



## Water Resources Research Act Program National Competitive Grants Program

### Fiscal Year 2019 Announcement

**Announcement No. G19AS00040  
under Section 104(g) of the  
Water Resources Research Act of 1984, as Amended  
March 11, 2019**

### Closing Dates

**5:00 PM, Eastern Time, February 15, 2019 (Preproposals)  
5:00 PM, Eastern Time, May 29, 2019 (Institutes)**

Department of the Interior  
U. S. Geological Survey

National Institutes for  
Water Resources

OMB Number 1028-0097  
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**NATIONAL INSTITUTES FOR WATER RESOURCES  
U.S. GEOLOGICAL SURVEY**

**WATER RESOURCES RESEARCH NATIONAL COMPETITIVE GRANTS  
PROGRAM  
ANNOUNCEMENT  
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**U.S. GEOLOGICAL SURVEY  
NATIONAL INSTITUTES FOR WATER RESOURCES**

**WATER RESOURCES RESEARCH  
NATIONAL COMPETITIVE GRANTS PROGRAM  
ANNOUNCEMENT  
FY 2019**

**ABSTRACT**

The U.S. Geological Survey in cooperation with the National Institutes for Water Resources requests proposals for matching grants to support research on the topic of improving and enhancing the nation's water supply, including evaluation of innovative approaches to water treatment, infrastructure design, retrofitting, maintenance, management, and replacement; exploration and advancement of our understanding of changes in the quantity and quality of water resources in response to a changing climate, population shifts, and land use changes; development of methods for better estimation of water supply, both surface and groundwater, including estimation of the physical supply and of the economic supply of water; development and evaluation of processes and governance mechanisms for integrated surface/ground water management; and the evaluation and assessment of conservation practices. Any investigator at an accredited institution of higher learning in the United States is eligible to apply for a grant through a Water Research Institute or Center established under the provisions of the Water Resources Research Act of 1984, as amended (<http://water.usgs.gov/wrri/institutes.html>). Proposals involving substantial collaboration between the USGS and university scientists are encouraged. Proposals may be for projects of 1 to 3 years in duration and may request up to \$250,000 in federal funds. Successful applicants must match each dollar of the federal grant with one dollar from non-federal sources. Preproposals must be submitted to your State Institute or Center by 5:00 PM, Eastern Time, February 15, 2019 and invited full proposals to the National Competitive Grants Program must be submitted to the grants.gov internet site at <http://www.grants.gov> not later than 5:00 PM Eastern Time, May 29, 2019 by the university at which the Institute or Center is located. Funds have not yet been appropriated for this program for FY 2019. The Government's obligation under this program is contingent upon the availability of funds.

**SUBMISSION OF PREPROPOSALS AND INVITED FULL PROPOSALS**

Preproposals and full proposals under this Announcement must be submitted using the following process:

1. Preproposals must be submitted by the PI's to their State Water Institute or Center (see <http://water.usgs.gov/wrri/index.php>) for approval following the template in **Attachment A**. The State Water Institute or Center will forward the preproposals to the USGS National Program Office for the peer panel evaluation and up to 30 preproposals will be selected and invited to submit a full proposal. Submitting a preproposal does not obligate the PI to submit a full proposal.

2. Each invited full research proposal must be submitted to grants.gov (<http://www.grants.gov/>) in PDF format (following template **Attachment B**) by the university at which the Water Resources Research Institute or Center approving the proposal is located, along with:
  - a. SF-424 (Application for Federal Assistance),
  - b. SF-424B (Assurances),
  - c. Full proposal in pdf format containing,
    - i. Cover Page
    - ii. Proposal
    - iii. Budget Breakdown Form (**Attachment C**),
    - iv. Budget Justification Form (**Attachment D**),
    - v. Budget Summary Form (**Attachment E**),
    - vi. Matching Commitment Letter, and
    - vii. Letters of Support if Provided

## 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. 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. Questions or comments concerning the review process may be addressed to either Earl Greene at the address below or to:

Dr. Daniel Devlin, Director  
Kansas Water Resources Institute, Kansas State University  
44 Waters Hall  
Manhattan, Kansas 66506  
(785) 532-0393  
ddevlin@ksu.edu

Questions or comments concerning this Program Announcement should be directed to:

Program Office

Earl Greene  
Director, Water Resources Research Act Program  
5522 Research Park Drive  
Baltimore, Maryland 21228  
Phone: 571-332-4184  
eagreene@usgs.gov

Grants Office

Kimberly L. Dove  
Office of Acquisition and Grants  
MS 211, U.S. Geological Survey  
12201 Sunrise Valley Drive  
Reston, Virginia, 20192  
Phone: 703-648-7487  
kdove@usgs.gov

## II. PROGRAM OBJECTIVES

Section 104(g) of the Water Resources Research Act of 1984 requires that this competitive grant program focus on: “**water problems and issues of a regional or interstate nature beyond those of concern only to a single State** and which relate to specific program priorities identified jointly by the Secretary (of the Interior) and the (water resources research) institutes.”

