



**U.S. Geological Survey
Department of the Interior**

**STATE WATER RESOURCES RESEARCH INSTITUTE PROGRAM
FISCAL YEAR 2019 REQUEST FOR APPLICATIONS
under Section 104 of the
Water Resources Research Act of 1984, as Amended**

**ANNOUNCEMENT G19ASXXXXX
Revised November 01, 2018**

**CLOSING DATE
JANUARY 17, 2019
5:00 P.M. Eastern Standard Time**

OMB Number: 1028-0097
Expiration Date: 2/29/2020

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U.S. Geological Survey

**STATE WATER RESOURCES RESEARCH INSTITUTE PROGRAM
FISCAL YEAR 2019 REQUEST FOR APPLICATIONS**

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**STATE WATER RESOURCES RESEARCH INSTITUTE PROGRAM
REQUEST FOR APPLICATIONS
FY 2019**

ELECTRONIC FILING OF APPLICATIONS REQUIRED

Applications under this Announcement must be submitted through the federal grants application site at <https://www.grants.gov>. Institute Directors or their designee(s) are responsible for submitting their applications electronically. Preparation of each application must follow the instructions contained herein and on the grants.gov 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 the State Water Resources Research Institute program has been delegated to the U.S. Geological Survey (USGS).

The USGS contacts for this program are:

Program Office
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MS 205, U.S. Geological Survey
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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 Institutes or Centers established pursuant to the provisions of Section 104 of the Water Resources Research Act of 1984, as amended. The applicant may consider project proposals only from faculty members or affiliates at institutions of higher education in its State.

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).
- C. Applications submitted by an Institute or Center that has not met reporting requirements on a previous award by the USGS.

V. FEDERAL FUNDS

Funds have not yet been appropriated for this program for FY 2019. For planning purposes, assume that the amount available to each Institute or Center in FY 2018 is \$92,335. Assume that a total of \$277,005 is available to the regional Institute in Guam, which serves Guam, the Federated States of Micronesia and the Commonwealth of the Northern Mariana Islands. Assume that a total of \$184,670 is available to the regional Institute in Hawaii, which serves Hawaii and American Samoa. The 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.

Note: Guam, the Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, the U.S. Virgin Islands, and American Samoa are exempt from the matching requirement.

- B. The matching requirement applies to the overall application, not the individual projects within the application.
- 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 and can be credited against subsequent year matches during the period of the grant.

- E. Matching funds obligated shall be reflected on line 10.i. of each Federal Financial Report, Standard Form 425.
- 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.**

Regulations pertaining to allowable matching funds are provided in the Code of Federal Regulations at 43CFR12.64 and in the following OMB Circulars:

- Circular A-21 for Educational Institutions
- Circular A-87 for State, Local, and Indian Tribal Governments
- Circular A-122 for Private Nonprofit Organizations

VII. APPLICATION DUE DATE

Applications must be filed at <https://www.grants.gov> prior to **5:00 PM Eastern Standard Time, January 17, 2019.**

VIII. APPLICATION CONTENTS

Each application shall consist of the following items:

- A. Signed SF 424, Application for Federal Assistance
- B. Signed Assurances
- C. Signed Matching Funds Commitment Letter
- D. Program Administration/Management Description, including a Budget Breakdown (Attachment A) and Budget Justification (Attachment B) for Administration/Management
- E. Project Proposals, including a Budget Breakdown (Attachment A) and Budget Justification (Attachment B) for each Project
- F. Budget Summary (Attachment C)

Attachment A (Budget Breakdown), Attachment B (Budget Justification) and Attachment C (Budget Summary) are fillable pdf's and should be attached to the application.

*(NEW) - 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 through the website at <https://www.grants.gov> and shall be prepared and submitted in accordance with the specific instructions provided at that site. Files may be prepared using the word processing software of choice, but must be translated to PDF format prior to being submitted.

Applications must contain the following sections and adhere to the following guidelines:

The first three sections of the application, below, (Application for Federal Assistance, Assurances, and Matching Funds Commitment Letter) are to be signed and submitted:

A. Application for Federal Assistance, SF 424. The SF 424 shall be signed by an authorized representative of the applicant.

B. Assurances. The Assurances shall be signed by an authorized representative of the applicant.

C. 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 or a third party, in-kind contribution signed by an official authorized to commit the third party.

D. Description of Program Management and Administration

Please provide information:

1. Institute Director. Name, academic rank, email address and phone number.
2. Administrative Personnel. Name, academic rank or title, email address and phone number of other principals involved in administration of the program, if any.
3. Budget Breakdown, fillable form (See Attachment A).
4. Budget Justification, fillable form (See Attachment B).
5. Program and Management Overview Description.

