

**NOTE: Funding is contingent on Congressional appropriation to NJWRRI through the WRA Act Program**

## CALL FOR PROPOSALS

**New Jersey Water Resources Research Institute  
Fiscal Year-2023 Grants Program  
Project Period: September 1, 2023 – August 30, 2024**

**DEADLINE: Wednesday, April 12, 2023 at 12PM, NOON**

The New Jersey Water Resources Research Institute (NJWRRI) invites proposals for research addressing water resources issues in the state. We expect to fund up to three larger research projects conducted by junior faculty (i.e., postdoctoral associates and assistant professor level) and up to six grants-in-aid to graduate students (i.e., masters or doctoral students) to support thesis research. The project funding period will be September 1, 2023 to August 30, 2024.

The mission of the NJWRRI is to fund research that addresses critical water resources problems in New Jersey, and by so doing, to produce the water resources professionals needed to protect and manage water in our increasingly crowded state. To this end, the Institute *especially encourages proposals from junior faculty* to develop research programs targeting priority water resources issues and from graduate students to develop thesis research projects on these issues.

Two types of projects are invited: a) research projects which address unanswered questions in water supply reliability, water resources problems, water sciences, and water equity and b) information/technology transfer projects which explore and develop novel methods of communicating water resources information to the public.

NJWRRI 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 increase diversity, equity, inclusion, and justice, which intersect with water research and resources. Proposals that address issues in historically marginalized or underserved communities are highly encouraged.

**JUNIOR FACULTY-INITIATED PROJECTS:** Up to three projects to be funded at a level of **up to \$20,000 per project**

Each project should be one year in duration and produce a product at the conclusion of the project year. The investigator should indicate how the funding will act as a “seed grant” to spur the development of a larger research program on water resources problems and what other sources of funding may be available or may be sought to continue the research.

**GRADUATE STUDENT GRANTS-IN-AID:** Up to six awards to be funded at a level of **\$5,000 each**

These funds are intended to allow graduate students to pursue research that is not supported by other grant funds. The funds should enable the student to carry out preliminary research to support other grant applications. The funds can be used for research assistant support, travel, supplies, or other direct research expenses. The student will be expected to present the results of the research at a scientific meeting (regional or national).

Proposals will be evaluated by the NJWRRI Advisory Council (a diverse panel of experts representing academic researchers, government scientists involved in the management of water resources, and water resources experts in the private sector according to criteria of 1) scientific merit, 2) promise for future scientific productivity (e.g., follow-on funding), and 3) relevance to New Jersey's water resources needs.

Summaries of research projects funded in recent years can be found at (<https://water.usgs.gov/wrri/annual-base-grants.php>).

Please note that the federal government requires a 1:1 match of dollars (one (1) non-federal dollar for each (1) dollar of WRRI support). The match typically includes salary and fringe benefits of the faculty investigator or graduate student advisor and the indirect costs associated with this salary and fringe benefits. Since the funding cannot be used for indirect costs, these costs also can be used toward the match. Matching dollars can be provided from any non-federal source. NJWRRI policy is to exclude faculty summer salary.

**Please submit an electronic copy by email to Christopher C. Obropta, Director, NJWRRI at [njwrri@njaes.rutgers.edu](mailto:njwrri@njaes.rutgers.edu).**

**DEADLINE: WEDNESDAY, April 12, 2023 at 12PM, NOON**

**For questions about the proposal please contact Lisa Galloway Evrard, Research Project Manager, at [njwrri@njaes.rutgers.edu](mailto:njwrri@njaes.rutgers.edu).**

**PROPOSALS THAT DO NOT FOLLOW THE GUIDELINES BELOW WILL NOT BE CONSIDERED FOR FUNDING.**

**FOR ALL PROPOSALS: Use a minimum 12-point typeface and 1-inch margins. Please paginate. Please submit as a single document, following the format specified below.**

**FORMAT FOR JUNIOR FACULTY PROPOSALS (up to \$20,000)**

1. Cover page (**1-page maximum, can be single-spaced**) to include:
  - a. Principle Investigator information: List all PIs, addresses, email addresses, phone numbers
  - b. Project Title
  - c. Project Type: Please indicate which of the following best pertains to this project (select one only) ~
    - Research
    - Information/Technology Transfer
  - d. Congressional District
  - e. Science Priority: Please indicate which of the following USGS Science Priorities best aligns with this project (select one only) ~
    - Water Scarcity and Availability
    - Water-Related Hazards and Climate Variability
    - Water Quality
    - Water Policy
    - Planning
    - Socioeconomics
    - Water Technology and Innovation
    - Workforce Development and Water Literacy
  - f. USGS Cross-Discipline Landscapes: Please indicate which of the following USGS Cross-Discipline Landscapes best pertains to this project (select one only) ~
    - 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
  - g. USGS Cross-Discipline Science Topic: Please indicate which of the following USGS Cross-Discipline Science Topics best pertains to this project (select one only) ~
    - Climate

