



Water Resources
Competitive Grants Program

Fiscal Year 2016 Request for Proposals

Pursuant to Section 104 of the
Water Resources Research Act of 1984, as Amended

Closing Date

4:00 PM, Eastern Time, **September 1**, 2016
(Institutes)

Institute for Water Resources
U.S. Army Corps of Engineers

National Institutes for
Water Resources

WATER RESOURCES REQUEST FOR PROPOSALS
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**NATIONAL INSTITUTES FOR WATER RESOURCES
INSTITUTE FOR WATER RESOURCES, USACE
WATER RESOURCES REQUEST FOR PROPOSALS
FY 2016**

ABSTRACT

The Institute for Water Resources (IWR), U.S. Army Corps of Engineers in cooperation with the National Institutes for Water Resources (NIWR) requests proposals for grants to support applied investigations in select topic areas.

Proposals will be for projects that conclude by submission of a final draft paper to the Institute for Water Resources not later than December 14, 2018. Grant proposals may request up to \$200,000 in federal funds, but **proposals for lesser amounts are encouraged**. Previous awards by USGS on behalf of IWR through this competitively based process are as follows.

2010 – Twenty-two proposals received, one awarded

2010 Award – “Identifying and Evaluating Best Practices for the Adaptive Management of Water Resources”, University of Minnesota, Oklahoma State University, Clemson University, and University of Arkansas, (\$199,394)

2011 – Seventeen proposals received, one awarded

2011 Award – “The Effectiveness of a Computer-assisted Decision Support System using Realistic Interactive Visualization as a Learning Tool in Flood Risk Management”, University of Maryland (\$200,000)

2012 – Twelve proposals received, one awarded

2012 Award – “Development of a National Database of Depreciated Structure Replacement Values for Inclusion with SimSuite/HAZUS and Flood Mitigation Reconnaissance Studies”, University of Nebraska at Omaha (\$100,000)

2013 – Twelve proposals received, one awarded

2013 Award – “RiverSmart Communities and Federal Collaborators: Attuning federal agencies and programs with state, regional and local efforts to support ecologically restorative flood prevention and remediation in New England”, University of Massachusetts at Amherst (\$198,597)

2014 – Ten proposals received, one awarded

2014 Award – “Prototype Multi-Jurisdictional Decision Making Web Platform for Integrated Water Resources Management: From Interagency Collaboration to Implementation in the Iowa-Cedar Watershed”, University of Iowa (\$180,865)

2015 – Fourteen proposals received, one awarded

2015 Award – “Environmentally-Friendly Alternatives to Bulkheads for Resilient and Healthy Shorelines: Evaluation and Implementation of Two Living Shoreline Designs”, University of South Alabama (\$166,916)

Proposals must be submitted to the Institute for Water Resources by 4:00 PM, Eastern Time, Friday, September 1, 2016. The Government's obligation under this program is contingent upon the availability of funds.

FILING OF PROPOSALS

All portions of the proposal under this announcement must be submitted by a NIWR designated Water Resources Research Institute or Center by email in PDF format to IWR.Research@usace.army.mil. Please see “Applicant Eligibility and Proposal Approval” (page 4).

I. INTRODUCTION

This Request for Proposals (RFP) 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 serves Hawaii and American Samoa. The addresses of the 54 Institutes are available on the Internet at <http://water.usgs.gov/wrri/institutes.html>. Responsibility for administration of the State Water Resources Research Institute program has been delegated to the U.S. Geological Survey (USGS).

The 54 Institutes are organized as the National Institutes for Water Resources (NIWR). NIWR cooperates with the USGS in the administration of the State Water Resources Research Institute Program. The IWR-USACE will coordinate the review process (panel review) for this competitive grant opportunity. Questions or comments concerning the review process or this RFP may be addressed to the following.

Dr Joe Manous	W: (703) 428-7074
Institute for Water Resources	C: (571) 215-2657
U.S. Army Corps of Engineers	Joe.Manous@usace.army.mil
Casey Building	
7701 Telegraph Road	
Alexandria, VA 22315	

Applicants whose proposals are selected for funding will submit their proposals to the U.S. Geological Survey through the website at www.grants.gov. Successful applicants will be provided instructions for submitting their applications on grants.gov

II. PROGRAM OBJECTIVES

The IWR is soliciting applied investigative proposals for specific areas related to water resources issues in the United States. These investigations will be conducted pursuant to provisions contained in the "Water Research" section of the Water Resources Research Act of 1984, (Public Law 98-242) and subsequent federal legislation, which amends or supersedes this Act.