Objectives of this program also include the following:

- A. Promote collaboration between the USGS and university scientists in research on significant national and regional water resources issues.

Proposals exhibiting substantial collaboration between the USGS and the applicant are encouraged and will receive extra weight in the evaluation and selection process. Collaborative proposals should describe in detail the respective roles of the USGS and the applicant in the proposed work. It is anticipated in FY2019 the USGS will have internal funds available for modest support of USGS scientists on selected proposals.

Potential applicants seeking collaborative opportunities are encouraged to contact USGS scientists directly (<http://water.usgs.gov/nrp/science.php>) or Water Science Center Directors ([http://water.usgs.gov/district\\_chief.html](http://water.usgs.gov/district_chief.html)).

- B. Promote the dissemination and application of the results of the research funded under this program.
- C. Assist in the training of scientists in relevant water resource fields. Proposals that include a strong educational component (student support) are encouraged, as are Proposals from faculty beginning their careers.

## III. RESEARCH PRIORITIES

Proposals are sought on the topic of improving and enhancing the nation’s water supply and availability, and promoting the exploration of new ideas that address or expand our understanding of water problems, including the following specific areas of inquiry (levels of priority are not assigned, and the order of listing does not indicate the level of priority):

- Evaluation of innovative approaches to water treatment, infrastructure design, retrofitting, maintenance, management and replacement.
- Exploration and advancement of our understanding of changes in the quantity and quality of water resources in response to a changing climate, population shifts, and land use changes; including associated economic, environmental, social, and/or infrastructure costs.
- Development of methods for better estimation of water supply, both surface and groundwater, including estimation of the physical and/or economic supply of water.

- Development and evaluation of processes and governance mechanisms for integrated surface/ground water management.
- Evaluation and assessment of the effects of water conservation practices, as well as adoption, penetration and permanence.

#### **IV. PROPOSALS NOT ELIGIBLE FOR FUNDING**

- A. Proposals for research on health effects involving human subjects.
- B. Proposals for research involving oceanography (estuarine research proposals are acceptable).
- C. Proposals submitted by an Institute or Center that has not met reporting requirements on a previous award by the USGS.
- D. Proposals that do not comply with the terms of this Announcement.

#### **V. APPLICANT ELIGIBILITY**

Awards are available only to Water Research Institutes or Centers established pursuant to the provisions of section 104 of the Water Resources Research Act and listed at (<http://water.usgs.gov/wrri/index.php>). However, any investigator at an institution of higher learning in the United States is eligible to apply for an award through a Water Research Institute or Center. All portions of the preproposals must be submitted through the State Water Institute or Center by the deadline established in this announcement. The invited full proposal along with the SF-424 and SF-424B and budget forms must be submitted through grants.gov ( <http://www.grants.gov>) by the university at which the Institute or Center is located. Each invited full proposal will then be authorized for inclusion in the national competition by the Director of the Institute or Center in the state in which the university of the principal investigator is located. Proposals requesting matching funds from an Institute or Center are authorized at the discretion of the Institute or Center Director.

#### **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 and agencies may not serve as a source of matching funds under these awards.
- E. Federal employees must prepare a Statement of Government Involvement, which is to be included with a collaborative proposals.

## VII. FEDERAL FUNDS

- A. Funds have not yet been appropriated for this program for FY 2019. 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 2019 funds, if available.

## VIII. MATCHING FUNDS

- A. Each applicant must match each Federal dollar provided to support each proposed project with not less than one dollar from non-federal sources. States may have different guidelines as to the sources of matching funds - please check with your Institute or Center Director for details.

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

- B. Matching funds shall be obligated during the period of performance.
- C. The matching requirement should be met during each 12-month budget period.
- D. Matching funds obligated shall be reflected on line 10.i of each Financial Status Report, Standard Form 425.
- E. 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. **As per the Water Resources Research Act federal funds shall not be used to pay indirect costs.**

## **IX. MAXIMUM SIZE AND DURATION OF PROJECT**

- A. Applicants shall not request total federal funds exceeding \$250,000 per project.
- B. Proposed projects may be of 1 to 3 years in duration, with discrete 12-month budget periods.