- Energy
  - HABs
  - Indian Water Rights
  - Natural Hazards
  - Oceans/Coastal/Great Lakes
  - STEM
  - Water Challenges
  - Other
- h. Keywords: Please provide at least three (3) and no more than six (6) from the list provided in Attachment 1
- i. Award Amount
- j. Matching Funds
- k. Abstract – 250 words maximum
- This should inform readers about the problem to be addressed, the general approach to be taken, and the results that are anticipated.
2. Proposal Narrative (**5-page maximum, can be single-spaced**) to include:
- a. Priority issue that is addressed by the research (See Attachment 2)
  - b. Briefly describe how the research will contribute to the understanding and/or solution of the problem and why it is important to New Jersey.
  - c. Background -  
Describe the scientific rationale for the proposed work. This section should include the review of relevant literature and should indicate how the proposed research will contribute to new knowledge in the relevant field.
  - d. Specific objectives and/or hypotheses of the study
  - e. Research methods, experimental design, data analysis/statistical design, and expected results -  
Include sufficient information so that reviewers on the Advisory Council can judge the technical competence and originality of the work, the likelihood that the work can be completed in the specified time, and that the results will constitute important new and useful information. All projects should be one year in duration (i.e., September 1, 2023 to August 30, 2024). Please describe what products will result from the one-year funding.
  - f. Explain specifically how the research results will be utilized in a teaching and/or outreach/extension capacity.
3. Indicate if you have received prior funding from the NJWRRI. If so, give a brief progress report. List any presentations or publications which have resulted from the prior funding. (*not included in 5-page limit*)
4. Literature cited (*not included in the 5-page limit*)
5. Two-page curriculum vitae for each principal investigator; include the 10 most relevant publications (maximum) (*not included in the 5-page limit*)

6. Budget (use form in Attachment 2) *(not included in the 5-page limit)*
7. Budget justification (use form in Attachment 3) *(not included in the 5-page limit)*
8. Matching funds commitment letter  
All applicants must provide an institutional cost-sharing agreement (letter) signed by an official authorized to commit the applicant to all or part of the matching share or a third party in-kind contribution signed by an official authorized to commit the third party. The institutional cost-sharing agreement (letter) must identify the total amount of the cost share *(not included in the 5-page limit)*.

## FORMAT FOR GRADUATE STUDENT GRANTS-IN-AID (\$5,000)

1. Cover page (**1-page maximum, can be single-spaced**) to include:
  - a. Graduate student name, degree sought, graduate program, institutional address, telephone, and email address
  - b. Thesis advisor name, address, telephone, and email address
  - c. Project Title
  - d. Project Type: Please indicate which of the following best pertains to this project (select one only) ~
    - Research
    - Information/TechnologyTransfer
  - e. Congressional District
  - f. Science Priority: Please indicate which of the following USGS Science Priorities best aligns with this project (select one only) ~
    - Water Scarcity and Availability
    - Water-Related Hazards and Climate Variability
    - Water Quality
    - Water Policy
    - Planning
    - Socioeconomics
    - Water Technology and Innovation
    - Workforce Development and Water Literacy
  - g. USGS Cross-Discipline Landscapes: Please indicate which of the following USGS Cross-Discipline Landscapes best pertains to this project (select one only) ~
    - 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
  - h. USGS Cross-Discipline Science Topic: Please indicate which of the following USGS Cross-Discipline Science Topics best pertains to this project (select one only) ~
    - Climate
    - Energy
    - HABs
    - Indian Water Rights
    - Natural Hazards
    - Oceans/Coastal/Great Lakes

