IOWA WATER CENTER

2017 Request for Proposals

The Iowa Water Center, the Water Resources Research Institute for the state of Iowa as authorized by the Water Resources Research Act of 1964, seeks proposals for the annual 104(b) funding program sponsored by the U.S. Geological Survey. This program consists of three distinct opportunities: a seed grant water research competition, an edge-of-field monitoring survey competition, and a graduate student supplemental research competition. Funding for selected projects will be available beginning March 1, 2017 (funding availability dependent upon congressional budget action) for a one-year period. Projects should address local or regional water research needs, particularly those outlined in the current year priority areas as identified in this request for proposals (RFP).

Project activities and expenditures will subject to federal requirements under Uniform Guidance (UG). To read more about UG, please visit: http://www.ospa.iastate.edu/omb-uniform-guidance.

Seed Grant Water Research Competition

Funding of up to $30,000 for one year is available for researchers at one of Iowa’s accredited public or private universities or community colleges. Multi-year projects will be considered for the seed grant water research competition, but continued funding for subsequent years is subject to the availability of funds and progress made in the first year. The proposal must indicate what results/products can be achieved in each individual project year. Subsequent year funding is not guaranteed. Researchers seeking second-year funding must resubmit their proposal showing a new budget and progress made. Priority will be given to projects that show potential for attracting additional grant money from state, federal, and other sources to support the research program. If funded, two short but required reports must be completed during the project year as a USGS requirement. The Iowa Water Center will also request a fact sheet from your work and a contribution to the Iowa Water Conference in the form of a poster or presentation.

In subsequent years, the Iowa Water Center will contact investigators to survey future impacts resulting from the seed grant funding, including “follow-on funding” and partnerships made as a result of grant activities.

The Iowa Water Center anticipates funding one seed grant.

Graduate Student Supplemental Research Competition

Funding of up to $5,000 for one year is available to graduate students nearing completion of their program of study. This program is designed to allow students to complete additional research objectives or products beyond the scope of their current water related funded project. The proposed budget must also include funds for publication costs; students will be required to submit their research to peer-reviewed publications.

The Iowa Water Center anticipates funding one graduate student supplemental grants in 2017.
**Edge-of-Field Monitoring Survey Competition**

Funding of up to $10,000 for one year is available to interested persons to conduct a survey to better understand the scope of both edge-of-field and in-stream monitoring. This will serve as a means to link monitoring data into a network for research purposes as well as develop the means to track progress from the field to the watershed to the Gulf. Funding for this project is in support of the effective application of science-based approaches to nutrient management and conservation efforts that reduce nutrient loss to the environment prioritized by SERA-46.

SERA-46 is one of a group of USDA National Institute of Food and Agriculture (NIFA) and land-grant university funded committees to promote research and extension activities that span multiple states for research in nutrient loss, nutrient impairments, and the hypoxic zone in the Gulf of Mexico.

Iowa Water Center anticipates funding one survey grant.

**A. 2017 Priority Areas Identified for this Research Initiative**

**Seed Grant and Graduate Student Supplemental Research Priority**

*Harmful Algal Blooms (HABs)*

One priority area for this research initiative will be on cyanobacterial blooms (also called harmful algae blooms or HABs) and their impact on water quality and water management decisions. HABs are naturally occurring, however their frequency and intensity have been increasing. The increases have been tightly linked to anthropogenic activities influencing nutrient delivery to surface water resources. Heightened agriculture production, discharges from sewer and wastewater management, and other urban runoff has amplified the amount of nutrients entering local and regional water systems beyond that naturally occurring in marine and freshwater ecosystems. In these systems, excess nutrients create a “greening” effect with the growth of algae. This, in turn, can have large-scale negative implications for surface water and marine ecosystem structure and is a stressor on healthy ecosystem functionality.

HABs is a broad topic that may encompass any of the following areas:

- Source water management
- Nutrient removal technologies
- Eutrophication
- Hydrodynamic transport of nutrients
- HAB monitoring programs

**Edge-of-Field Monitoring Survey Competition**

The process of and the decision-making required in water quality assessment is often varied and intricate. The use of monitoring data can help assess trends in the environment as well point to the activities that can either have a positive or negative impact on water quality. Monitoring activities have the potential to vary from project-to-project and state-to-state. These activities are often conducted at different scales (i.e. field-level, watershed-level, regional) and lack a visible connection between the data being collected
and the resulting positive impacts on a wider, regional scale. Because of this, a second priority area focuses on the status of edge-of-field and in-field monitoring and seeks to link these data to research purposes and to track progress of in-field and edge-of-field activities. Research projects under this scope must seek to develop a comprehensive cataloguing of edge-of-field monitoring activities in Iowa.