The purpose of this grant is to stimulate investigation and analysis that develops and effectively communicates reasoned and practical alternatives to select challenges in National water resources policy. Through well-communicated issue backgrounds and discussions of alternatives, decision makers can be better informed of the existence and extent of challenges facing the Nation's water resources as well as alternatives to deal with these challenges.

Objectives of this program also include the following:

- A. Promote collaboration between the IWR and university scientists on water resources issues of national and regional significance. Potential applicants are encouraged to contact the IWR lead for this initiative, Dr Joe Manous, as they develop proposals. Proposals that clearly explain possible broad practical applications of research results are desired.
- B. Promote the dissemination and application of information and analysis funded under this program. It is desirable for proposals to describe the relationship of the proposed research to a USACE water resources mission area (<http://www.usace.army.mil/Missions/CivilWorks.aspx>).
- C. Assist in the training of scientists, engineers, and policy makers in relevant water resources fields. Proposals that include a strong educational component (student support) are encouraged, while proposals that contain a significant outsourcing to private firms or laboratories are less desired.

The IWR and NIWR prefer efforts supported by this program involve collaboration between the IWR and university scientists. Collaboration can range from use of USACE data and information to the mutual involvement of IWR or USACE and university scientists on projects.

III. RFP PRIORITIES

The following priorities have been designated for this initiative. Levels of priority are not assigned to these topics, and the order of listing does not indicate the level of priority.

- Using case studies and historical analysis describe the success or lack of success in water resources strategic planning initiatives within the continental United States.
- Identify and analyze opportunities, challenges, and potential solutions to improve public safety and reduce flood in areas that experience severe repetitive flood losses. Proposals for evaluation of case studies that incorporate structural and nonstructural measures within collaborative, federal, state, tribal, or local interagency contexts are encouraged.
- Analyze current demands versus projected changes in United States inland or marine navigation that result and will continue from changes in inland navigation cargo such as the recent expansion in United States petroleum production.
- Through case study analyses, identify opportunities and challenges to integration of water resource management decisions in complex jurisdictional environments where there are conflicting interests at the federal, state and/or tribal, and local levels.
- Develop alternatives for the future role of the Federal government pertaining to the Nation's water resources as a result of the changing roles and capabilities of federal, state, and local water resources agencies; and evolving challenges such as demographic shifts, climate variation, economic changes, and similar influencers.
- Identify criteria, recommend roles for various levels of government, and develop procedural alternatives to describe tolerable and acceptable risk for critical infrastructure that could be applicable across a variety of infrastructures associated with water resources.
- Compare methodologies and approaches for harmonizing collaborative decision making processes that recognize local and regional values with the need to achieve national level consistency with Federal interests.
- Evaluate and assess the Federal interest in coastal storm damages associated with storm surge, shoreline loss, navigation, terrestrial and wetland ecosystems, and similar impacted areas; and provide rationale for how, based on Federal interest, the Federal government should be involved with various structural and non-structural risk reduction activities.

- Identify and describe how select USACE and non-government partnerships could initiate or more effectively yield self-sustaining water resources improvements, developments, and management that directly or indirectly benefit economically depressed and/or disadvantaged communities.
- Evaluate, assess, and recommend ways to improve how water resources management considerations are integrated into standard state and local planning processes such as the development of comprehensive plans, transportation plans, capital improvement plans, land use plans, economic development plans, and hazard mitigation plans.
- Identify and analyze options and specific actions for divestment of U.S. Army Corps of Engineers infrastructure to state, local, or other entities. Proposals that focus on water infrastructure that is difficult to maintain and/or has become less valuable to the national and local stakeholders are encouraged. Case study and historical analyses from water management infrastructure, as well as other possibly relevant infrastructure sectors, such as highways, power facilities, and airports are encouraged.
- Identify, discuss, and assess prospects to better integrate project operations in USACE's primary civil works mission areas – navigation, flood risk management, and ecosystem restoration – with other water management sectors (e.g., water quality, threatened and endangered species, and water supplies) to improve prospects for achieving multiple water management objectives and goals. Specific case study analyses are encouraged.

IV. PROPOSALS NOT ELIGIBLE FOR FUNDING

Proposals that do not comply with the terms of this Request for Proposals.

V. APPLICANT ELIGIBILITY AND PROPOSAL APPROVAL

"Awards will be made only to the Water Resources Research Institutes authorized by the Water Resources Research Act of 1984 and listed at <http://water.usgs.gov/wrri/institutes.html>. Individuals located at accredited colleges or universities other than those at which these institutes are located may submit an application through those institutes if the institute agrees to become the official applicant and does not charge an administrative fee and does not apply its institution's indirect cost rate to the award."

