additionally, each awardee will prepare and submit grant proposals such that there will be two extramural dollars requested for every $1 received. For example, if a project team receives the full $250,000, then the team must submit grant proposals to extramural sources requesting at least $500,000. This requirement can be satisfied through a single large grant application or through several smaller grant applications. Extramural grant applications may include the awarded PI/Co-PIs and additional collaborators. Grant applications must be submitted before August 31, 2025, and proof of submission provided to TWRI and included in the final report. Potential sources of funding shall be identified in section 8 of the project information discussed below.

Contacts

For technical questions regarding the proposal and content, please contact Allen Berthold, Ph.D., at taberthold@ag.tamu.edu.

For budgetary or submission questions, please contact Danielle Kalisek, at Danielle.Kalisek@ag.tamu.edu.

Selection Criteria

Proposals will be selected based on: 1) evidence of a demonstrated need; 2) evidence of cohesive, multidisciplinary teams in the proposed research and outreach activities; 3) potential impacts and relevance of advancing water resources management in Texas; and 4) a demonstrated plan for leveraging large, competitive state or federal resources.

Proposal Format

Project Information (1 Page for items 1-8):

1. **Title**. Concise but descriptive.
2. **Proposal Type**. Enter type 1 or type 2 based on which proposal you are submitting.
3. **Keywords**. Enter keywords of your choice descriptive of the work.
4. **Start date**. Enter the actual beginning date for the project.
5. **End date**. Enter the estimated end date for the project.
6. **Principal and Co-investigators**. Provide the name, position title, agency, department/unit, email address and phone number of the PI and co-investigators. This

must include participants from all three agencies: AgriLife Research, AgriLife Extension and TEES.

7. **Abstract**. Provide a nontechnical description of the problem, methods, and objectives of the project (300 words or less).
8. **Source of extramural funding planned to be pursued**. Please provide the agency, name of the program within the agency, anticipated release date of the request, maximum total amount of the request and relevant information to the program(s) you anticipate submitting to, such as a web link to more information about the program(s). Recipients can change the program(s) they submit to, but dollar amounts should be similar, and awardees will first consult with TWRI and TEES. Proposals developed as part of this program should not already be in progress but will be new proposals developed by the project team during the performance period that aligns with the project work.

Project Narrative (6 pages maximum 9-13):

9. **Statement of water management problem**. Explain the need for the project, and how the proposed project will advance water management in Texas. (1 page maximum)
10. **Anticipated project fit of extramural funding**. Please describe how your proposal will fit the priority area identified in the source(s) of extramural funding that has been identified in section 8. How will successful acquisition and submission of externally funded grants advance water management in Texas? (1 page maximum)
11. **Statement of results or benefits**. Specify how a successful project will position the team for leveraging large, competitive state and federal grants. How will the results of the completion of this project advance water management in Texas? (1 page maximum)
12. **Nature, scope and objectives of the project**. Provide a description of the project goals and objectives, as well as the approach that will be used to achieve these objectives, including a timeline of activities. (3 page maximum)
13. **References cited.** Please list any references cited within your proposal. (*Does not count toward the 6-page limit.*)

Additional Information:

14. **Investigator's qualifications**. Include resumes of the principal and co-investigators. Limit each resume to two pages including no more than five relevant publications. (2 pages maximum per investigator)
15. **Investigator Current and Pending.** Include a table of current and pending support for each principal and co-investigator to include: 1) project dates; 2) project title; 3) project sponsor; and 4) amount awarded/requested.
16. **Leveraging of on-going research activities**. If these funds will leverage an on-going research activity, please provide a single paragraph statement summarizing: the existing project title, amount of funding for the existing project, the agency funding the existing project and a brief narrative of how this research activity links to the existing project. (1 page maximum)
17. **Logic Model**. Include a logic model. (1 pages maximum)
18. **Timeline**. Include a timeline of proposed project activities. (1 page maximum)

Project budgets. ***Budgets SHALL NOT be routed through SRS***. Requested project budgets should be prepared using the Budget Template and Budget Narrative Template provided below. Each principal and co-investigator should provide an individually-completed budget and budget narrative. All budgets must be summarized into the budget request budget summary table.

Budget Summary, Template and Narrative

Budget Request Summary

For each Principal and Co-investigator, please provide a fiscal year and overall total.

AgriLife Research	**FY 2022**	**FY 2023**	**Total**
PI or Co-PI	$	$	$
Co-PI	$	$	$
Co-PI	$	$	$
Co-PI	$	$	$
AgriLife Extension	$	$	$
PI or Co-PI	$	$	$
Co-PI	$	$	$
Co-PI	$	$	$
Co-PI	$	$	$
TEES	$	$	$
PI or Co-PI	$	$	$
Co-PI	$	$	$
Co-PI	$	$	$
Co-PI	$	$	$
Total	**$**	**$**	**$**

Budget Template

For each Principal and Co-investigator individually, please indicate the appropriate agency and insert the total budget figures into the budget summary under the fiscal year. Fringe benefits, tuition and fees, indirect costs and new hires are not allowed.

Agency:			
Principal or Co-investigator Name:			
Cost Category	FY 2022 Sept 21 – Aug 22	FY 2023 Sept 22 – Aug 23	Total Sept 21 – Aug 23
1. Salaries and Wages Principal Investigator Co-Investigator Co-Investigator Graduate Student _____ _____	$	$	$
2. Supplies	$	$	$
3. Equipment	$	$	$
4. Travel	$	$	$
5. Other costs (including services or consultants)	$	$	$
6. Total estimated costs	$	$	$

Budget Narrative

Fringe benefits, tuition and fees, indirect costs and new hires are not allowed.

Agency:
Principal or Co-investigator Name:
Salaries and Wages. Provide estimated hours and the rate of compensation proposed for each individual.
Supplies. Indicate separately the amounts proposed for office, laboratory, computing and field supplies.
Equipment. Identify non-expendable personal property having a useful life of more than one (1) year and an acquisition cost of more than $5,000 per unit.
Travel. Provide purpose and estimated costs for all travel.
Other Direct Costs. Itemize costs not included elsewhere, including services, publication costs, computers, fees, services, consultants, printing, etc. If budgeting a service or consultant, identify the task for which the service is for and estimate the amount of time required and hourly or daily rate.