

**MARYLAND WATER RESOURCES RESEARCH CENTER  
REQUEST FOR APPLICATIONS  
FY 2016**

Maryland Water Resources Research Center (MWRRRC) invites research proposals for **Fiscal Year 2016** funding under the Water Resources Research Act, administered by the U.S. Geological Survey (USGS), Department of Interior.

**ELECTRONIC FILING OF APPLICATIONS REQUIRED**

Applications under this Announcement will be accepted only through the Internet site at **<https://niwr.net>**. Preparation of each application must follow the instructions contained herein and on the web site.

**I. INTRODUCTION**

This Program Announcement is issued under the provisions of section 104 of the Water Resources Research Act of 1984 (Public Law 98-242), as amended by Public Laws 101-397, 104-147, 106-374, and 109-471. Section 104 of the Water Resources Research Act directs the Secretary of the Interior to administer program grants to Institutes and Centers established under the provisions of section 104(a) of the Act. Water Resources Institutes or Centers have been established in each of the 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam. The Institute in Guam also serves the Federated States of Micronesia and the Commonwealth of the Northern Mariana Islands. The Institute in Hawaii also serves American Samoa. Responsibility for administration of this State Water Resources Research Institute program has been delegated to the U.S. Geological Survey (USGS).

**II. PROGRAM OBJECTIVES**

Section 104(b) of the Water Resources Research Act of 1984 requires the Institutes or Centers to:

- (1) “plan, conduct, or otherwise arrange for competent applied and peer reviewed research that fosters –
  - (A) improvements in water supply reliability;
  - (B) the exploration of new ideas that –
    - (i) address water problems; or
    - (ii) expand understanding of water and water-related phenomena;
  - (C) the entry of new research scientists, engineers, and technicians into water resources fields; and
  - (D) the dissemination of research results to water managers and the public.
  
- (2) “cooperate closely with other colleges and universities in the State that have demonstrated capabilities for research, information dissemination, and graduate training in order to develop a statewide program designed to resolve State and regional water and related land problems.” The Act also requires each institute to:

- (3) “cooperate closely with other institutes and other organizations in the region to increase the effectiveness of the institutes and for the purpose of promoting regional coordination.”

Applications submitted under this Announcement are to be in furtherance of these objectives and promote the national mission and objectives of the U.S. Geological Survey which are focused on providing water quality and quantity information, understanding water availability, addressing the influence of climate on water resources, and responding to water-related emerging needs. Specific areas of emphasis are at the discretion of the individual Institute or Center Directors.

### III. ELIGIBLE APPLICANTS

Applications will be accepted only from faculty members or affiliates at institutions of higher education in the State of Maryland.

### IV. APPLICATIONS NOT ELIGIBLE FOR FUNDING

- A. Applications for research on health effects involving human subjects.
- B. Applications for research involving oceanography (estuarine research applications are acceptable).

### V. FEDERAL FUNDS

As of the date of this Announcement, funds have not yet been appropriated for this program for **FY 2016**. The Federal Government’s obligation under this program is contingent upon the availability of appropriated funds.

### VI. MATCHING FUNDS

- A. Each applicant must match each Federal dollar provided with not less than two dollars from non-federal sources (*2:1 Non-Federal:Federal*).
- B. [Item applying to Centers/Institutes, not to PIs]
- C. Matching funds shall be obligated during the period of performance.
- D. The matching requirement should be met during each 12-month budget period.  
*Note: Matching funds in excess of the required 2:1 Non-Federal:Federal match are acceptable.*
- E. Matching funds may contain indirect costs and non-federal salaries and benefits. The applicant’s negotiated indirect cost rate (NICR) may be applied to **both** qualifying federal and non-federal direct costs, and the result used to satisfy part of the matching requirement under the non-federal share. The NICR shall not be applied to tuition and equipment costs. **Federal funds shall not be used to pay indirect costs.**

## VII. APPLICATION DUE DATE

Applications to the *Maryland Water Resources Research Center* must be filed on the NIWR website at <http://niwr.net> before **5:00 PM Eastern Standard Time, Wed., Jan. 6, 2016**.

## VIII. APPLICATION CONTENTS

Each application to MWRRC shall consist of the following items, as detailed below:

- Basic Information
- Budget Breakdown (see Attachment A)
- Budget Justification (see Attachment B)
- Project Proposal
- Official Letter of Transmission from Institution to MWRRC
- Official Signed Matching Funds Commitment Letter

**Attachment A (Budget Breakdown) and Attachment B (Budget Justification) should be considered worksheets. During the proposal submission process, data for Attachments A and B will be entered into forms on the NIWR website. Upon completion of the submission process, the actual budget and budget justification documents will be generated from these form entries and bundled with the application package.**

## IX. APPLICATION INSTRUCTIONS

Each application must be submitted through the website at <http://niwr.net> and shall be prepared and submitted in accordance with the specific instructions provided at that site. Submission will require two distinctly different actions: (1) submission of specified information as text directly into a Web form and (2) uploading document files containing detailed descriptions of the work being proposed. The document files may be prepared using the word processing software of choice, but must be translated to PDF format before being uploaded (**detailed instructions for preparing and submitting these files, and verifying their submission, are provided at the website**).

