



Utah Water Research Laboratory
UtahStateUniversity

Utah Center for Water Resources Research
USGS 104(b) Annual Research Grants Program
Request for Pre-Proposals FY 2024

Deadline: **February 29, 2024, 5:00 PM**

Project Period: **9/1/2024 – 8/31/2025**

Send To:

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Utah Water Research Laboratory
Utah State University, Logan, Utah

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For further Information:

See the UCWRR website:
<https://uwrl.usu.edu/research/ucwrr/>
or USGS website:
<https://water.usgs.gov/wrri>

Questions:

Carri Richards: (435) 797-8040

Program Description and Objectives:

The Utah Center for Water Resources Research (UCWRR) at the Utah Water Research Laboratory is one of 54 federally authorized water resource institutes in the United States. It operates under the authority of the Water Resources Research Act (WRRRA) of 1964, as amended in 1984, through the Water Resources Research Institutes (WRII) Program administered by the USGS. Program objectives are as follows:

- Plan, facilitate, and conduct research to aid in the resolution of State and regional water problems
- Promote technology transfer and the dissemination and application of research results
- Provide for the training of scientists and engineers through their participation in research
- Provide for competitive grants to be awarded under the Water Resources Research Act

Eligibility:

Any faculty member or affiliate at an institution of higher education in the State of Utah can apply. Federal employees are NOT eligible as a principal investigator but may participate as a co-investigator.

Research Priorities

USGS Circular 1488 (<https://doi.org/10.3133/cir1488>), *Water Resources Research Act Program—Current Status, Development Opportunities, and Priorities for 2020–30*, lists seven focus areas for this program:

- Water Scarcity and Availability
 - Water Related Hazards and Climate Variability
 - Water Quality
 - Water Policy, Planning, and Socioeconomics
 - Ecosystem and Drainage Basin Functions
 - Water Technology and Innovation
 - Workforce Development and Water Literacy
- Proposed projects should articulate how they align with these focus areas and the associated goals and opportunities listed in this circular with application to Utah and the western US.
 - Proposers should also articulate how their research benefits Utah or meets high-priority needs in the State.
 - Preference will be given to research projects led by early career faculty and those that support graduate students.
 - The UCWRR highly encourages proposals from principal investigators who are from underrepresented or underserved groups in STEM and from institutions that serve minority populations. Additionally, we encourage proposals that increase diversity, equity, inclusion, and justice related to water research topics, or that address water issues in historically marginalized or underserved communities.
 - The 104b program is funded through the US Geological Survey, and collaboration with USGS personnel is welcome and encouraged.

Funding Information:

Pre-proposals should be for projects of a 12-month or 24-month duration that address water problems in the State of Utah or regional concerns that affect Utah. We anticipate that 4 projects will be selected to submit full proposals. Requested funding amounts should not exceed **\$32,000** in direct (USGS) funds each year with 1:1 matching funds required.

Recognizing the benefit of the continuity offered by multi-year projects, we will consider up to two proposals that request a tentative second-year commitment. Projects requesting a two-year commitment may request up to \$32,000 for the second year. If a proposal is selected as a multi-year project, the second-year proposal would not need to compete in the pre-proposal selection process for the following year. However, since USGS funds are awarded on a year-by-year basis, the second-year award will be administered as a separate project. PIs with multi-year projects will need to provide separate proposal text, budgets, and matching commitments for the full proposals submitted to the USGS in both years. PI's will also need to meet separate reporting requirements for both years of the project and fully expend funds in each year separately as there is no mechanism to carry USGS funds forward from one year to the next. While funding for a second year cannot be guaranteed until the USGS proposal is funded for that year, selection as a 2-year project reflects a commitment for the project to be included in the aggregated UCWRR proposal submitted to the USGS 104b program by UCWRR for the follow-on year. If two projects requesting multi-year consideration have already been selected for any given year, the first-year activities of any other multi-year project proposals may be

considered for funding independent of the second-year activities, and they would then need to compete for funding independently the following year.

The funding for this grant is contingent upon congressional appropriations. The projects selected in the pre-proposal process will submit full proposals as part of Utah's aggregated proposal submitted to the USGS 104b program by UCWRR once the RFP for this fiscal year becomes available. Given government budgetary uncertainty, reductions or delays in funding are possible.

Matching Requirement:

Matching funds of 1:1 non-federal to federal dollars are required. Indirect costs are not allowed on the Federal cost category. However, indirect costs may be used to provide part of the matching requirements (i.e., indirect costs computed for federal funds may be used as part of the non-federal match. Indirect costs are allowed on the non-federal funds portion of the budget as match).