VI. COLLABORATION BY FEDERAL EMPLOYEES

- A. Federal employees may and are encouraged to collaborate with college or university investigators in this program.
- B. Federal employees may not serve as a principal investigator, but may serve as a co-principal investigator.
- C. Federal employees and agencies may not receive federal funds for any purpose under these awards.
- D. Federal employees must prepare a Statement of Government Involvement, which is to be included with collaborative proposals (Section XIII.17)
- E. Federal employees who will participate in a proposed investigation may not participate in the proposal evaluation process. This proposal evaluation limitation does not include discussions to explain the USACE interest concerning a topic included in this RFP (Section III) or agreeing to serve as the government liaison to follow the investigation if selected.

VII. FEDERAL FUNDS

- A. Funding for zero to two awards is expected to be available in FY 2016. The Government's obligation under this program is contingent upon the availability of funds.
- B. All successful proposals will be fully funded for the entire duration of the project with FY 2016 funds.

VIII. MATCHING FUNDS

There is no matching funds requirement for these awards.

IX. MAXIMUM SIZE AND DURATION OF PROJECT

- A. Applicants shall not request total federal funds exceeding \$200,000 per project.
- B. Proposals for less than \$200,000 are encouraged.
- C. Proposed projects will conclude with a final draft paper submission to IWR not later than December 14, 2018.

X. PROPOSAL DUE DATE

Proposals must be received by email at IWR prior to 4:00 PM Eastern Time, September 1, 2016. Only proposals filed by that time will be considered.

XI. PROPOSAL REVIEW, SELECTION, AND AWARD PROCESS

A selection panel consisting of IWR employees experienced in water resources will evaluate each proposal that meets the requirements of this RFP. Proposals will be reviewed according to the following criteria.

20 Points: Applied Nature of the Proposal. - The extent to which the proposal is structured to develop analyses, communications, and alternatives to influence Federal, state, and local government policy and/or legislative development. Included in this assessment is the breadth of practical applicability of the research results.

20 Points: Relevance and Importance. - The extent to which the proposal develops the concepts specified in this RFP.

15 Points: Feasibility. (1) The extent to which the objectives, methodologies, designs, and techniques are adequate and completely described; and (2) the likelihood of success given the methods and time frame proposed.

10 Points: Scientific Merit. – The extent to which the proposal (1) has potential to expand fundamental knowledge in its specific area(s); (2) is scientifically sound; and (3) demonstrates cognizance of past work.

10 Points: Training. The extent to which the proposal has a strong educational component, provides for student support, and engages a principal investigator near the beginning of his or her career.

10 Points: Qualifications of the Investigators. The extent to which the qualifications of the investigators are commensurate with the proposal and the adequacy of the facilities and equipment.

15 Points: Budget. The extent to which the budget is reasonable and adequate for the work proposed. The evaluation will include an assessment of value produced versus the proposed budget. Note: the principal investigator's salary is an acceptable budget item, but should not exceed one or two months per year.

Proposals recommended for funding will be forwarded to the IWR for review and approval. Awards will be made directly to the **Water Resources Research Institute or Center** through which the proposal was submitted. The target award date is December 2016.

XII. PROPOSAL CONTENTS

Each proposal submission shall consist of the following separate PDF files.

- A. **Basic Information Form** (Section XIII, Items 1-10)
- B. **Proposal** (Section XIII, Items 11-20)
- C. **Budget Breakdown** (Attachment A)
- D. **Budget Justification** (Attachment B)
- E. Letters of Support (**Optional – but if provided, all letters combined in one PDF**)

XIII. PROPOSAL INSTRUCTIONS

Prior to submission of a proposal, all principal investigators must be registered at <https://niwr.net/>. Registration involves providing basic contact information (name, address, phone, e-mail address, etc.) to a Web form, and subsequently being provided with a user ID and password. Individuals already registered should not register again.

Each proposal must be complete and received by email at IWR by the submission suspense. The submission may be prepared using the word processing software of choice, but must be translated to PDF format prior to transmitting. **Submission will conform to 12-point Arial font, single spacing, and at least 1 inch margins.**

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

- A. **Application for Federal Assistance, SF 424.** Instructions will follow concerning SF 424 submission, if a proposal is accepted.
- B. **Proposal.** Each proposal shall consist of the following 20 elements. Items numbered 1 through 10 compose the project Basic Information Form, which is to be submitted as a separate PDF file.

BASIC INFORMATION FORM

(12-point, Arial font, single spaced, 1-inch margins)

1. Title. Concise but descriptive.
2. Topic. Specify the topic area from the list included in this RFP (Section III).
3. Keywords. Enter keywords of your choice descriptive of the work.

