MARYLAND WATER RESOURCES RESEARCH CENTER
REQUEST FOR APPLICATIONS
FY 2020

Maryland Water Resources Research Center (MWRRC) invites research proposals for **Fiscal Year 2020** funding under the Water Resources Research Act, administered by the U.S. Geological Survey (USGS), Department of the Interior.

The information provided in this document is selected from a draft USGS **FY2020** RFP, excluding material that applies to MWRRC administration and not to Principal Investigators (PIs) preparing proposals.

ELECTRONIC FILING OF APPLICATIONS REQUIRED

Applications under this Announcement will be accepted only via email to the MWRRC Director, Dr. Kaye Brubaker, kbru@umd.edu. Preparation of each application must follow the instructions contained herein**.**

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.

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 USGS, 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 2020**. 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 from USGS RFP 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. [Item from USGS RFP applying to Centers/Institutes, not to PIs.]

F. 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 emailed to the MWRRC Director, kbru@umd.edu, before **11:59 p.m. Eastern Standard Time, Sunday, Jan. 5, 2020**.

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

Proposals submitted to USGS must include a supplementary document of no more than two 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

Simultaneously submitted collaborative proposals and proposals that include subawards are a single unified project and should include only one supplemental combined DMP by the lead PI that also addresses all subaward data management needs, regardless of the number of non-lead collaborative proposals or subawards included.

IX. APPLICATION INSTRUCTIONS

Each application must be submitted by email to the MWRRC Director, Dr. Kaye Brubaker, kbru@umd.edu, and shall be prepared and submitted in accordance with the specific instructions

provided in this document.

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

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, 2020**, or after).
7. **End Date.** Enter the estimated end date for the project (**FY 2020** funds must be spent by **Feb. 28, 2021**).
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 (Note: enter the District of the university, even if field work is being conducted in another District).
10. **Abstract.** Provide a brief (one-page or 250- to 500-word) description of the problem, methods, and objectives.
11. **Budget Breakdown** (See Attachment A).
12. **Budget Justification** (See Attachment B).

Items 13 through 20 compose the body of the proposal. Note: This document shall not exceed 10 single-spaced pages (12 point type, 1-inch margins), *including references, but exclusive of resume(s)*.

13. **Title** (repeat).
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 [by the PI(s) or others].
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.

Items 21 and 22 may be provided as separate documents; they may be combined into a single letter.

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 "Maryland Water Resources Research Center." The total amount committed must match the amount entered in the Budget Breakdown.

Review Process and Award Dates: Proposals will be reviewed by a Technical Advisory Committee to be organized through MWRRC. Selected research projects will be submitted by MWRRC to the USGS in mid-January **2020**. Contingent upon appropriated funds, award announcements are expected in February **2020**, and funds are expected to be available in March **2020**.

Questions should be addressed to MWRRC Director, Dr. Kaye Brubaker, at 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 - 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	XXXXXXXX XXXXXXXX		
10b. Indirect costs on non-federal share	XXXXXXXX XXXXXXXX		
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 B
BUDGET JUSTIFICATION WORKSHEET*

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.

Attachment C

FOCUS CATEGORIES

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
INVASIVE SPECIES	INV
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