Selection Criteria:

The proposed projects will be ranked based on the following criteria:

- 30% – Scientific merit** (*scientifically sound, advances basic knowledge, innovates, results in peer-reviewed scientific literature and/or information transfer to stakeholders and the public*)
- 20% – Applicability to Utah's need** (*addresses one or more Utah high-priority water quality or quantity needs*)
- 20% – Training and workforce development** (*supports early career faculty, graduate students*)
- 15% – Broader impact considerations** (*includes component(s) addressing diversity, equity, inclusion, justice, or involving historically marginalized, underserved, or indigenous groups*)
- 15% – Engagement with USGS** (*USGS encourages and welcomes collaboration with WRRRA projects*)

NOTE: Final decisions will also weigh and consider the full portfolio of projects to be submitted.

Instructions:

Project pre-proposals should include:

- (1) A project description of no more than 5 pages (excluding citations & investigator qualifications)
- (2) A 1-page draft budget. Formal institutional commitment from sponsored programs is not required at the pre-proposal stage, but the budget draft should state how the 1:1 match requirement will be met.
- (3) A data management plan of no more than 1 page

NOTE: Projects selected for inclusion in the full UCWRR proposal to USGS will be required to submit content responsive to the FY2024 USGS 104b funding opportunity announcement (FOA) when it is released. This content must be submitted to the UCWRR no less than three weeks prior to the USGS deadline to allow time for assembly of the full proposal. The FY2024 USGS 104b FOA has not yet been released, and dates are uncertain and subject to USGS approval processes and federal government budget appropriations. We anticipate release of the FOA during March/April 2024, with the full proposal

due in May 2024. We anticipate that the FY2024 USGS FOA will be similar to 2023 and will require a 1:1 match. Until the FY2024 FOA is available, proposers should refer to the FY2023 FOA at: <https://www.grants.gov/web/grants/view-opportunity.html?oppld=347304>.

Timeline:

The 2024 schedule is as follows:

- Pre-proposals due to UCWRR on Thursday – February 29, 2024
- Committee reviews pre-proposals – March 4 to March 22, 2024
- Proposers notified of selection status – April 1, 2024
- Materials due to UCWRR for inclusion in the full USGS proposal – April 12, 2024
- Full proposal due to USGS – May 1, 2024
- Expected project timeframe – September 1, 2024, to August 31, 2025

Contents:

Project Description – (no more than 5 pages)

- 1) Title. Concise but descriptive.
- 2) Principal investigator(s). Provide name, academic rank, university, email address and phone number of the principal investigators.
- 3) Project Type. Choose from the following: Research, Information Transfer, Information Management System, or Education.
- 4) WRRRI Science Priorities. Choose from the following the one category that most closely applies: Water Scarcity and Availability; Water Hazards and Climate Variability; Water Quality; Water Policy Planning, and Socioeconomics; Watershed and Ecosystem Function; Water Technology and Innovation; or Workforce Development and Water Literacy.
- 5) USGS Cross-Discipline Landscape and Science Descriptors. Choose up to two from each category that most apply:

LANDSCAPE DESCRIPTORS – Arctic, California Bay Delta, Chesapeake Bay, Columbia River, Everglades, Great Lakes, Gulf Coast, Klamath, Puget Sound, Salton Sea, Upper Mississippi River, None of the Above. It is not a problem to select “None of the Above” for Utah-related projects.

SCIENCE DESCRIPTORS – Climate, Energy, HABS, Indian Water Rights, Natural Hazards, Oceans/Coastal/Great Lakes, STEM, Water Challenges, Other
- 6) Focus Categories: Choose a maximum of three focus categories from the provided list, with the most preferred focus category first.

ACID DEPOSITION	ACD	EDUCATION	EDU
AGRICULTURE	AG	FLOODS	FL
CLIMATOLOGICAL PROCESSES	CP	GEOMORPOLOGICAL PROCESSES	GEOMOR
CONSERVATION	COV	GEOCHEMICAL PROCESSES	GEOCHE
DROUGHT	DROU	GROUNDWATER	GW
ECOLOGY	ECL	HYDROGEOCHEMISTRY	HYDROGEO
ECONOMICS	ECON	HYDROLOGY	HYDROL

INVASIVE SPECIES	INV	SEDIMENTS	SED
IRRIGATION	IG	SOLUTE TRANSPORT	ST
LAW, INSTITUTIONS, AND POLICY	LIP	SURFACE WATER	SW
MANAGEMENT AND PLANNING	M&P	TOXIC SUBSTANCES	TS
METHODS	MET	TREATMENT	TRT
MODELS	MOD	WASTEWATER	WW
NITRATE CONTAMINATION	NC	WATER QUALITY	WQL
NON POINT POLLUTION	NPP	WATER QUANTITY	WQN
NUTRIENTS	NU	WATER SUPPLY	WS
RADIOACTIVE SUBSTANCES	RAD	WETLANDS	WET
RECREATION	REC		

