

Request for Proposals Statewide Research Competition

Issued by the:

South Carolina Water Resources Center
at
Clemson University

Issue Date: November 1, 2008
Closing Date: December 23, 2008

PROPOSALS

SOUTH CAROLINA WATER RESOURCES CENTER COMPETITIVE GRANTS PROGRAM

I. INTRODUCTION

Section 104 of the Water Resources Research Act directs the U.S. Secretary of the Interior to administer program grants to Institutes and Centers established within the States and certain other similar jurisdictions for research, education, and training that will assist the Nation in augmenting its water-resources science and technology. Responsibility for administration of this program has been delegated to the United States Geological Survey (USGS). Research funds will be used to support water resources research that is of critical need to the state of South Carolina.

Research proposals submitted under this RFP may be for a one-year duration only. Proposals will not be considered in the following cases:

- A. Proposals submitted by an institute which has not met reporting requirements on a previous award by the USGS.
- B. Research on health effects involving human subjects or their surrogates.
- C. Research involving oceanography. NOTE: Estuarine research proposals are suitable.

II. PROGRAM OBJECTIVES

The principal objectives of the state competitive grants program include the following:

- A. Conduct research relative to important water resource problems of South Carolina.
- B. Promote the dissemination and application of the results of the research involving these problems.
- C. Assist in the training of scientists in relevant water resource fields.

III. SOUTH CAROLINA WATER RESOURCES CENTER RESEARCH PRIORITIES

Both the SCWRC and USGS have developed research priorities which must be considered in proposal development. The SCWRC research emphasis this year is to develop and maintain a watershed and reservoir studies program for the state of South Carolina. The following issues and research areas will be favored in the selection of research proposals:

- **Watersheds:** Watershed-wide studies and management strategies within watersheds that affect the rivers and streams of South Carolina.

- **Water Policy:** Policy implications related to the social, cultural and physical characteristics of the major streams, reservoirs and their watersheds.

- **Water Management:** Issues regarding reservoirs and major streams influenced by management decisions made in bordering states.

- **Water Supply:** Surface and groundwater issues, sedimentation, non-point source pollution, water quality and quantity issues as they relate to the management of watersheds and basins.
- **GIS Technologies:** The use of geographic information systems (GIS), remote sensing and image analysis and other innovative technologies involved in water resources research, technology transfer and decision-making.
- **Population and Demographics:** Demographic issues, population growth and pressure on reservoirs, recreation and tourism issues, and economic development issues.
- **Emerging Problems:** Studies not included in other priority areas but which are dedicated to solving emerging water problems which are identified as critical issues by key state water management officials in the region are included in this category.

The USGS has also established priority areas or needs for research within this competitive program. These areas are:

- **Water Quality:** Research needs in the water quality area involve information, information management, and the protection of surface and ground water from degradation. It includes industrial and municipal wastewater treatment and subsurface disposal of hazardous/toxic wastes. In addition, problems from non-point sources of both municipal and agricultural sources including soil erosion, agricultural runoff, and pesticides pertain to this area. The development and improvement of monitoring techniques and analysis are also important, as well as water quality problems associated with eutrophication and weed control. This area also includes remediation research, drinking water quality, salt water intrusion, and near coastal and island water quality issues.
- **Water Management:** Research needs in the area of water management include legal, institutional, and financial arrangements. Specific items such as basin planning, water use control, transfers and/or diversions of water flood control, and drought planning are all priority issues. It also includes construction of facilities, financing and pricing, and water conservation and reuse. Management includes quality protection studies upgrading of supplies and state and/or federal and interstate interactions or compacts.
- **Water Quantity:** Research needs in the water quantity area include studies of the basin water cycle for an understanding of prediction. It also includes items of surface water flow, basin planning, low flow prediction (7Q10), flood control, water use, and water allocation. Included also are studies of ground water availability and the locations, movement, and volume of ground water. Also of importance are use and user impacts and surface and ground water interaction.
- **Aquatic and Environmental Protection:** Research needs in this area include studies of wetlands, swamps and marshes, fish and other biota, and the quality of life. It also includes studies of ecological balance, protection of endangered species, and studies of dredging and filling. This area also includes exotic species issues and ecosystem studies.

IV. ELIGIBLE APPLICANTS

The South Carolina Water Resources Center will only consider proposals from faculty members or affiliates at institutions of higher education in South Carolina. Applications **not** eligible include the following: 1) Applications for research on health effects involving human subjects; 2) Applications for research involving oceanography (estuarine research applications are acceptable).

V. CONFLICT OF INTEREST

An applicant may not permit any federal employee to use his or her position for a purpose that is or gives the appearance of being in conflict of interest, either by giving the applicant an unfair advantage or by a desire for private financial gain.

