

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

CALL FOR PROPOSALS

New Jersey Water Resources Research Institute FY 2017 Grants Program

DEADLINE: Friday, October 21, 2016 at 5 p.m.

The New Jersey Water Resources Research Institute (NJWRRI) invites proposals for research addressing water resource issues in the state. We expect to fund two to three larger research projects conducted by junior faculty and five to six grants-in-aid to graduate students to support thesis research.

The mission of the NJWRRI is to fund research that addresses critical water resource problems in New Jersey, and by so doing, to produce the water resource 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 resource issues and from graduate students to develop thesis research projects on these issues.

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

JUNIOR FACULTY-INITIATED PROJECTS: Two 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 resource problems and what other sources of funding may be available or may be sought to continue the research.

GRADUATE STUDENT GRANTS-IN-AID: Five 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 resource 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 resource needs.

Summaries of research projects funded in recent years can be found on the NJWRRI website (www.njwrri.rutgers.edu/research.html).

Please note that the federal government requires a 2:1 match of dollars (two (2) non-federal dollars for each (1) dollar of WRRRI support). The match usually includes salary of the faculty investigator or graduate student advisor and the indirect costs and fringe benefits associated with this salary. 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@aesop.rutgers.edu

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For questions about the proposal or the budget, please contact Christopher C. Obropta at njwrri@aesop.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" margins. Please paginate. Please submit as a single document.

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

1. Cover page (**1-page single-spaced maximum**) to include:
 - a. Project Title
 - b. Project Type (Research or Information Transfer)
 - c. Congressional District
 - d. Research Category (select 1 from list provided in Attachment 1)
 - e. Focus Category (select 3 from list provided in Attachment 1)
 - f. Keywords (provide at least three and no more than six)
 - g. Research Priority (select 1 from list provided in Attachment 1)
 - h. Investigator(s) name(s), institutional address(es), telephone, email address(es)
 - i. Amount requested
 - j. 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. It will be sent to potential reviewers and used on the NJWRRRI website and USGS publications.

2. Proposal Narrative (**10-page double-spaced maximum**) to include:
 - a. Priority issue that is addressed by the research
 - 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, 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. 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.
 - g. Literature cited

3. Indicate if you have received prior funding from the NJWRRRI. If so, give a brief progress report. List any presentations or publications which have resulted from the prior funding. (*not included in 10-page limit*)

4. Two-page curriculum vitae for each principal investigator; include the 10 most relevant publications (maximum) *(not included in the 10-page limit)*
5. Provide the names and contact information (phone number, email address) for three scholars external to your institution who can provide peer reviews and for whom there is no conflict of interest (i.e., prior collaborative or training relationships); please do NOT include scientists with the NJDEP or other New Jersey agencies; these agencies already provide reviews of WRRRI proposals. *(not included in the 10-page limit)*
6. Budget (use form in Attachment 2) *(not included in the 10-page limit)*
7. Budget justification (use form in Attachment 3) *(not included in the 10-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. *(not included in the 10-page limit)*

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

NOTE: The proposal must be written by the student, not the faculty advisor.

1. Cover page (**1-page single-spaced maximum**) to include:
 - a. Project Title
 - b. Project Type (Research or Information Transfer)
 - c. Congressional District
 - d. Research Category (select 1 from list provided in Attachment 1)
 - e. Focus Category (select 3 from list provided in Attachment 1)
 - f. Keywords (provide at least three and no more than six)
 - g. Research Priority (select 1 from list provided in Attachment 1)
 - h. Graduate student name, degree sought and graduate program, institutional address, telephone, and email address
 - i. Thesis advisor name, address, telephone, and email address
 - j. Amount requested
 - 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. It will be sent to potential reviewers and used on the NJWRRRI website and USGS publications.
2. Proposal Narrative (**5-page single-spaced maximum**) to include:
 - a. Priority issue that is addressed by the research -
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, and expected results -
Include sufficient information so that reviewers on the Advisory Council can judge the technical competence of the work, the likelihood that the work can be completed in the specified time, and that there will be specific products and outcomes from the research.
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. *(not included in the 5-page limit)*

NOTE: 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: RESEARCH CATEGORIES,
FOCUS CATEGORIES,
RESEARCH PRIORITIES**

RESEARCH CATEGORIES (select 1)

Biological Sciences	Ground-water Flow and Transport
Climate and Hydrologic Processes	Social Sciences
Engineering	Water Quality

FOCUS CATEGORIES (select 3)

Acid Deposition	Hydrology	Solute Transport
Agriculture	Invasive Species	Surface Water
Conservation	Irrigation	Toxic Substances
Climatological Processes	Law, Institutions, and Policy	Treatment
Drought	Management and Planning	Wastewater
Ecology	Methods	Water Quality
Economics	Models	Water Quantity
Education	Nitrate Contamination	Water Supply
Floods	Non Point Pollution	Water Use
Geomorphological Processes	Nutrients	Wetlands
Geochemical Processes	Radioactive Substances	
Groundwater	Recreation	
Hydrogeochemistry	Sediments	

RESEARCH PRIORITIES (select 1)

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 resource problems and water science

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

III. Information Transfer

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

ATTACHMENT 2: BUDGET FORM

FORMAT FOR THE BUDGET:

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

- It is the policy of the NJWRRRI 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 2 non-federal dollars: 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

BUDGET BREAKDOWN

Project Number: (Number will be provided by the application system)

Project Title:

Cost Category	Federal	Non-Federal	Total
1. Salaries and Wages	\$	\$	\$
- Principal Investigator(s) _____			
- Graduate Student(s) _____			
- Undergraduate Student(s) _____			
- Others _____			
Total Salaries and Wages			
2. Fringe Benefits			
- Principal Investigator(s) _____			
- Graduate Student(s) _____			
- Undergraduate Student(s) _____			
- Others _____			
Total Fringe Benefits			
3. Tuition			
- Graduate Student(s) _____			
- Undergraduate Student(s) _____			
Total Tuition			
4. Supplies			
5. Equipment			
6. Services or Consultants			
7. Travel			
8. Other direct costs			
9. Total direct costs			
10a. Indirect costs on federal share	XXXXXXXXXX XXXXXXXXXX		
10b. Indirect costs on non-federal share	XXXXXXXXXX XXXXXXXXXX		
11. Total estimated costs	\$	\$	\$
Total Costs at Campus of the University on which the Institute or Center is located.	\$	\$	\$
Total Costs at other University Campus Name of University:	\$	\$	\$

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.

Budget Justification

BUDGET JUSTIFICATION

Project Number: (Number will be provided by the application system)

Project Title

Salaries and Wages for PIs. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.
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.)
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.)
Salaries and Wages for Others. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.
Fringe Benefits for PIs. Provide the overall fringe benefit rate applicable to each category of employee proposed in the project. . Note: include health insurance here, if applicable.
Fringe Benefits for Graduate Students. Provide the overall fringe benefit rate applicable to each category of employee proposed in the project. Note: include health insurance here, if applicable.
Fringe Benefits for Undergraduate Students. Provide the overall fringe benefit rate applicable to each category of employee proposed in the project. Note: include health insurance here, if applicable
Fringe Benefits for Others. Provide the overall fringe benefit rate applicable to each category of employee proposed in the project. . Note: include health insurance here, if applicable.
Tuition for Graduate Students.
Tuition for Undergraduate Students
Supplies. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies. Provide a breakdown of the supplies in each category.
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.
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.
Travel. Provide purpose and estimated costs 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).
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 breakdown for costs listed under this category.
Indirect Costs. Provide negotiated indirect ("Facilities and Administration") cost rate.