USGS/NIWR FY2025 Nationally Competitive Grants

Proposal Preparation Guidance

August 21, 2025

IWRC

INDIANA WATER RESOURCES RESEARCH CENTER

Institute of Water Research
MICHIGAN STATE UNIVERSITY

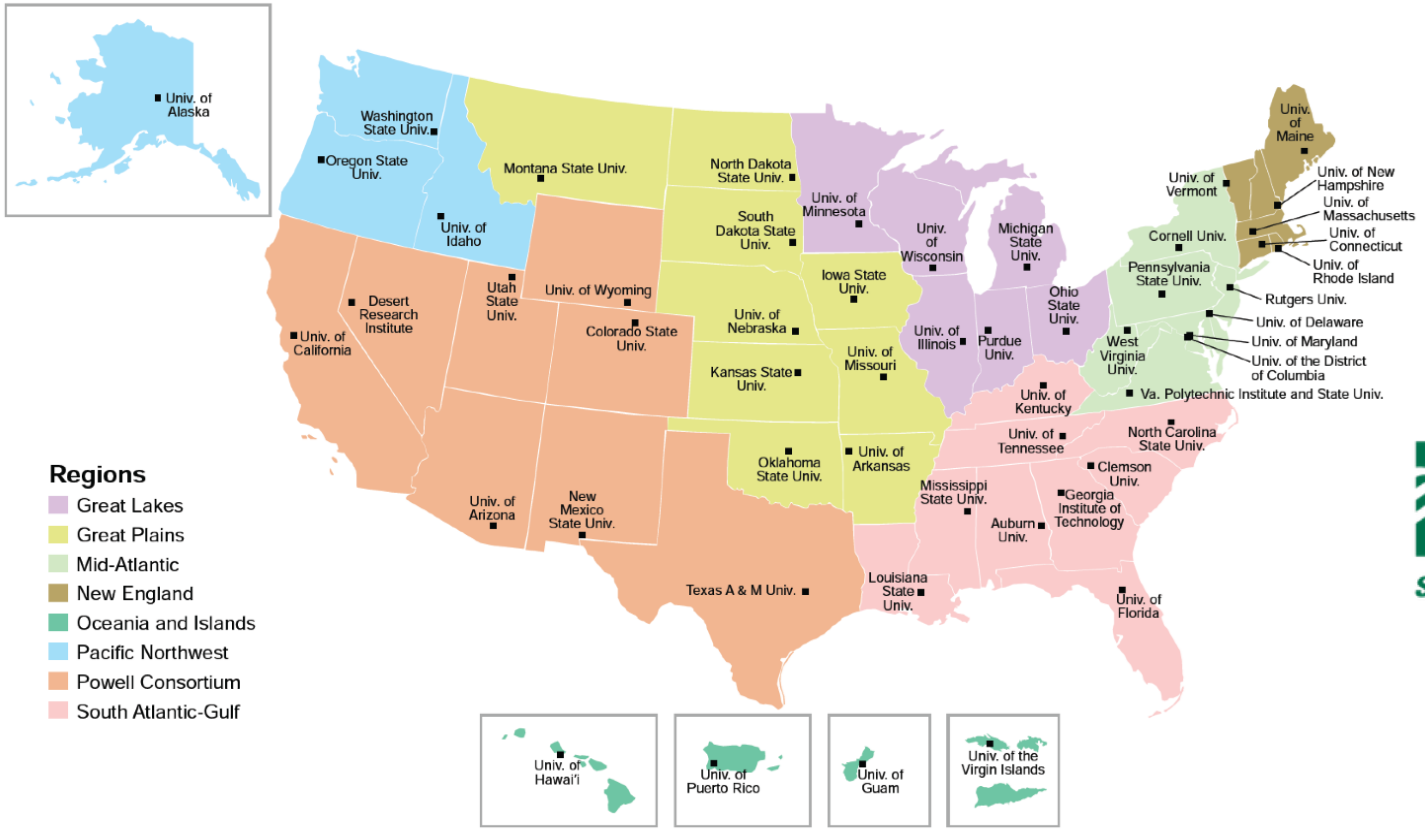
Water Resources Center
UNIVERSITY OF MINNESOTA

WATER RESOURCES CENTER OHIO WRC

WRI
University of Wisconsin

Today's webinar:

- Introduction to NIWR and state water centers/institutes
- Eligibility and how to apply
- FY2025 104(g) grants: General, AIS and PFAS – including research priorities
- Overview of RFPs with emphasis on budget criteria
- USGS collaboration
- Self selecting breakout rooms for each program (General, PFAS, AIS)



NIWR
THE NATIONAL INSTITUTES FOR WATER RESOURCES

USGS
science for a changing world

Eligibility

- Any investigator at an accredited institution of higher learning
- Investigators in each state must submit through the designated Water Resources Research Institute in that state

USGS WRRA page

How to apply:

- Work with your state WRRI contact
- Great Lakes:
  - IL - Amy Weckle
  - IN - Laura Esman
  - MI - Jeremiah Asher
  - MN - Sarah Roth
  - OH - Linda Weavers and John Lenhart
  - WI - Jennifer Hauxwell
- Application requirements may differ in each state

USGS WRRA page

Timeline

August 15	USGS released RFP
~ Mid September	Proposal submission deadline to WRRI
September 30	WRRI proposal submission deadline to grants.gov **by your state institute**
~ Thanksgiving	USGS announces funding decisions
February 1	Money disbursed to WRRI awardees (delays always possible)
Other deadlines may include (state dependent):	
	Notice of Intent (NOI) submitted to WRRI
	Submission of budgets and budget justifications

FY2025 104(g) Nationally Competitive Grants

- General
- Aquatic Invasive Species (limited to Upper Mississippi River Basin)
- Per- and polyfluoroalkyl substances (PFAS)

All three programs focus on:

- water problems and issues of a regional or interstate nature beyond those of concern only to a single state, and
- concerns related to specific program priorities identified in each RFP

104(g)-General, AIS, PFAS common objectives

- Promote the dissemination and application of the results to the scientific community and to the general public.

- Assist in the training of scientists in relevant water-related fields. Proposals that include a strong educational component (student support) are encouraged, as are those from early-career faculty.

Note: None of the federally appropriated WRRA monies can be used for federal salary, travel, or any other expenses.

104(g)-General additional objective

- Promote collaboration between the USGS and university scientists on significant national and regional water-resource issues

104(g)-General additional monies

- Up to $40,000/project of internal USGS funds (non-WRRA appropriated) are available to fund salary and other expenses for a USGS co-PI.

- Requires submission of a Statement of Government Involvement including a workplan, budget, and explanation of personnel as well as the SF-424 Budget Information form and Budget Narrative.

104(g)-General priority #1

Economic value of Information of the USGS streamgage network and associated National Water Information System (NWIS).

- National Hydrologic Warning Council 2006 report categories (1) through (3)
- Hydrologic Unit Maps | U.S. Geological Survey
- Congressional Research Service Report – USGS Streamgaging Network: Overview and Issues for Congress
- National Water Monitoring Network | U.S. Geological Survey
- Federal Priority Streamgages (FPS) and Re-Prioritization of the U.S. Geological Survey
- Federal Priority Streamgage Network
- Flood_Management_benefits_FinalDraft.indd
- nhwc report final 030806.pub
- Water Data for the Nation
- National Water Dashboard
- Explore USGS Water Data

104(g)-General priority #1

- Proposals may seek a tradeoff between examining multiple benefit categories at a reduced geographic scale versus a limited number of benefits categories at a national scale.
- Preference will be given to those proposals that provide a Nation-wide assessment.
- Minimum geographic scope is the HUC12.
- **Define the program**: objective identification and scope
- **Identify Costs and Benefits**
    - Direct Costs: Include expenses such as funding, resources, labor, and implementation costs
    - Benefits: Identify direct market and non-market benefits
- **Quantify Costs and Benefits**
    - Monetary Valuation: Assign a monetary value to both costs and benefits where possible. This may include:
        - Market prices for goods and services
        - Willingness to pay for non-market benefits
        - Cost savings or increased productivity.

104(g)-General priority #1

- **Analyze timeframe and discounting**
  - Time horizon: Determine the timeframe over which the costs and benefits will be evaluated.
  - Discount rate: Apply a discount rate to account for the time value of money, ensuring future benefits and costs are appropriately valued in present terms.
- **Stakeholder Analysis**
  - Identify Affected Parties: Understand who will benefit from or bear the costs of the program
- **Report Findings**
  - Documentation: Present the methodology, assumptions, and results clearly.
  - Recommendations: Provide actionable insights based on the analyses, discussing implications for policy and practice.

