



USGS 104B ANNUAL BASE GRANTS PROGRAM REQUEST FOR PROPOSALS FY2023

Deadlines:

Project Title and List of Reviewers due: **Wednesday, January 18, 2023 by 5PM Eastern.**

Proposal and application materials due: **Wednesday, January 25, 2023 at 5PM Eastern**

More information:

IWRRC: <https://iwrrc.org/>

USGS: <https://water.usgs.gov/wrri/index.php>

Questions:

Laura Esman, Managing Director

lesman@purdue.edu; 765.496.3135

Program Description:

The Indiana Water Resources Research Center (*IWRRC*) invites faculty and affiliates from *Indiana's colleges and universities* to submit water related proposals for possible funding. The IWRRC grant program is supported via an annual base grant from the U.S. Department of Interior, U.S. Geological Survey, as part of the federal Water Resources Research Act of 1964 (Program 104B). This program provides a base of support for Indiana's water resource research needs.

Project Areas:

The IWRRC grant program supports research in all areas of water research, especially identified Indiana water priorities which include emerging regional community threats, industrial capacity demand, water availability for economic development, invasive species, PFAS, nutrient loading, Harmful Algal Blooms, hydrologic alteration in a changing climate, and downstream impacts of excess water extraction and water quality after changes in pumping regimes.

For FY2023, the IWRRC is collaborating with the Indiana Water Resources Association and their focus on the drinking water infrastructure, and water demand changes due to shifts in power production from coal power to renewable energy and small modular reactors. Therefore, the IWRRC anticipates funding at least one proposal focused on research related to water infrastructure and changes to power production.

Projects that also incorporate concepts of water equity, such as identifying causes and impacts of water-related disparities, developing or evaluating tools or strategies to improve water quality, or providing scientific information to benefit underserved communities are also sought.

Researchers involved in funded projects with an equity focus will be invited to join a Great Lakes Water Equity Research working group coordinated by the Water Resources Research Institutes in the Great Lakes region. The working group will organize member-driven activities that may include, but are not limited to: grant development workshops, conference special sessions, mini-conferences, special issue journal proposals, and coordinated communications to amplify research impacts. Funding of up to \$1000 for these activities will be provided directly by the IWRRC and should not be included in the project budget.

Funding Information:

We anticipate funding 3-4 research projects this year (each up to \$25,000), depending on the level of monetary requests. Each project will be subject to the following stipulations:

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- Funds will be administered through the Indiana Water Resources Research Center
- All awards will be subject to the availability of federal funds. We have not received official notification for the levels of federal support in the 2023 program. As a result, the loss of the entire program, reductions in funding levels, and funding delays are possible.

Applicants must provide a **1:1 match in non-federal funds**. All indirect funds (F&A) must be waived but may be counted as match. Salaries, benefits, and other project-related expenses covered by other state or private sources may also be counted as match.

Project Period:

Grants will support one-year projects (Note that project extensions are not allowed by USGS for this program). The project year typically extends from September 1, 2023 to August 31, 2024. However, the start date has varied in recent years due to delays in funding from the U.S. Department of Interior.

Eligibility:

Researchers at any institution of higher education in Indiana are eligible for this annual grant competition.

The IWRRC highly encourages proposals from principal investigators who are from underrepresented or underserved groups in STEM, and from institutions that serve majority minority populations. Additionally, proposals are encouraged that enhance diversity, equity, inclusion, and justice at the intersection of water research and resources. Proposals that address issues in historically marginalized or underserved communities are highly encouraged.

Proposal Selection Criteria:

Research proposals will be competitively reviewed using an external peer review process. The reviewers will use the following criteria in assigning a final rank:

- 1) Technical merit, proposal quality, and feasibility (50%);
- 2) Applicability to Indiana's needs (15%);
- 3) Involvement of students (undergraduate/graduate) in research (20%); and
- 4) Capability of the PI(s) (15%).

Highly valued research projects will also include activities to disseminate information and results to the public.

Reporting Requirements:

All outputs of your 104B supported research must acknowledge both the USGS and IWRRC for the 104B grant opportunity and must include the project ID assigned to your research. The IWRRC will provide you with the appropriate logos. Please use the following language to acknowledge IWRRC as a funding source:

This research is funded [, in part,] as [Project ID] under the provisions of section 104 of the Water Resources Research Act of 1984 annual base grants (104B) program through the United States Geological Survey and distributed through the Indiana Water Resources Research Center, www.iwrcc.org.

Grant recipients are expected to contribute towards a fact sheet detailing their study findings and participate in the annual Indiana Water Resources Association Symposium. Grant recipients may also be asked to give a presentation during an IWRRC sponsored webinar.

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

- A final abstract (around 250 words) summarizing major findings and implications/impact of the project.
- Name, major, degree program, and date of graduation of all students working on the project.

