

2021–2022 TWRI Graduate Student Research Programs Request for Pre-Proposals

The Texas Water Resources Institute (TWRI) is happy to announce its call for pre-proposals for students conducting water resources research. TWRI has funds available for graduate students at Texas universities through two programs, the [TWRI Mills Scholarship Program](#) (available to Texas A&M College Station, Galveston and Qatar only) and the [U.S. Geological Survey Graduate Research Program](#) (available to all Texas universities). Pre-proposals are due November 23, 2020 by 11:59 p.m.

TWRI anticipates funding 6 to 8 graduate research projects of up to \$5,000 each in the area of water resources and hydrology that have the potential to help Texas solve future water problems. We expect the funds will become available to graduate students in spring 2021. Additionally, those students selected for the Mills Scholarship will also be eligible for an out-of-state tuition waiver.

Eligibility:

- Applications from graduate students doing water resources-related research in Texas are encouraged. This program can support either ongoing or new studies.
- Proposals should be developed by the graduate student applying for the project in collaboration with his or her faculty advisor. Students with junior faculty thesis and dissertation advisors are highly encouraged to apply for these grants.
- Students must be enrolled at least half-time if not full-time.
- Citizenship:
 - USGS: students do not have to be U.S. citizens or have permanent visa status
 - Mills: reserved to students who are citizens of the United States or have permanent immigration visas
- Graduate students who previously received a TWRI USGS competitive grant or a Mills Scholarship are not eligible for that same grant program but can be selected for the program not previously received. (Example: If student has received a Mills Scholarship, they are still eligible for a USGS grant, and vice versa.) Please note in the pre-proposal if you have previously received funds from one of these programs.

TWRI Research Priorities:

Proposed research can deal with a wide range of water resources topics. However, priority will be given to research addressing the science, technology, policy or socio-economics of:

- Developing innovative water management strategies to aid in implementing the Texas State Water Plan that address agricultural and urban water conservation, identifying new surface water and groundwater sources, desalination, reuse (potable and non-potable), and aquifer storage and recovery;
- Evaluating and understanding the implications of water availability and quality on human health outcomes;
- Addressing major water quality impairments in Texas, which includes bacteria, dissolved oxygen, mercury, and other hazardous contaminants;
- Understanding the vulnerability of groundwater resources (both quantity and quality) from both a management and policy perspective;
- Impacts of climate variability, climate change and drought on Texas water resources, along with measures to adapt and mitigate these impacts; and
- Understanding the long-term effects of catastrophic flooding events on surface water and groundwater resources, along with measures to adapt to or mitigate these effects.

Timeline:

Start dates for those selected for the Mills Scholarship may begin as early as the spring 2021 semester. Those selected for the USGS grant will begin no earlier than March 1, 2021. The project timeline for each is one year.

Budget:

The TWRI Mills Scholarship Program funds are strictly for tuition and fees, while the USGS Program allows for a categorical budget (see template below), if needed, including tuition. If you have a specific budgetary need one way or the other, please note that in your application, and we will take that into consideration when determining the program fit.

Other budgetary notes:

- A maximum of **\$5,000** may be requested.
- A 2:1 non-federal match is required for USGS. (Example: If the full \$5,000 is requested, you need \$10,000 in non-federal match; if \$1,500 is requested, you need \$3,000 in match.) A letter of commitment from your graduate committee chair is not needed at the pre-proposal phase, but if selected, a signed commitment letter will be required.
- The 2:1 non-federal match can include: salaries and fringe benefits of faculty advisors and graduate students funded by non-federal dollars; in-kind services; equipment or lab use; supplies furnished by student's department; and graduate teaching or research assistantships.
- Mills Scholarships do not require match.
- Indirect costs (IDC) may not be charged as part of the requested funds, but IDC and unrecovered IDC can be used toward to 2:1 non-federal match requirement. IDC used for match must be applied to modified total direct costs, thus IDC **cannot** be applied to tuition and equipment costs.
- If the student is unable to complete their project as proposed and approved or if all funds are not used within the one-year timeline, the funds will be returned to TWRI for re-allocation.

Reporting Requirements:

Students will be required to submit a progress/final report at the end of their funding cycle and provide an oral overview of their report (specific details of the oral report to be discussed and agreed upon between recipients and TWRI). The progress/final report may include the student's thesis or dissertation or a summary of it, a manuscript suitable for publication as a TWRI technical report, or a journal article. In addition, those receiving funds must work with the TWRI communications team to publicize their results in the form of photo(s) and a story. Acknowledgement must be given to TWRI's program in any resulting publications for efforts partially funded by these funds.