104(g)-General priority #2

Model Advancement and Machine Learning Integration

- Explore methods to develop new hydrologic models in large, regional areas or, where possible, at the national level to enhance understanding of water availability.
- Provide information on promising modeling approaches to inform science questions specific to a region. Examples include:
    - **Machine Learning Techniques for Water Quality Data**: Apply AI and machine learning methods to harmonize water quality data across different sources, improving integration and accessibility for hydrologic modeling.
    - **Groundwater and Base Flow Predictions**: Specifically apply machine learning techniques to predict transient groundwater levels or base flow to streams, enhancing the understanding of these critical hydrologic processes.
    - **Causal Machine Learning Exploration**: Investigate the use of causal machine learning to evaluate current or ongoing studies impacted by non-causal modeling. This approach should help quantify the extent of the problem associated with non-causal machine learning modeling and inform the development of more robust, process-based modeling frameworks.

Aquatic Invasive Species (AIS):

- Nationally competitive but **project must fall within the delineated area** of the Upper Mississippi River Basin.

Aquatic Invasive Species (AIS) Research Priorities

- **Effects**: Research that improves our understanding of the effects of aquatic invasive species on lakes, rivers, and associated tributaries in the upper Mississippi River basin, including changes to water quantity, water quality, and ecosystem dynamics.
- **Characteristics**: Research that identifies physical, biological, and chemical characteristics of water bodies that infer resistance and resilience to the distribution, establishment, and effects of aquatic invasive species in the upper Mississippi River basin. Research is needed to better understand these interactions to guide management decisions that will improve invasive species management and result in positive effects on aquatic ecosystems.
- **Management**: Research on assessment of the detection, spread, and management of aquatic invasive species in the upper Mississippi River basin and the connections to human dimensions, both socially and economically. **Note that this does not include physical control of AIS.**

Per- and polyfluoroalkyl substances (PFAS) Research Priorities

- **Media-specific methods**: Enhanced methods for detection on specific media, with a clear indication of new or different compounds, new or different methodological approaches (such as non-target analysis [NTA] or suspect screening, proxies, surrogates), lower detection levels for specific media or compounds, especially with respect to EPA health guidelines for PFOA (Perfluorooctanoic Acid) and PFOS (Perfluorooctane Sulfonate).
    - Media of interest include (in ranked order):
        1. tissues/plasma,
        2. sediment,
        3. air or interfaces,
        4. water.

Per- and polyfluoroalkyl substances (PFAS) Research Priorities

- **Atmospheric sources**: Improved understanding of atmospheric exchange in PFAS distribution and fate. This may include methods to determine transport of PFAS to the atmosphere and to subsequent receiving waters, such as a water method that determines "new" compounds based on their likelihood to occur in the atmosphere.
- **Processes oriented at molecular level, physical or biological:** Process-oriented research of PFAS fate, transport, and effects, with emphasis on *molecular-level* understanding of PFAS precursor transformation, sorption dynamics, or process-oriented research of mechanisms of PFAS bioaccumulation and(or) biological/ecological effects, or biodegradation of PFAS along source to receptor pathways and identification of mitigation methods and engage modeling and forecasting processes for prediction, prevention, and mitigation of environmental risk of exposure to PFAS in ecosystem and human population.

Federal collaboration

- Collaboration with USGS or other federal scientists is encouraged
- Federal employees may not be a PI but can be a co-PI
- Federal agencies may not receive funds from these grants
    - **For General ONLY**: USGS scientists can obtain internal research funds to support their activities. Additional paperwork required. Funding for collaborator is from USGS, not included in proposal budget.
- Contact your state WRRI for assistance in identifying USGS collaborators
- https://www.usgs.gov/mission-areas/water-resources/connect

Budget requirements

- Up to $310,000 for the General 104g program, 6 awards anticipated
- Up to $309,000 for PFAS projects, 9 awards anticipated
- Up to $346,875 for AIS projects, 4 awards anticipated
- Project duration: 1–3 years
- Anticipated project start date: February 1, 2026
- 1:1 non-federal cost share required per 12-month period
- Facilities and Administrative (F&A or 'indirect costs') cannot be paid from federal funds
- Unrecovered F&A on both federal and non-federal direct costs are used toward the 1:1 match requirement – can be an exception to university policy