## **X. PREPROPOSAL AND INVITED FULL PROPOSAL DUE DATES**

Investigators must submit their preproposals (PDF format) to their State Water Resources Research Institute or Center prior to 5:00 PM Eastern Time, February 15, 2019. Only preproposals filed by that time will be transmitted to the National Grants Competition Preproposal Peer Review Panel. Thirty preproposals will be invited to submit a full proposal to the National Grants Competition. Invited full proposals must be submitted as an application package (Full Proposal, SF-424 and SF-424B, Matching commitment letter, budget breakdown, budget justification and budget summary) to grants.gov by the university that houses the State Water Institutes or Centers prior to 5:00 PM Eastern Time, May 29, 2019. Only full proposals submitted by that time will be transmitted to the National Grants Competition Full Proposal Review Panel for review.

## **XI. PREPROPOSAL AND INVITED PROPOSAL PREPARATION AND REVIEW PROCESS**

### **A. Preproposals**

Each preproposal will need to be written following the template (**Attachment A**). Preproposals which meet the requirements of this Announcement will be evaluated by a peer review panel composed of Institute directors, university scientists, and USGS employees experienced in water resources research. Preproposals will be reviewed according to the following criteria:

25 Points: Relevance and Importance. - The extent to which: (1) the preproposal focuses on a water problem or issue of a regional or interstate nature of concern to more than one State and directly addresses a research priority described in this RFP (Section III); (2) the subject is of particularly high importance to present and future water resources management programs; and (3) the preproposal includes collaboration with the USGS if appropriate.

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

25 Points: Expected Results and Benefits. - The extent to which the preproposal describes the how the potential outcomes and the potential realistic impacts of the proposed work.

15 Points: Information Transfer. - The extent the preproposal actively addresses the eventual transfer of results to user groups and whether it actively addresses the impact that the results could have?

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

## B. Invited Full Proposals

Each invited full proposal will need to be written following the template (**Attachment B**). Full proposals which meet the requirements of this Announcement will be evaluated by a peer review panel composed of Institute directors, university scientists, and USGS employees experienced in water resources research. Proposals will be reviewed according to the following criteria:

20 Points: Relevance and Importance. - The statement of relevance and importance is a critical component of the proposal review process. Describe the water problem or issue of a regional or interstate nature of concern to more than one State and directly addresses a research priority described in Section III. Document the magnitude of the situation and relevance of the issue/problem to state, regional and national issues. Why is this project/topic innovative and important? Does the proposal include collaboration with the USGS if appropriate?

20 Points: Scientific Merit. – The extent to which the proposal (1) has potential to expand fundamental knowledge through the stated goals and objectives; (2) is scientifically sound through the description of the research objectives; and (3) demonstrates cognizance of past work.

20 Points: Expected Results and Benefits. – The extent to which the proposal describes the how the potential outcomes and the potential realistic impacts of the proposed work.

10 Points: Information Transfer. – The extent the proposal actively addresses the eventual transfer of results to user groups how it will deliver the potential impacts of the research proposed.

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 proposed research, and the adequacy of the facilities and equipment.

10 Points: Budget. The extent to which the budget is reasonable and adequate for the work proposed. Note: the principal investigator's salary is an acceptable budget item, but the federal share of the salary should not exceed one or two months per year.

Full proposals recommended for funding will be forwarded to the USGS 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 August through September

with a USGS-preferred project start date of September 1, 2019. The project start date must be no later than September 30, 2019.

\* NEW for this Fiscal Year a USGS Data Management Plan must be included in the full proposal. Requirements for the data plan are included below.

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.

## XII. PROPOSALS SELECTED FOR FUNDING IN PREVIOUS YEARS

Total Funds Available, Number of Proposals Received and Funded, and the Minimum and Maximum Federal Funds Awarded, by Year.

Year	Total Funds Available	Number of Proposals Received	Number of Proposals Funded	Minimum. Federal Funds Awarded	Maximum. Federal Funds Awarded
1999	\$1,000,000	68	10	\$13,833	\$183,650
2000	\$1,000,000	106	8	\$41,937	\$216,999
2001	\$1,000,000	75	9	\$84,294	\$150,000
2002	\$1,000,000	75	8	\$103,134	\$157,586
2003	\$1,000,000	76	6	\$92,839	\$233,953
2004	\$950,000	45	8	\$69,246	\$170,596
2005	\$950,000	49	8	\$63,014	\$172,842
2006	\$920,000	61	8	\$58,155	\$250,000
*2007	\$814,419	63	5	\$61,312	\$242,508
2009	\$937,358	61	6	\$82,489	\$235,148
2010	\$950,183	46	6	\$60,396	\$247,563
2011	\$1,064,754	40	5	\$140,162	\$249,949
2012	\$853,498	46	6	\$35,885	\$243,835
2014	\$963,704	68	4	\$230,839	\$248,556
2015	\$999,289	101	4	\$249,329	\$250,000
2016	\$856,004	83	5	\$109,123	\$249,625
2017	\$749,415	30*	3	\$249,415	\$250,000
2018	\$857,420	30*	4	\$193,831	\$248,201