- STEM
  - Water Challenges
  - Other
- i. Keywords: Please provide at least three (3) and no more than six (6) from the list provided in Attachment 1
  - j. Award Amount
  - k. Matching Funds
  - l. Abstract – 250 words maximum  
This should inform readers about the problem to be addressed, the general approach to be taken, and the results that are anticipated.
2. Proposal Narrative (**5-page maximum, can be single-spaced**) to include:
    - a. Priority issue that is addressed by the research (See Attachment 2)  
Briefly describe how the research will contribute to the understanding and/or solution of the problem and why it is important to New Jersey. Include a brief literature review that places the proposed research in its scientific context.
    - b. Specific objectives and hypotheses of the study
    - c. Research methods, experimental design, data analysis/statistical design, and expected results -  
Include sufficient information so that reviewers on the Advisory Council can judge the technical competence and originality of the work, the likelihood that the work can be completed in the specified time, and that the results will constitute important new and useful information. All projects should be one year in duration (i.e., September 1, 2023 to August 30, 2024). Please describe what products will result from the one-year funding.
  3. Indicate if you have received prior funding from the NJWRRI. If so, give a brief progress report. List any presentations or publications which have resulted from the prior funding. *(not included in 5-page limit)*
  4. Literature cited *(not included in the 5-page limit)*
  5. Budget (use form in Attachment 2) *(not included in 5-page limit)*
  6. Budget justification (use form in Attachment 3) *(not included in 5-page limit)*
  7. One-page CV describing previous training, any publications or presentations, and professional goals *(not included in 5-page limit)*
  8. Letter of support from Advisor -  
A one-page letter must be submitted from the thesis advisor endorsing the student's proposal, agreeing to oversee the work, and taking responsibility for helping the student manage the financial aspects of the project. *(not included in 5-page limit)*

9. Matching funds commitment letter -

All applicants must provide an institutional cost-sharing agreement (letter) signed by an official authorized to commit the applicant to all or part of the matching share or a third party in-kind contribution signed by an official authorized to commit the third party. The institutional cost-sharing agreement (letter) must identify the total amount of the cost share (*not included in the 5-page limit*).

*NOTE: The proposal must be written by the student, not the faculty advisor. The student will be expected to present the results as a poster or oral presentation at a meeting of an appropriate research organization. Travel and conference registration fees for international conferences are not eligible for funding under this grant. Funds can be used for student support as hourly pay, but not as a stipend or fellowship.*



## **ATTACHMENT 1**

### **Keywords**

ACID DEPOSITION  
AGRICULTURE  
CLIMATOLOGICAL PROCESSES  
CONSERVATION  
DROUGHT  
ECOLOGY  
ECONOMICS  
EDUCATION  
FLOODS  
GEOMORPOLOGICAL PROCESSES  
GEOCHEMICAL PROCESSES  
GROUNDWATER  
HYDROGEOCHEMISTRY  
HYDROLOGY  
INVASIVE SPECIES  
IRRIGATION  
LAW, INSTITUTIONS, AND POLICY  
MANAGEMENT AND PLANNING  
METHODS  
MODELS  
NITRATE CONTAMINATION  
NON POINT POLLUTION  
NUTRIENTS  
RADIOACTIVE SUBSTANCES  
RECREATION  
SEDIMENTS  
SOLUTE TRANSPORT  
SURFACE WATER  
TOXIC SUBSTANCES  
TREATMENT  
WASTEWATER  
WATER QUALITY  
WATER QUANTITY  
WATER SUPPLY  
WETLANDS

## ATTACHMENT 2

### **RESEARCH PRIORITIES**

Research priorities mandated by Section 104(b) of the Water Resources Research Act of 1984 as amended 2006 are as follows:

#### ***I. Water supply reliability***

Proposals can address any aspect of supplying water for human and ecological needs. This may include (but not be limited to) water re-use, projected water supply issues for municipalities or regions, water availability for aquatic ecosystems, limitations to water supply such as contamination, water infrastructure, and watershed management.

#### ***II. Novel approaches to water resources problems and water science***

Proposals can address any aspect of water resources research as long as they clearly demonstrate the importance of a water resources issue to New Jersey and demonstrate that the proposed scientific methods and/or solutions to a water resources problem represent new ideas in the field. Projects may address topics in water resources engineering, aquatic ecology, hydrology, water quality issues, socio-economic aspects of water resources, water equity, or the communication of water resources information to the public (including school programs).

#### ***III. Information Transfer***

Projects that explore and develop novel methods of communicating water resources information to the public (examples may be, but are not limited to K-12 classroom teaching, informal science education, and citizen science projects) are encouraged.

## ATTACHMENT 3: BUDGET FORM

### **FORMAT FOR THE BUDGET:**

This format is required by USGS. Please complete the attached form.

- It is the policy of the NJWRRI that funds should not be used for summer salary for full-time faculty.
- It is a federal requirement of the program that these grants are matched by non-federal funds on a 1 non-federal dollar: 1 federal dollar basis. Pro-rated salary for time spent by the faculty advisor on the project can be allocated to the non-federal contribution, as can the indirect costs charged by the institution. **The indirect cost rate cannot be applied to tuition and equipment costs.** Federal dollars may **not** be used for indirect costs.
- Itemize the non-federal dollars being used for the match.