Example budget summary – General

Item	Federal	Non-federal	Total
A: Direct costs	310,000	90,500	400,500
B1: F&A on federal portion (55% of A:Fed)		170,500	170,500
B2: F&A on non-federal portion (55% of A:Nonfed)		49,775	49,775
C: Total (A + B1 + B2)	310,000	310,775	620,775

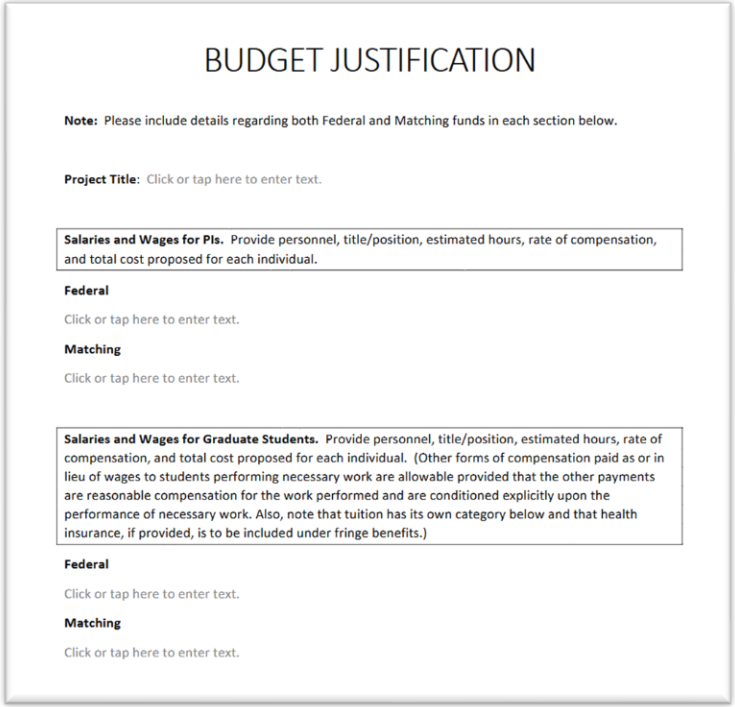
NOTE: F&A will differ for each state/institution. Please check with your state WRRI contact.

Budget requirements

- PIs can request salary from the federal funds, limited to 2 months of salary per year

- Budget Justification -
  - Justify and distinguish the federal funds requested from the match contribution.
  - Provide details
    - # of samples / testing kit capacity x number of tests and cost per test
    - Subawards to provide same level of detail

- Use the USGS-provided templates



BUDGET JUSTIFICATION

Note: Please include details regarding both Federal and Matching funds in each section below.

Project Title: Click or tap here to enter text.

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

Federal

Click or tap here to enter text.

Matching

Click or tap here to enter text.

Salaries and Wages for Graduate Students. Provide personnel, title/position, estimated hours, rate of compensation, and total cost 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.)

Federal

Click or tap here to enter text.

Matching

Click or tap here to enter text.

Common Budget Issues

- Not enough details
  - Tuition: # of students, time/# of semesters, rate/semester, and total amount
  - Supplies: item name, amount/unit, # of units, cost/unit, and total cost
  - Services/consultants: rate, hours, total cost
  - Travel:
    - actual name of conference, date, location
    - trip destination, # of personnel, # of days, per diem rate, lodging rate, mileage and mileage rate or airfare (for each trip)
- Unallowed costs
  - gifts, gift cards, incentives, gratuities, catering/food
- Indirect costs -> include indirect rate agreements
- Equipment -> if over $10,000, need a manufacturer's quote
- Subawards -> need just as much detail as in full budget

Free advice for making proposals competitive

- Connect with other teams who are applying to the same RFP
- Very low chance of USGS funding two proposals that are similar
- Differentiating proposals will improve everyone's chances
- Student involvement
- Regionally or nationally important (doesn't mean you need people spread throughout the region, but that the research needs to be regionally relevant)
- Make sure you READ the review criteria from the RFP as you write your proposal
- Make sure to answer the specific priority stated in each RFP

Breakout Rooms

Breakout Options (facilitator in each)

- AIS
- PFAS
- General
- Stay in main room for high-level / budget questions

Suggestions for discussion

- Introductions
- Topic/areas of interest - if willing to share
- Collaboration interests
- Other questions

WRRA Program Manager

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