Evaluation and Ranking Criteria:

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| 30 Points | Are TWRI Research Priorities being addressed in the proposed research? |
| 30 Points | Will it help better manage Texas water resources and/or solve future water problems? |
| 20 Points | Does the proposal have scientific merit? |
| 10 Points | Will it advance existing science, or is it new and innovative? |
| 10 Points | Does the work proposed seem doable? Can the research be accomplished? |

Application & Deadline

Graduate students interested in applying should complete the Pre-Proposal Application Form below. The completed Pre-Proposal Application Form must be e-mailed in Microsoft Word to Danielle Kalisek at Danielle.Kalisek@ag.tamu.edu. Pre-proposals must be received electronically by **11:59 p.m. CDT, November 23, 2020**, to be considered.

Pre-Proposal Application Form 2021–2022 TWRI Graduate Student Research Programs

Please complete all parts of this Pre-Proposal Application Form to be considered for the Texas Water Resources Institute (TWRI) Graduate Student Research Programs. Pre-proposals should be at least 11-point Times New Roman font with 1-inch margins. Pre-proposals must be received electronically by **11:59 p.m. CDT, November 23, 2020**, to be considered.

The completed Pre-Proposal Application Form must be e-mailed as an electronic document (Microsoft Word) to Danielle Kalisek at Danielle.Kalisek@ag.tamu.edu. The application package is **limited to 3 pages** and must include items 1 through 9 below. You do not have to keep the instructions within your application form but ensure that each section is titled accordingly and the required items 1 through 9 are addressed. *Applications with Basic Information beyond the 3-page limit **will not** be considered in the review process.* The Other Required Information 10-11 is not included in the 3-page limit.

Basic Information:

1. Title of pre-proposal.
2. Student name, contact information (email and phone number), university, department, degree being pursued as well as degree starting year and expected year of graduation.
3. Faculty advisor or committee chair name, title, contact information (email and phone number), university and department.
4. Which program(s) are you applying for (only select one option)? In addition, please also indicate, if applicable, if you previously received funds from Mills or USGS, or if you are not eligible for Mills due to eligibility restrictions.
 Mills Scholarship Program (Texas A&M, Galveston or Qatar only; tuition only)
 USGS Research Program (any Texas university; categorical funds and/or tuition)
 Either program will fit my needs and eligibility
5. Have you received either the Mills Scholarship or USGS Research Program funds before? If so, please indicate which source and the year.
6. Would these funds be initiating new research or supporting ongoing research? If ongoing, please briefly explain where you are at in the research and project timeline, funding source, funding amount (please differentiate between federal and nonfederal), and project start and end dates.
7. Abstract: Please provide 200 words or less about your proposed research problem, methods and objectives, and describe how your research will address the research priorities.
8. Description of your research proposed research, emphasizing how it will address water resources-related concerns (particularly how, if possible, it will benefit Texas), including:
 - a. *Statement of critical regional or state water problem.* Describe how your research will address RFP research priorities and explain the need for the project, who wants it and why.
 - b. *Nature, scope and objectives of the research, including a timeline of activities.* This is the major emphasis of your proposal
 - c. *Methods, procedures and facilities.* Provide sufficient information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.
 - d. *Statement of expected results or benefits.* Specify the type of information that is to be gained and how it will be used.

Note: Reference/Citations do not count toward the 3-page limit.
9. Intended career path you anticipate pursuing.

Other Required Information (*These items are not included in the 3-page limit.*)

10. **Academic qualifications of the student:** current degree plan/grades, unofficial transcript or list of courses taken and grades.

11. **Budget**

TWRI Mills Scholarship funds are strictly for tuition and fees only. No match is required. USGS funds can go toward tuition as well as salaries, fringe, supplies, travel and other costs. Indirect costs are not allowed on the federal request but can be used toward match.

If applying for only Mills funds, there is no need to complete the budget tables. If applying for USGS funds, or if either source of funds is applicable, please detail your USGS categorical request and match in the budget tables.

If applying for USGS, please show your proposed use of funds by category, not to exceed \$5,000 requested. Indirect costs are not allowed per the prime sponsor agreement.

Category	Request	Justification
Salary	\$	
Fringe Benefits	\$	
Travel	\$	
Supplies	\$	
Tuition	\$	
Other	\$	
Total	\$	<i>Not to exceed \$5,000</i>

Matching funds of 2:1 are required for USGS. (Example: If requesting full \$5,000, then \$10,000 of non-federal match is needed; likewise, if requesting \$1,500, then \$3,000 of match is needed.) Please list the amount and source(s) of your non-federal matching funds. *Note: Unrecovered indirect costs may be used as part of the matching requirement.*

Category	Match	Justification
Salary	\$	
Fringe Benefits	\$	
Travel	\$	
Supplies	\$	
Tuition	\$	
Other	\$	
Total Direct	\$	
Indirect Costs (IDC)	\$	<i>Please list university's negotiated IDC rate.</i>
Unrecovered IDC	\$	
Total Match	\$	