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- One or more publication quality photo(s) of project-related work (and/or student(s) performing such work).
- List of research products (i.e., publications, conference proceedings, patents, fact sheets, and other products resulting from the project).
- List of training sessions, information transfer, and notable achievements and awards.

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

Proposal Format Guidelines:

Each proposal must contain the information outlined below in Attachments 1, 2, 3, 4, and 5 which includes the proposal narrative and additional documentation. Please note page number, font and margin limits in Attachment 1. All research proposals must have each section identified in Attachment 1 and be in the same order. Any research proposal that is not formatted correctly will not be eligible for funding. All other Attachments should be included.

Submission Requirements:

Title and Reviewers: For research proposals, please send your project title and a list of names and email addresses for four reviewers within your field of expertise to Ms. Laura Esman (lesman@purdue.edu) no later than 5:00PM Eastern on Wednesday, January 18, 2023. Your four reviewers should include: (1) out of state academic, (2) in state academic, and (3) two reviewers of your choice. Please include their title (e.g., Dr., Mr., Ms., etc.).

Proposal Submission: Please send an electronic copy of the completed research proposal (MS-Word document only, not in PDF format) to Dr. Keith Cherkauer (cherkaue@purdue.edu) and Ms. Laura Esman (lesman@purdue.edu) no later than 5:00PM Eastern on Wednesday, January 25, 2023. (Indicate the PI's NAME- IWRRC 2022 proposal in the header.) We will respond with an email once we receive your submission. If you do not receive a confirmation email within 24 hours of your submission, please contact Laura Esman (email or phone) to let her know.

ATTACHMENT 1 –RESEARCH PROPOSAL

Proposal Narrative: *The proposal must fit on no more than 5 pages including figures and graphs, but not including references. Use 1-inch margins all around and 12 pt font. Do not use letters as part of heading for each section.*

- a. Title. Concise but descriptive.
- b. Project Type. Choose one (Research, Information Transfer, Information Management System, Education)
- c. Focus Categories (Attachment 2; choose a maximum of three focus categories)
- d. Research Category. 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.
- e. Keywords. Enter keywords of your choice that describe the work.
- f. Start date: September 1, 2023
- g. End date: August 31, 2023
- h. Principal Investigator(s). Provide name, academic rank, university, email address and phone number of the principal investigators
- i. Congressional District of the university where the work is to be conducted.
- j. Abstract. Provide a brief (300 word) description of the problem, methods, and objectives.
- k. Statement of regional or state water problem. Include explanation of the need for the project, who wants it, and why.
- l. Statement of results or benefits. Specify the type of information that is to be gained, and how it will be used.
- m. Nature, scope, and objectives of the project. Include a brief timeline of activities.
- n. Methods, procedures, and facilities. Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.
- o. Related research. (Research projects only) Provide context for the proposed work in terms of previous and ongoing research, including citations.
- p. Training potential. Estimate the number of graduate and undergraduate students, by degree level, who are expected to receive training in the project.
- q. Expected deliverables. Include information dissemination plan.
- r. IWRRC Past Funding. If you have received IWRRC funds in the past, how have you leveraged the projects/funds that were supported by IWRRC and what were your accomplishments?
- s. References cited.

Additional Documents

- 1. Investigator’s qualifications. Include short (no more than 2 pages) biographical sketches of the principal investigator(s).
- 2. Budget Summary (attachment 3)
- 3. Budget Justification (attachment 4)
- 4. Data Management Plan (attachment 5)
- 5. Documentation of institutional approval of the proposal.
- 6. Matching fund commitment letter signed by authorized institutional official

FISCAL GUIDELINES. The proposal budgets must reflect a \$1 non-federal match for each federal dollar requested. Please contact your college pre-award details but the match may include actual contributions, in-kind contributions and overhead costs. (Indirect costs may not be charged on the *federal* funding request in this program, although the match may include the indirect costs forgiven on the federal dollars.)

ATTACHMENT 2

<u>Focus Categories</u>	<u>Abbreviations</u>
ACID DEPOSITION	ACD
AGRICULTURE	AG
CLIMATOLOGICAL PROCESSES	CP
CONSERVATION	COV
DROUGHT	DROU
ECOLOGY	ECL
ECONOMICS	ECON
EDUCATION	EDU
FLOODS	FL
GEOMORPOLOGICAL PROCESSES	GEOMOR
GEOCHEMICAL PROCESSES	GEOCHE
GROUNDWATER	GW
HYDROGEOCHEMISTRY	HYDGEO
HYDROLOGY	HYDROL
IRRIGATION	IG
LAW, INSTITUTIONS, AND POLICY	LIP
MANAGEMENT AND PLANNING	M&P
METHODS	MET
MODELS	MOD
NITRATE CONTAMINATION	NC
NON POINT POLLUTION	NPP
NUTRIENTS	NU
RADIOACTIVE SUBSTANCES	RAD
RECREATION	REC
SEDIMENTS	SED
SOLUTE TRANSPORT	ST
SURFACE WATER	SW
TOXIC SUBSTANCES	TS
TREATMENT	TRT
WASTEWATER	WW
WATER QUALITY	WQL
WATER QUANTITY	WQN
WATER SUPPLY	WS
WATER USE	WU
WETLANDS	WL