- 7) Keywords. Enter keywords of your choice descriptive of the work
- 8) Training potential. Estimate the number of graduate and undergraduate students, by degree level, who are expected to receive training in the project.
- 9) Abstract. Provide a brief (300 word) description of the problem, methods, and objectives.
- 10) Plain-language summary. Provide a brief (150 word) description of the study that would be understandable by the public.
- 11) Statement of regional or State water problem. Include an explanation of the need for the project, who wants it, and why. Describe how the work proposed aligns with one or more of the WRRRI Science Priorities in (4) above. (See USGS Circular 1488 (<https://doi.org/10.3133/cir1488>), *Water Resources Research Act Program—Current Status, Development Opportunities, and Priorities for 2020–30 for more information*).
- 12) Statement of results or benefits. Specify the type of information that is to be gained and how it will be used.
- 13) Nature, scope, and objectives of the project, including a timeline of activities.
- 14) Methods, procedures, and facilities. Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.
- 15) Interaction with USGS. Describe any collaboration with USGS staff (include name, position, and Science Center, if applicable). A support letter from a USGS collaborator will be required if the project is selected for inclusion in the full proposal. If you are interested in discussing a possible collaboration with the USGS, please contact the [Utah Water Science Center](#).
- 16) Related research. Show by literature and communication citations the similarities and dissimilarities of the proposed project to completed or ongoing work on the same topic.
- 17) Investigator’s qualifications. Include resume(s) of the principal investigator(s). Limit to 2 pages with no more than 15 pertinent publications.
- 18) Budget breakdown. A one-page draft budget and basic budget justification including details on meeting the 1:1 match.

*****Notice Regarding Restrictions on Funding for Uncrewed Aircraft Systems (UAS)**

If your proposal includes funding for use or purchase of UAS technology, please refer to the “Designated UAS Assessment Guide” (<https://www.doi.gov/sites/doi.gov/files/uploads/doi-designated-uas-assessment-guide-v2.1.pdf>) for guidance in determining whether the UAS is designated. The Department of Interior will not approve funding for designated UAS, and including a designated UAS in your request may cause significant delays in processing the award.

Additionally, all UAS operated under Department of Interior operational control, including cooperator aircraft, must have a current OAS-36U DOI UAS Data Card or letter of authorization issued by the Office of Aviation Services. Please review

<https://www.doi.gov/sites/doi.gov/files/opm-11.pdf> for detailed information if you are submitting a proposal that includes UAS.

19) Data Management Plan.

Provide a 1-page data management plan to include the following:

- the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project,
- the standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies),
- policies for access and sharing, including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements,
- provisions for re-use, re-distribution, and the production of derivatives, and
- plans for archiving data, samples, and other research products, and for preservation of free public access to them.

The items above will be included in the aggregate proposal data management plan submitted to the USGS. The data management plan should follow current federal government open data requirements that involve submitting the data to a recognized repository. General USGS guidance on data management is available at: <https://www.usgs.gov/products/data-and-tools/data-management/data-management-plans>. The UWRL will provide data management support for investigators who use HydroShare to publish their data from USGS 104b projects.

20) Conflicts of Interest. Please disclose any actual or potential conflicts of interest as indicated on p. 13 of 23 in the [2023 USGS 104b FOA](#) or state “no conflict of interest.”

21) Overlap or Duplication of Effort. Describe any overlap between this Federal application and any other Federal application or funded project in regard to activities, cost, or time commitment of key personnel as indicated on p. 14 of 23 in the [2023 USGS 104b FOA](#).

Reporting Requirements:

1) ACKNOWLEDGEMENTS/DISCLAIMERS:

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

This material is based upon work supported by the U.S. Geological Survey under Grant/Cooperative Agreement No. G21AP10623-04.

The following disclaimer should also be included:

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Geological Survey. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Geological Survey.

2) FINAL REPORT SUMMARY INFORMATION:

Recipients will be required to prepare a final report summary no later than 30 calendar days after the project end date. The USGS tracks project productivity such as research publications, conference proceedings, patents, student participation, training sessions, etc., and recipients will be required to provide this information in a project summary report and to report on publications and other outcomes that result from this project for up to 2 subsequent years.

The following additional information must be provided as reporting requirements:

- Name, major, degree program of all students who have worked on the project.
- One or more publication quality photo(s) of project-related work (and/or student performing such work).
- Links to electronic copies of any student thesis or dissertation, poster, or PowerPoint presentation resulting from the project.
- Citations and digital object identifiers (DOIs) for journal articles submitted for publication and published data.
- Links to fact sheets, data sets, or any other materials produced as part of the project
- A final abstract (around 250 words) summarizing major findings of the project suitable for newsletter publication.
- Description of, and reasons for, any deviation of actual accomplishments from the original project goals.
- Information transfer, student support, USGS collaborations, and notable achievements and awards.

3) DATA MANAGEMENT

At the completion of the project, all data must be archived as outlined in the original proposal data management plan. Shannon Syrstad (shannon.syrstad@usu.edu) is available to assist PIs in publishing project data to HydroShare.