4. Start Date. Enter the requested beginning date for the project. The target award date is December 2016 with a preferred project start date of January 2017. The project start date must be no later than February 1, 2017.
5. End Date. Enter the estimated end date for the project, but not later than December 14, 2018.
6. Principal investigator(s). Provide name, academic rank, university, email address and phone number of ALL principal investigators.
7. Congressional District of the university where the work is to be conducted.
8. Abstract. Provide a brief (one-page) description of the problem, methods, and objectives of the proposed work. Please be as descriptive as possible, **but do not exceed 1-page**.
9. Budget Breakdown, As per Attachment A.
10. Budget Justification, As per Attachment B.

PROPOSAL
(12-point, Arial font, single spaced, 1-inch margins)

Items 11 through 20 are to be submitted as a separate PDF file. Note: **This document shall not exceed 10 single-spaced pages**, including tables, pictures, graphs, figures, and appendices, but excluding literature citations/references (item 19) and resumes (item 20). **Proposals exceeding the 10-page limit will not be considered in the competition.**

11. Title. Please use the same title as was entered in the Basic Information Form under item 1, above.
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 efforts. Demonstrate 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. Statement of Government Involvement. If a Federal employee will collaborate on the project, provide a detailed description of the role and responsibilities of the Federal collaborator in the proposed project. (Caution: see Item VI, above)
18. Information Transfer Plan. Describe the plan for disseminating information on the results of the investigation and promoting their application. Each plan should define the subject matter and the problems to be addressed, identify the target audience, indicate the strategies to be employed (e.g., workshops, publications), and identify the cooperators (e.g., Cooperative Extension Service).
19. Literature Citations/References
20. Investigator's qualifications. Include a resume(s) of the principal investigator(s). No resume shall exceed two pages or list more than 15 pertinent publications.

If letters of support for the application are provided, they should be submitted as attachments or scanned and emailed as a separate PDF file. Please provide the title of the project as it appears in item 1 above in the letter. **Letters of support do not count against the 10-page limit.**

An Application Checklist is provided to help guide the principal investigator and the relevant Water Center or Institute through the application process. Please see Attachment C.

XIV. REPORTING REQUIREMENTS

A progress report in accordance with USGS guidance will be required not later than April 28, 2017 along with a final completion report at the time of the final draft submission, but before December 14, 2018.

A formal presentation to IWR will be required following submission of the final draft.

This presentation may occur after December 14, 2018 and may be waived in entirety, but these decisions are at the sole discretion of IWR.

Attachment A -BUDGET BREAKDOWN

Project Title: _____

Cost Category	Federal
1. Salaries and Wages	\$ 0.00
- <u>Principal Investigator</u>	
- _____	
- _____	
- _____	
Total Salaries and Wages	\$ 0.00
2. Fringe Benefits	
3. Supplies	
4. Equipment (Not Allowed for this Grant)	<u>0.00</u>
5. Services or Consultants	
6. Travel	
7. Other direct costs	
8. Total direct costs	
9a Indirect costs	
10. Total estimated costs	\$

Attachment B - BUDGET JUSTIFICATION

Project Title: _____

<p>Salaries and Wages. Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual. (Tuition remission and other forms of compensation paid as or in lieu of wages to students performing necessary work are allowable provided the tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work.)</p>
<p>Fringe Benefits. Provide the overall fringe benefit rate applicable to each category of employee proposed in the project.</p>
<p>Supplies. Indicate separately the amounts proposed for office, laboratory, computing, and field supplies. Provide a breakdown of the supplies in each category.</p>
<p>Equipment. Equipment is not authorized under this proposal</p>
<p>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.</p>
<p>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).</p>
<p>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.</p>
<p>Indirect Costs. Provide negotiated indirect ("Facilities and Administration") cost rate.</p>

Attachment C - APPLICATION CHECKLIST

Principal Investigator (Items completed by Investigator Deadline)

_____ Submit application to IWR following the instructions in the RFP. Filing the application requires the PI to complete the following.

_____ Complete the Basic Information Form

_____ Complete Budget Breakdown form

_____ Complete Budget Justification form

_____ Complete Proposal;

_____ If submitted by email ensure proposal is in PDF format - Check that page limit as stated in the RFP is not exceeded

_____ Submit signed letter(s) of support (optional, not required)

_____ Check that the submission has been received by IWR

Water Institute or Center (Items completed by Institute Deadline)

_____ Check that email received from IWR stating that application has been received.

_____ Review application for conformance with the RFP.

_____ PI makes requested changes and (re)submits the application

_____ If application is acceptable, Approve application

_____ Check that submission has been received by IWR

Note: It is expected that the Principal Investigator will coordinate the application process with the Water Research Center or Institute in their State from the beginning of the process.