**Budget Breakdown**

<b>PI Name &amp; University:</b>			
<b>Project Title:</b>			
<b>Cost Category</b>		<b>Federal</b>	<b>Non-Federal (match)</b>
<b>1. Salaries and Wages</b>			
Principal Investigator(s)			\$0.00
Graduate Student(s)			\$0.00
Undergraduate Student(s)			\$0.00
Other(s)			\$0.00
<b>Total Salaries and Wages</b>		\$0.00	\$0.00
<b>2. Fringe Benefits</b>			
	<b>Rate (%)</b>		
Principal Investigator(s)	0.00%		\$0.00
Graduate Student(s)	0.00%		\$0.00
Undergraduate Student(s)	0.00%		\$0.00
Other(s)	0.00%		\$0.00
<b>Total Fringe Benefits</b>		\$0.00	\$0.00
<b>3. Tuition</b>			
Graduate Student(s)			\$0.00
Undergraduate Student(s)			\$0.00
<b>Total Tuition</b>		\$0.00	\$0.00
<b>4. Supplies</b>			
			\$0.00
<b>5. Equipment</b>			
			\$0.00
<b>6. Services or Consultants</b>			
			\$0.00
<b>7. Travel</b>			
			\$0.00
<b>8. Other direct costs</b>			
			\$0.00
<b>9. Total direct costs</b>		\$0.00	\$0.00
	<b>Rate (%)</b>		
10a. Indirect costs on federal share	0.00%	XXXXXXXXXX	\$0.00
10b. Indirect costs on non-federal share	0.00%	XXXXXXXXXX	\$0.00
<b>11. Total estimated costs</b>		\$0.00	\$0.00

*Total Federal for student grants - maximum of \$5,000; for junior faculty grants - maximum of \$20,000*

*Total Non-Federal for student grants - minimum of \$5,000; for junior faculty grants - minimum of \$20,000*

*Total estimated costs for student grants - \$10,000; for junior faculty grants - of \$40,000*

## **ATTACHMENT 3: BUDGET JUSTIFICATION FORM**

### **FORMAT FOR THE BUDGET JUSTIFICATION:**

This format is required by USGS. Please complete the attached form.

- Provide a narrative justification using the attached form for the specific dollar allocations.

Please be as specific as possible and be sure to include estimated hours and rate of compensation for salaries and wages, fringe benefit rates, and negotiated indirect (F&A) rates.

Please include a justification for all matching contributions as well.

Follow the specific instructions on the form for each line item.

## BUDGET JUSTIFICATION

**PI Name & Project Title:**

<p><b>Salaries and Wages for PIs.</b> Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.</p>
<p>Federal:</p>  <p>Non-Federal (match):</p>
<p><b>Salaries and Wages for Graduate Students.</b> 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.)</p>
<p>Federal:</p>  <p>Non-Federal (match):</p>
<p><b>Salaries and Wages for Undergraduate Students.</b> 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.)</p>
<p>Federal:</p>  <p>Non-Federal (match):</p>

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

Federal:

Non-Federal (match):

**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.

Fringe Benefit Rate for PIs =  
Federal:

Non-Federal (match):

**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.

Fringe Benefit Rate for Graduate Students =  
Federal:

Non-Federal (match):

**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.

Fringe Benefit Rate for Undergraduate Students =  
Federal:

Non-Federal (match):

**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.

Fringe Benefit Rate for Others =  
Federal:

Non-Federal (match):

<p><b>Tuition for Graduate Students.</b> Provide time &amp; amount. In-state or Out-of-state tuition?</p> <p>Federal:</p> <p>Non-Federal (match):</p>
<p><b>Tuition for Undergraduate Students.</b> Provide time &amp; amount. In-state or Out-of-state tuition?</p> <p>Federal:</p> <p>Non-Federal (match):</p>
<p><b>Supplies.</b> Indicate separately the amounts proposal for laboratory and field supplies followed by a breakdown of the supplies in each category.</p> <p>Laboratory supplies (itemized list) :</p> <p>Field supplies (itemized list):</p>
<p><b>Equipment.</b> 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.</p> <p>Detailed breakdown:</p>
<p><b>Services or Consultants.</b> 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.</p> <p>Detailed breakdown for each cost:</p>



**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).

Purpose & Location:  
 Number of personnel & number of days:  
 Per diem rate:  
 Lodging rate:  
 Mileage & mileage rate:  
 Airfare:

**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.

Detailed breakdown for each cost:

**Indirect Costs.** Provide negotiated indirect (“Facilities and Administration”) cost rate.

Indirect Cost Rate (F&A) =