E. Project Proposals. (Includes research, education, information transfer, and information management system proposals. "Graduate Fellowship" and "Seed Grant" projects must each be entered as **separate** research proposals if they support research.)

1. Title. Concise but descriptive.
2. Project Type. Choose from the following: 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 F), with the most preferred focus category first.
4. Research Category. Choose from the following the one category that most closely applies: Social Sciences, Ground-water 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.
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) description of the problem, methods, and objectives .
11. Statement of regional or State water problem. Include an explanation of the need for the project, who wants it, and why.
12. Statement of results or benefits. Specify the type of information that is to be gained and how it will be used.
13. Nature, scope, and objectives of the project, including a timeline of activities.
14. Methods, procedures, and facilities. Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.
15. Related research. (Research projects only) Show by literature and communication citations the similarities and dissimilarities of the proposed project to completed or on-going work on the same topic.
16. Training potential. Estimate the number of graduate and undergraduate students, by degree level, who are expected to receive training in the project.
17. Budget Breakdown, fillable form (Attachment A)
18. Budget Justification fillable form (See Attachment B)
19. Investigator's qualifications. Include resume(s) of the principal investigator(s). No resume shall exceed two pages or list more than 15 pertinent publications.

F. **Budget Summary** (fillable form Attachment C). Provide information from the budget breakdown forms for all of the projects.

X. REPORTING REQUIREMENTS

TECHNICAL REPORTING REQUIREMENTS

- A. The recipient shall prepare an Annual Program Report summarizing its activities during the reporting period under its base grant, national competitive grant program awards for which it is the lead institute NIWR-USGS Internships, and supplemental awards funded either by the USGS or by pass-through funds from another Federal agency. **The reporting period for the annual program is March 1 through February 28.**
- B. The Annual Program Report is to be filed with the USGS by May 31 of each year. The report for the program awards, internship awards and supplemental awards should be filed within 90 days after the completion date of the individual award.
- C. **The Annual Program Report** for each Institute shall consist of the following components and shall be in the format specified in the Annual Report guidelines provided by the program office.
- (1) **RESEARCH:** A synopsis of each ongoing research project and of each research project completed during the reporting period. This includes projects funded under the base grant and the National Competitive Grant Program, as well as projects supported by supplemental grants funded by the USGS and other Federal agencies. Include only those National Competitive Grant Program projects for which you are the lead institute.
 - (2) **PUBLICATIONS:** A list of all reports published during the reporting period as a result of projects supported with section 104 and required matching funds, including base grants and National Competitive Grant awards for which you are the lead institute, and as a result of supplemental awards.
 - (3) **INFORMATION TRANSFER PROGRAM:** A brief description of information transfer activities supported with section 104 and required matching funds during the reporting period.
 - (4) **STUDENT SUPPORT:** A summary of the number of students supported with section 104 and required matching funds, including the base grant and National Competitive Grant Program awards for which you are the lead institute. Report, also, the number of students supported under the NIWR-USGS Student Internship Program and other supplemental awards during the reporting period.

(5) **STUDENT INTERNSHIP PROGRAM**: A Student Evaluation of Internship at the U.S. Geological Survey for each student who completed an internship during the reporting period.

(6) **NOTABLE ACHIEVEMENTS AND AWARDS**: Provide a brief description of any especially notable achievements and awards resulting from work supported with section 104 and required matching funds and by supplemental grants during the reporting period.

D. Supplemental awards may require progress reports; this requirement will be stated within the award document.

CASH MANAGEMENT AND FINANCIAL REPORTING REQUIREMENTS

1. Annual Financial Reports.

The recipient will submit annual STANDARD FORM 425, FEDERAL FINANCIAL REPORT(S) for each individual USGS award. The SF 425 is available at - http://www.whitehouse.gov/omb/grants_forms. The SF 425 will be due ninety (90) calendar days after the grant year (i.e., 12 months after the approved effective date of the grant agreement and every 12 months thereafter until the expiration date of the grant agreement). USGS acknowledges that this annual reporting schedule may not always correspond with a specific budget period. The SF 425 must be submitted electronically through the FedConnect Message Center (www.fedconnect.net). If after 90 days, recipient has not submitted a report, the recipient's account in ASAP will be placed in a manual review status until the report is submitted.