Research proposals to MWRRC shall consist of the following 22 elements.

Items numbered 1 through 12, below, are entered in the Web forms provided at the website.

1. **Title.** Concise but descriptive.
2. **Project Type.** Research, Information Transfer, Information Management System, Education, or Other (please specify).
3. **Focus Categories.** Choose a maximum of three focus categories from the list provided (Attachment C), with the most preferred focus category first.
4. **Research Category.** Choose from the following the one category that most closely applies: Social Sciences, Groundwater Flow and Transport, Water Quality, Biological Sciences, Engineering, or Climate and Hydrologic Processes.
5. **Keywords.** Enter keywords of your choice descriptive of the work.
6. **Start Date.** Enter the actual beginning date for the project (**Mar. 1, 2016**, or after).

7. **End Date.** Enter the estimated end date for the project.
8. **Principal investigator(s).** Provide name, academic rank, university, email address and phone number of the principal investigators.
9. **Congressional District** of the university where the work is to be conducted.
10. **Abstract.** Provide a brief (one-page or 250- to 500-word) description of the problem, methods, and objectives in the space provided on the Web form.
11. **Budget Breakdown,** as requested by the Web form (See Attachment A).
12. **Budget Justification,** as requested by the Web form (See Attachment B).

Items 13 through 22, below, are to be uploaded to the website in PDF format. Note: This document shall not exceed 10 single-spaced pages (12 point type, 1-inch margins), *including references, but exclusive of resume(s) (item 20) and official letters (items 21 and 22)*. Upon submission of your application components, the entire package will be available in PDF format for your inspection and final approval. You are responsible for verifying the approval, including compliance with the 10-page limit. If editing is required, you must edit the original document(s) using your word processor, recreate the PDF document, and resubmit it.

13. **Title.** Please use the same title as entered in the Web form under Item 1, above.
14. **Statement of regional or State water problem.** Include an explanation of the need for the project, who wants it, and why.
15. **Statement of results or benefits.** Specify the type of information that is to be gained and how it will be used.
16. **Nature, scope, and objectives of the project, including a timeline of activities.**
17. **Methods, procedures, and facilities.** Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.
18. **Related research.** (Research projects only) Show by literature and communication citations the similarities and dissimilarities of the proposed project to completed or ongoing work on the same topic.
19. **Training potential.** Estimate the number of graduate and undergraduate students, by degree level, who are expected to receive training in the project.
20. **Investigator's qualifications.** Include resume(s) of the principal investigator(s). No resume shall exceed two pages or list more than 15 pertinent publications.
21. **Official letter of transmission or cover page** from the University Office of Sponsored Research or equivalent authorizing unit. For institutions that do not have such an office, the letter should come from the unit that will receive and administer the funds, if awarded. The letter should be addressed to "Maryland Water Resources Research Center."
22. **Matching funds commitment letter.** The applicant shall provide an institutional cost sharing agreement (letter) signed by an official authorized to commit the applicant to all or part of the matching share *and/or* a third party, in-kind contribution signed by an official authorized to commit the third party. This letter should be addressed to "Director, Maryland Water Resources Research Center." The amount committed must match the amount entered in the Budget Breakdown web form (Item 11, above).

(Items 21 and 22 may be combined in a single letter. They are to be placed at the end of the proposal – despite the term "cover page" – because they will be removed from the document to be submitted to the USGS if the proposal is selected for funding by the MWRRC.)

**Review Process and Award Dates:** Proposals will be reviewed by a Technical Advisory Committee to be organized through MWRRRC. Selected research projects will be submitted by MWRRRC to the USGS in mid-January **2016**. Contingent upon appropriated funds, award announcements are expected in February **2016**, and funds are expected to be available in March **2016**.

*Questions should be addressed to MWRRRC Director, Dr. Kaye Brubaker, at [kbru@umd.edu](mailto:kbru@umd.edu) or (301) 405-1965 (email preferred).*

Attachment A  
BUDGET BREAKDOWN WORKSHEET

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

Project Title:

Cost Category	Federal	Non-Federal	Total
1. Salaries and Wages - <u>Principal Investigator(s)</u> - <u>Graduate Student(s)</u> - <u>Undergraduate Student(s)</u> - <u>Others</u> Total Salaries and Wages	\$	\$	\$
2. Fringe Benefits - <u>Principal Investigator(s)</u> - <u>Graduate Student(s)</u> - <u>Undergraduate Student(s)</u> - <u>Others</u> Total Fringe Benefits			
3. Tuition - <u>Graduate Student(s)</u> - <u>Undergraduate Student(s)</u> 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:	\$	\$	\$

\* This form is provided as a worksheet only. Actual data are entered on the NIWR website.

**Attachment B  
BUDGET JUSTIFICATION WORKSHEET\***

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

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

\* This form is provided as a worksheet only. Actual data are entered on the NIWR website.

Attachment C

FOCUS CATEGORIES

ACID DEPOSITION  
AGRICULTURE  
CLIMATOLOGICAL PROCESSES  
CONSERVATION  
DROUGHT  
ECOLOGY  
ECONOMICS  
EDUCATION  
FLOODS  
GEOMORPHOLOGICAL 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  
WATER USE  
WETLANDS