\*The program did not receive funding in FY 2007 and FY 2013. Projects selected in FY 2007 were supported with FY 2008 funds. A program competition was not held in FY 2008 nor held in FY 2013. Starting in 2017 30 full proposals were invited to submit for consideration out of over 150 pre-proposals. Projects Descriptions of the projects selected for funding since 2002 are provided at (<http://water.usgs.gov/wrri/national-competitive-grants.php>).



National Competitive Grant (104g) Preproposal Form – RFP G19AS00040

Number assigned by USGS: \_\_\_\_\_

**TITLE:**

**PROPOSED INITIATION DATE: September 1, 2019**

**PROPOSED COMPLETION DATE:**

**FUNDING LEVEL (Cap of \$250,000 federal funds and a maximum of a 3 year duration)**

**(A) FEDERAL FUNDS REQUESTED: \_\_\_\_\_**

**(B) PROPOSED COST SHARING: \_\_\_\_\_**

**[Must equal at least a 1:1 match]**

**Preproposal must be submitted in PDF format, length is limited to no more than 4 pages (12-point font) and at a minimum address the following below. References do not count toward the 4 page limit.**

**STATEMENT OF RELEVANCE AND IMPORTANCE:**

The statement of relevance and importance is a critical component of the preproposal review process. Describe the water problem or issue of a regional or interstate nature of concern to more than one State and directly addresses a research priority described in Section III. Document the magnitude of the situation and relevance of the issue/problem to state, regional and national issues. Why is this project/topic innovative and important? Does the preproposal include collaboration with the USGS if appropriate?

**RESEARCH GOALS AND OBJECTIVES:**

Describe the goals (desired results) and objectives of the proposed work. State objectives in a way that enables measurable comparison to expected project results.

**RESEARCH APPROACH:**

Describe the project design and explain how the work will accomplish the stated objectives.

**EXPECTED RESULTS AND BENEFITS:**

Describe the expected outcomes of the project. What new solutions and/or opportunities will be available to the hydrologic scientific community and/or management agencies? What impact will successful completion of this project have on the state, region or nation?

**INFORMATION TRANSFER AND EDUCATION:**

Describe how results will be communicated to the relevant user groups and how it will deliver the potential impacts of the research proposed.

**PRINCIPAL INVESTIGATOR:**

**AFFILIATION:**

**CO-INVESTIGATORS (name/position/affiliation):**

**PRINCIPAL INVESTIGATOR SIGNATURE:**

**DATE:**

**PHONE NUMBER:**

**EMAIL ADDRESS:**

National Competitive Grant (104g) Proposal Form – RFP G19AS00040

Number assigned by USGS: \_\_\_\_\_

**COVER PAGE (Does Not Count Towards 12 Page Limit)**

**TITLE:**

**PROPOSED INITIATION DATE: September 1, 2019**

**PROPOSED COMPLETION DATE:**

**WATER RESOURCES RESEARCH INSTITUTE OR CENTER:**

**FUNDING LEVEL (Cap of \$250,000 federal funds and a maximum of a 3 year duration)**

**(A) FEDERAL FUNDS REQUESTED: \_\_\_\_\_**

**(B) PROPOSED COST SHARING: \_\_\_\_\_**  
**[Must equal at least a 1:1 match]**

**FOCUS CATEGORIES.** Choose a maximum of three focus categories from the list provided (**Attachment F**), with the most preferred focus category first.

**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.

**KEYWORDS.** Enter keywords of your choice descriptive of the work.

**PRINCIPAL INVESTIGATOR(S).** Provide name, academic rank, university, email address and phone number of all principal investigators.

**CO-PRINCIPAL INVESTIGATOR(S).** Provide name, academic rank and university (or title and federal agency), email address and phone number of all co-principal investigators.

**ABSTRACT.** Provide a brief (one-page) description of the problem, methods, and objectives. Please be as descriptive as possible but do not exceed one-page, 12 point font.