This priority area seeks to understand the status of water quality monitoring and to build a collaborative network of information across the Mississippi River Basin through the use of a survey. Projects must seek to understand what data is being made available, how data collection engages public or private partnerships for funding, and how data from a variety of sites are being used to address research gaps associated with field-level activities.

B. Funding

Funds from this program can be requested for graduate student support, supplies, local travel, analytical costs and publication costs. Investigators will be required to provide documentation of committed matching funds. The U.S. Geological Survey requires a 2:1 nonfederal to federal funds match. The sponsor will not pay indirect costs; researchers are encouraged to use forfeited indirect costs as a portion of the required match.

C. Evaluation Criteria for Funding

Proposals will be reviewed for scientific merit and relevance to the above research areas by scientists not involved with this RFP and the Center’s Advisory Board (a listing of board members can be found at [http://www.water.iastate.edu/content/advisory-board](http://www.water.iastate.edu/content/advisory-board)).

Evaluation of proposals will be based on scientific merit and the following criteria:

1. Proposals are within the high priority areas for this initiative and represent a unique or emerging approach to research.
2. Final outcome of the project will result in a product such as a refereed publication, patent, technology development and/or better understanding of a process that will help Iowa citizens.
3. For seed grants, project has potential to lead to significant future funding from state, federal, and other sources.

Investigators should submit with their proposal three to six names of preferred reviewers.
D. Proposal Guidelines
Please include the information listed below. The body of the proposal (items 10 through 16) should not exceed 6 single-spaced pages in 12-point, Times New Roman font.

1. **Principal Investigator(s):** Provide name, academic rank, university, email address, and phone number of the principal investigators. Graduate students should list their adviser as a co-investigator.

2. **Focus Categories:** Choose a maximum of three from the list on page 3.

3. **Research Category:** Choose the option that most closely applies.

4. **Keywords:** Include keywords that are descriptive of the work.

5. **Duration of Project:** Actual beginning date and estimated end date for the project.

6. **Congressional District of the university where the work is to be conducted.**

7. **Abstract:** Provide a brief (one-page) description of the problem, methods, and objectives.

8. **Budget Breakdown** *(see page 4)*

9. **Budget Justification** *(see page 5)*

10. **Title**

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:** 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 (seed grants only):** Estimate the number of graduate and undergraduate students, by degree level, who are expected to receive training in the project.

17. **Investigator’s qualifications:** Include resume(s) of the principal investigator(s). No resume shall exceed two pages or list more than 15 pertinent publications.

18. **Cost-share documentation:** Provide a letter from sponsor indicating that funds are approved for 2:1 match. A memo from your accountant stating that funds are available to meet the cost-share requirement will also suffice. Cost share should include unrecovered indirect costs on both the federal and nonfederal portions of the budget.

E. **Deadline:** Please email the proposal as a Word file *(no pdf files)* to hbates@iastate.edu, by close of business Monday, **November 7, 2016**

**Note:** Please refer to the National Institutes for Water Resources website http://niwr.info/ for additional information.
Focus Categories
Research Category Code
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, & Policy LIP
Management & 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
## Budget Breakdown

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<thead>
<tr>
<th>Cost Category</th>
<th>Federal Funds requested</th>
<th>Non-Federal matching funds</th>
<th>Total</th>
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<td><strong>1. Salaries and Wages</strong></td>
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<td>Principal Investigator/post doc/grad/undergrad</td>
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<td><strong>2. Fringe Benefits</strong></td>
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<td><strong>8. Total direct costs</strong></td>
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<td><strong>9b. Indirect costs on non-federal share</strong></td>
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<td><strong>10. Total estimated costs</strong></td>
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Budget Justification

1. **Salaries and Wages:** Provide estimated hours and the rate of compensation proposed for each individual (X hours @ $X). Tuition remission and other forms of compensation paid as or in lieu of wages to students performing necessary work are allowable provided that the tuition or other payments are reasonable compensation for the work performed and are conditioned explicitly upon the performance of necessary work.

2. **Fringe Benefits:** Provide the overall fringe benefit rate applicable to each category of employee proposed in the project.

3. **Supplies:** Indicate separately the amounts proposed for office, laboratory, computing, and field supplies. Please be specific.

4. **Equipment:** Identify non-expendable personal property having a useful life of more than one 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.

5. **Services or Consultants:** Identify the specific tasks for which these services, consultants, or subcontracts would be used. Estimate amount of time required and the hourly or daily rate. Provide a detailed list (i.e. sample analysis: 1000 samples @ $8/sample.)

6. **Travel:** Provide purpose and estimated costs for all travel. Travel opportunities must be specific (i.e. travel to XYZ conference in XYZ location on XYZ dates) and costs must be itemized (e.g. airfare, lodging, parking, per diem).

7. **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.

8. **Indirect Costs:** No indirect costs are associated with these grants. Please use forfeited indirect costs as part of the required match.