2. Final Financial Report.

a. The recipient will liquidate all obligations incurred under the award and submit a final STANDARD FORM 425, FEDERAL FINANCIAL REPORT through FedConnect (www.fedconnect.net) no later than 90 calendar days after the grant/cooperative agreement completion date. The SF 425 is available at - http://www.whitehouse.gov/omb/grants_forms. Recipient will promptly return any unexpended federal cash advances or will complete a final draw from ASAP to obtain any remaining amounts due. Once 120 days has passed since the grant/agreement completion date, the ASAP subaccount for this award may be closed by USGS at any time.

b. Subsequent revision to the final SF 425 will be considered only as follows -

- (i) When the revision results in a balance due to the Government, the recipient must submit a revised final Federal Financial Report (SF 425) and refund the excess payment whenever the overcharge is discovered, no matter how long the lapse of time since the original due date of the report.
- (ii) When the revision represents additional reimbursable costs claimed by the recipient, a revised final SF 425 may be submitted to the Contracting Officer with an explanation. If approved, the USGS will either request and pay a final invoice or reestablish the ASAP subaccount to permit the recipient to make a revised final draw. Any revised final report representing additional reimbursable amounts must be submitted no later than 1 year from the due date of the original report, i.e., 15 months following the agreement completion date. USGS will not accept any revised SF 425 covering additional expenditures after that date and will return any late request for additional payment to the recipient.

BUDGET BREAKDOWN

Project Title:

Cost Category	Federal	Non-Federal	Total
1. Salaries and Wages (list personnel)	\$	\$	\$
Total Salaries and Wages	\$	\$	\$
2. Fringe Benefits	\$	\$	\$
Total Fringe Benefits	\$	\$	\$
3. Tuition	\$	\$	\$
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	\$	\$
10b. Indirect costs on non-federal share	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:	\$	\$	\$

BUDGET JUSTIFICATION

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 projects. 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 projects. 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 projects. 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 projects. Note: include health insurance here, if applicable.

Tuition for Graduate Students. Provide time & amount. In-state or Out-of-state tuition?
Tuition for Undergraduate Students. Provide time & amount. In-state or Out-of-state tuition?
Supplies. Indicate separately the amounts proposal for laboratory and field supplies followed by 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. A breakdown is required for each cost.
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).
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.
Indirect Costs. Provide negotiated indirect (“Facilities and Administration”) cost rate. If indirect costs are provided please include a copy of your current Indirect Cost Rate Agreement so the rate can be verified.

BUDGET SUMMARY

ATTACHMENT C (fillable PDF)

Project Number							All Projects	
Principle Investigator								
Cost Category	Federal	Non-Federal	Federal	Non-Federal	Federal	Non-Federal	Federal	Non-Federal
Salaries and Wages								
Fringe Benefits								
Supplies								
Equipment								
Services or Consultants								
Travel								
Other Direct Costs								
Total Direct Costs								
Indirect Costs	XXXXX		XXXXX		XXXXXXX		XXXXXXX	
Total Costs								

ACID DEPOSITION	ACD
AGRICULTURE	AG
CLIMATOLOGICAL PROCESSES	CP
CONSERVATION	COV
DROUGHT	DROU
ECOLOGY	ECL
ECONOMICS	ECON
EDUCATION	EDU
FLOODS	FL
GEOMORPHOLOGICAL 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

Institute	Federal Award Identifier
Alabama	G16AP00037
Alaska	G16AP00038
Arizona	G16AP00039
Arkansas	G16AP00040
California	G16AP00041
Colorado	G16AP00042
Connecticut	G16AP00043
Delaware	G16AP00044
DC	G16AP00045
Florida	G16AP00046
Georgia	G16AP00047
Guam	G16AP00048
Hawaii	G16AP00049
Idaho	G16AP00050
Illinois	G16AP00051
Indiana	G16AP00052
Iowa	G16AP00053
Kansas	G16AP00054
Kentucky	G16AP00055
Louisiana	G16AP00056
Maine	G16AP00057
Maryland	G16AP00061
Massachusetts	G16AP00062
Michigan	G16AP00063
Minnesota	G16AP00064
Mississippi	G16AP00065
Missouri	G16AP00066

Institute	Federal Award Identifier
Montana	G16AP00067
Nebraska	G16AP00068
Nevada	G16AP00069
New Hampshire	G16AP00070
New Jersey	G16AP00071
New Mexico	G16AP00072
New York	G16AP00073
North Carolina	G16AP00074
North Dakota	G16AP00075
Ohio	G16AP00076
Oklahoma	G16AP00077
Oregon	G16AP00078
Pennsylvania	G16AP00079
Puerto Rico	G16AP00080
Rhode Island	G16AP00081
South Carolina	G16AP00082
South Dakota	G16AP00083
Tennessee	G16AP00084
Texas	G16AP00085
Utah	G16AP00086
Vermont	G16AP00087
Virginia	G16AP00088
Virgin Islands	G16AP00089
Washington	G16AP00090
West Virginia	G16AP00091
Wisconsin	G16AP00092
Wyoming	G16AP00093