VI. APPLICATION DUE DATE

The SCWRC must submit its application to the USGS on or before January 15, 2009. Thus, as stated in the cover memorandum, **the deadline for submitting proposals to the SCWRC is December 23, 2008 at 4:30 p.m. (local time)**. Proposals received after this date and time will be returned to the principal investigator. Proposals must be sent electronically this year. The SCWRC will accept proposals e-mailed to:

scwrc@strom.clemson.edu

VII. FUNDS

- A. The total amount available in FY 2009 for the statewide competitive grant program is anticipated to be approximately \$60,000.

NOTE: The federal government's obligation under this program is contingent upon the availability of appropriated funds. The South Carolina Water Resources Center and Clemson University will not be held liable at any time if the federal government withholds funds for this program.

- V. Proposals should be for research and information transfer projects **12 months in duration** and shall not request Federal funding exceeding \$60,000. The SCWRC typically funds two or three projects in the range of \$20,000 - \$30,000 each.
- C. Each applicant shall match each Federal dollar provided to support each proposed project with not less than two (2) non-federal dollars. If multiple projects are funded under a single program award, the required matching funds must be met on the total program award, not necessarily on each individual project. **However, higher consideration will be given to high quality proposals that include the two-to-one non-federal to federal match.**

VIII. PROPOSAL REVIEW AND SELECTION PROCESS

1. Proposals will be sent out for peer review as well as to SCWRC's statewide advisory committee for evaluation. Results of this evaluation will be forwarded to the director of the SCWRC. **Please submit names and contact information of at least two potential reviewers for your content area with your proposal.**
2. Up to six proposals may be sent out for technical evaluation. Those performing the

technical evaluation must sign a statement that serving as a reviewer will not constitute a conflict of interest. A minimum of two written technical evaluations will be attached to each proposal.

3. Based on all of these evaluations and availability of funds, the director of the SCWRC will select the top proposal(s) to be submitted to the USGS.

4. The criteria for the technical evaluation will be as follows:

Technical/Scientific Merit:	30%
Relevance to SCWRC and USGS Research Priorities	25%
Feasibility:	25%
Competence of the PI:	10%
Students' Educational Opportunities:	5%
Contribution to Water Sciences and/or Information Transfer:	5%

5. Upon completion of the advisory board review and technical evaluation, The director of the SCWRC will submit a list of the proposals recommended for funding to the USGS, the total value meeting their criteria for funds available.

The tentative research competition schedule is:

November 1, 2008:	RFP made available
December 23, 2008:	Proposals due to the SCWRC.
January 2, 2009:	Proposals sent to advisory committee.
January 2, 2009:	Proposals sent for technical review.
January 15, 2009:	Proposal package submitted to USGS.

As stated previously, proposals may be for a one-year duration only. **Those with a duration greater than one year will not be considered for funding. The SCWRC encourages investigators to look at other funding sources for multi-year projects.**

IX. APPLICATION REQUIREMENTS

A. The SCWRC (and applicants) shall have its matching funds (\$2.00 Non-Federal for every \$1.00 Federal requested) committed at time of application submittal to the USGS. Commitment means that the application shall contain 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.

B. Matching funds shall be obligated during the period of performance.

C. The matching requirement should be met during the 12-month budget period.

D. Matching funds may contain indirect costs. Federal funds shall not be used to pay indirect costs. 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.

E. The length of the project period shall not exceed 1 year.

- F. SCWRC may consider research proposals only from faculty members or affiliates at institutions of higher education.

Investigators shall submit their proposals (in Word or PDF formats) electronically to the SC Water Resources Center e-mail address shown below:

scwrc@strom.clemson.edu

It will be assumed that all proposals submitted have the proper signatures from their respective institutions. Signature pages can be surface mailed or faxed to the following address:

SC Water Resources Center
Strom Thurmond Institute
230 Kappa Street
Clemson University
Clemson, SC 29634-0125
(FAX: 864-656-4780) (Phone: 864-656-0208)

X. RESEARCH PROPOSAL CONTENTS

A. Application for Federal Assistance, SF 424. Note: Not required for Clemson University proposals. SCWRC will submit the final SF 424. Proposals from investigators from other universities must file a separate SF 424. Use the SF 424 as page 1 of the application. The SF 424 shall be signed by an authorized representative of the applicant (See NIWR web (www.niwr.org) for 104-B RFP and forms.).