ATTACHMENT 3

BUDGET SUMMARY

Project Title:

Cost Category	Federal	Non-Federal	Total
Salaries and Wages	\$	\$	\$
-Principal Investigator(s) _____			
-Regular Investigator(s) _____			
-Post Doc(s) _____			
- Graduate Student(s) _____			
-Undergraduate Student(s) _____	\$	\$	\$
-Others _____			
Total Salaries and Wages			
Fringe Benefits			
-Principal Investigator(s) _____			
-Regular Investigator(s) _____			
-Post Doc(s) _____			
- Graduate Student(s) _____			
-Undergraduate Student(s) _____			
-Others _____			
Total Fringe Benefits			
Tuition			
-Graduate Student(s) _____			
-Undergraduate Student(s) _____			
Total Tuition			

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Supplies			
Equipment			
Services or Consultants			
Travel			
Other direct costs			
Total direct costs	\$	\$	\$
Indirect costs on federal share	XXX	\$	\$
Indirect costs on non-federal share	XXX	\$	\$
Total estimated costs	\$	\$	\$
Total costs at Purdue University (campus on which the IWRRC is located.)	\$	\$	\$
Total costs at other university campus Name of University:	\$	\$	\$

ATTACHMENT 4

BUDGET JUSTIFICATION

Project Title: [Click or tap here to enter text.](#)

Salaries and Wages for PIs. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.

[Click or tap here to enter text.](#)

Salaries and Wages for Graduate Students. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual. (Other forms of compensation paid as or in lieu of wages to students performing necessary work are allowable provided that the other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work. Also, note that tuition has its own category below and that health insurance, if provided, is to be included under fringe benefits.)

[Click or tap here to enter text.](#)

Salaries and Wages for Undergraduate Students. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual. (Other forms of compensation paid as or in lieu of wages to students performing necessary work are allowable provided that the other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work. Also, note that tuition has its own category below and that health insurance, if provided, is to be included under fringe benefits.)

[Click or tap here to enter text.](#)

Salaries and Wages for Others. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.

[Click or tap here to enter text.](#)

Fringe Benefits for PIs. Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.

[Click or tap here to enter text.](#)

Fringe Benefits for Graduate Students. Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.

[Click or tap here to enter text.](#)

Fringe Benefits for Undergraduate Students. Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.

[Click or tap here to enter text.](#)

Fringe Benefits for Others. Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.

[Click or tap here to enter text.](#)

Tuition for Graduate Students. Provide time & amount. In-state or Out-of-state tuition?

[Click or tap here to enter text.](#)

Tuition for Undergraduate Students. Provide time & amount. In-state or Out-of-state tuition?

Click or tap here to enter text.

Supplies. Indicate separately the amounts proposed for laboratory and field supplies followed by a breakdown of the supplies in each category.

Click or tap here to enter text.

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. If fabrication of equipment is proposed, list parts and materials required for each, and show costs separately from the other items. A detailed breakdown is required.

Click or tap here to enter text.

Services or Consultants. Identify the specific tasks for which these services, consultants, or subcontracts would be used. Provide a detailed breakdown of the services or consultants to include personnel, time, salary, supplies, travel, etc. A breakdown is required for each cost.

Click or tap here to enter text.

Travel. Provide purpose and estimated cost for all travel. A breakdown should be provided to include location, number of personnel, number of days, per diem rate, lodging rate, mileage and mileage rate, airfare (whatever is applicable).

Click or tap here to enter text.

Other Direct Costs. Itemize costs not included elsewhere, including publication costs. Costs for services and consultants should be included and justified under "Services or Consultants" (above). Please provide a detailed breakdown for costs listed under this category.

Click or tap here to enter text.

Indirect Costs. Provide negotiated indirect ("Facilities and Administration") cost rate. If indirect costs are provided, please include a copy of your current Indirect Cost Rate Agreement so the rate can be verified.

Click or tap here to enter text.

ATTACHMENT 5

DATA MANAGEMENT PLAN

DATA MANAGEMENT PLAN GUIDELINES US GEOLOGICAL SURVEY FY2022 REQUEST FOR APPLICATIONS – 104B

Proposals submitted to USGS must include a **supplementary document of no more than four pages** labeled "Data Management Plan" (DMP). This supplementary document should describe how the proposal will conform to USGS policy on the dissemination and sharing of research results and associated data. A valid DMP may include only the statement that no detailed plan is needed (e.g. "No data are expected to be produced from this project"), as long as the statement is accompanied by a clear justification. This supplementary document may include:

- 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.

Additional guidance on data management plans is available from the USGS Data Management web site here: <http://www.usgs.gov/datamanagement/plan/dmplans.php>