1. **Direct Costs.** Those costs that can be identified with a particular research project, an instructional activity, or any other institutional activity that can be directly assigned to such activities relatively easily with a high degree of accuracy.
2. **Indirect Costs (non-Federal share only).** Those costs that have been incurred for common or joint objectives and therefore cannot be identified with a particular research project, an instructional activity, or any other institutional activity. At educational institutions such costs normally are classified under the following categories: 1) general administration and general expenses; 2) research administration expenses; 3) operation and maintenance expenses; 4) library expenses; and 5) departmental administration expenses.

B. Research Proposals. Proposals shall consist of the following 21 elements. The first 11 elements listed below shall not exceed 4 pages. Begin a new page with element 12 (Elements 12-19 shall not exceed 10 single spaced pages).

1. **Title.** Concise but descriptive
2. **Project Type.** Research, Information Transfer, Information Management System, Education, or Other (please specify).
3. **Focus Categories.** List a maximum of three focus categories, with the most preferred focus category first. A list of focus categories is provided in Attachment B. Enter the abbreviations in capital letters and separate them by commas.

4. **Keywords.** List descriptor words, separated by commas. Make up your own or select words from the attached list of keywords.
5. **Start Date.** Use the actual beginning date for project.
6. **End Date.** Estimated ending date for project.
7. **Principal investigator(s)** name(s), academic rank, university, address, phone number, and e-mail address.
8. **Congressional district** of university where research is to be conducted.
9. **Abstract (3 paragraphs maximum)** Provide a brief description of the problem, methods, and objectives.
10. **Budget Breakdown.** See NIWR web (www.niwr.org) for 104-B RFP and forms.
11. **Budget Justification.** See NIWR web (www.niwr.org) for 104-B RFP and forms..

(NOTE: Begin a new page with item 12. Items 12-19 shall not exceed 10 single spaced pages.)

12. **Title.** Use the same title as entered in element #1 above.
13. **Statement of critical regional or State water problem.** Include an explanation of the need for the project, who wants it and why.
14. **Statement of results or benefits.** Specify the type of information that is to be gained from the project and how it will be used.
15. **Nature, scope, and objectives of the research (include a timeline of activities).**
16. **Methods, procedures, and facilities.** Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives. Continuing projects should include a detailed progress report in this section.
17. **Related Research.** Show by literature and communication citations the similarities and dissimilarities of the proposed project to completed or on-going research on the same topic.
18. **Training potential.** Estimate the number and level of graduate and undergraduate students, by field of study and degree, that are expected to receive training in the project (use Attachment C).
19. **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.
20. **Matching Funds Commitment Letter.** The proposal shall contain an institutional cost-sharing agreement (letter) signed by an official authorized to commit the institution of the principal investigator to the matching share or a third party, in-kind contribution signed by an official authorized to commit the third party.
21. **Negotiated indirect cost rate agreement.** Attach a copy of the approved negotiated indirect cost rate agreement.

Attachment B

FOCUS CATEGORIES

ACID DEPOSITION	ACD
AGRICULTURE	AG
CLIMATOLOGICAL PROCESSES	CP
CONSERVATION	COV
DROUGHT	DROU
ECOLOGY	ECL
ECONOMICS	ECON
EDUCATION	EDU
FLOODS	FL
GEOMORPHOLOGICAL & GEOCHEMICAL PROCESSES	G&G
GROUND WATER	GW
HYDRO GEOCHEMISTRY	HYDGEO
HYDROLOGY	HYDROL
IRRIGATION	IG
LAW, INSTITUTIONS, & POLICY MANAGEMENT & PLANNING	LIP
METHODS	M&P
MODELS	MET
NITRATE CONTAMINATION	MOD
NONPOINT POLLUTION	NC
NUTRIENTS	NPP
RADIOACTIVE SUBSTANCES	NU
RECREATION	RAD
SEDIMENTS	REC
SOLUTE TRANSPORT	SED
SURFACE WATER	ST
TOXIC SUBSTANCES	SW
TREATMENT	TS
WASTEWATER	TRT
WATER QUALITY	WW
WATER QUANTITY	WQL
WATER SUPPLY	WQN
WATER USE	WS
WETLANDS	WU
	WL

Attachment C

TRAINING ACCOMPLISHMENTS

Academic I Level

<u>FIELD OF STUDY</u>	<u>Undergraduate</u>	<u>Master's Degree</u>	<u>Ph.D. Degree</u>	<u>Post Ph.D.</u>	<u>Total</u>
Chemistry					
<u>Engineering</u>					
Agricultural					
Civil					
Environmental					
Soils					
System					
Other*					
Geology					
Hydrology					
Agronomy					
Biology					
Ecology					
Fisheries, Wildlife and Forestry					
Computer Science					
Economics					
Geography					
Law					
Resources Planning					
Other (specify)					
TOTAL					

*Less than 5 students in any one field of study.

Attachment D

Attachment E