## PROPOSAL

**Must be submitted in PDF format, and shall not exceed 12 single-spaced pages, with 12 point font and at least 1 inch margins, including tables, pictures, graphs, figures, and appendices, but excluding Literature Citations/References (item 10), Investigator's Qualifications (item 11). Proposals exceeding the 12-page limit will not be considered in the competition**

1. Title. Please use the same title as was entered in the Web form under item 1, above.
2. Statement of regional, interstate, or multi-state water problem. Include an explanation of the need for the project, who wants it, and why.
3. Statement of results or benefits. Specify the type of information that is to be gained and how it will be used.
4. Nature, scope, and objectives of the project, including a timeline of activities.
5. Methods, procedures, and facilities. Provide enough information to permit evaluation of the technical adequacy of the approach to satisfy the objectives.
6. Related research. Demonstrate by literature and communication citations the similarities and dissimilarities of the proposed project to completed or on-going work on the same topic.
7. Training potential. Estimate the number of graduate and undergraduate students, by degree level, who are expected to receive training in the project.
8. 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 research project. A brief narrative description is sufficient. As part of the narrative the USGS employees are encouraged to include a budget (not more than \$35,000 per proposal). The USGS budget is not to be included as part of the budget information in items 12, 13, and 14.
9. Information Transfer Plan. Describe the plan for disseminating information on the results of the research 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).
10. Literature Citations/References
11. 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. Does not count towards 12 page limit.

12. Budget Breakdown, as requested using form (See **Attachment C**). Does not count towards 12 page limit.
13. Budget Justification, as requested using form (See **Attachment D**). Does not count towards 12 page limit.
14. Budget Summary, as requested using form (See **Attachment E**). Note: Multi-year projects will be fully funded with FY 2018 funds, if funded. The budget must be complete for all years of the project. Does not count towards 12 page limit.
17. Data Management Plan. See RFP for requirements and format. Does not count towards 12 page limit.
16. Matching Commitment Letter. The proposal 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. Scanned legible pdf documents are acceptable. The USGS does not need the originals. Does not count towards 12 page limit.

If letters of support for the application are provided, they should be scanned and uploaded as part of the proposal. **Letters of support do not count against the 12-page limit.**

## 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:

<p><b>Salaries and Wages for PIs.</b> Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.</p>
<p><b>Salaries and Wages for Graduate Students.</b> 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.)</p>
<p><b>Salaries and Wages for Undergraduate Students.</b> 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.)</p>
<p><b>Salaries and Wages for Others.</b> Provide personnel, title/position, estimated hours and the rate of compensation proposed for each individual.</p>
<p><b>Fringe Benefits for PIs.</b> Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.</p>
<p><b>Fringe Benefits for Graduate Students.</b> Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.</p>
<p><b>Fringe Benefits for Undergraduate Students.</b> Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.</p>
<p><b>Fringe Benefits for Others.</b> Provide the overall fringe benefit rate applicable to each category of employee proposed in the projects. Note: include health insurance here, if applicable.</p>

<b>Tuition for Graduate Students.</b> Provide time & amount. In-state or Out-of-state tuition?
<b>Tuition for Undergraduate Students.</b> Provide time & amount. In-state or Out-of-state tuition?
<b>Supplies.</b> Indicate separately the amounts proposal for laboratory and field supplies followed by a breakdown of the supplies in each category.
<b>Equipment.</b> 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.
<b>Services or Consultants.</b> 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.
<b>Travel.</b> 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).
<b>Other Direct Costs.</b> 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.
<b>Indirect Costs.</b> 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 E

Project Title:

COST CATEGORY	Federal Year 1	Non-Federal Year 1	Federal Year 2	Non-Federal Year 2	Federal Year 3	Non-Federal Year 3	TOTAL ALL YEARS
1.Total Salaries and Wages for: - PI - Grad Students - Undergrad Students							
2. Total Fringe Benefits for: - PI - Grad Students - Undergrad Students							
3. Tuition for: - Grad Students - Undergrad Students							
4. Supplies							
5. Equipment							
6. Services or Consultants							
7. Travel							
8. Other Direct Costs							
9. Total Direct Costs (1-8)							
10. Indirect Costs	XXXXXXXX		XXXXXXX		XXXXXXXXXX		
11. Amount Proposed (9+10)							

FOCUS CATEGORIES

ATTACHMENT F

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	HYDROGEO
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
WETLANDS	WET

**SPECIAL TERMS AND CONDITIONS**

**SECTION A –ADMINISTRATIVE DATA AND REPORTING REQUIREMENTS**

**A.1 Payment**

Payments under financial assistance awards must be made using the Department of the Treasury Automated Standard Application for Payments (ASAP) system ([www.asap.gov](http://www.asap.gov)).

- a) The Recipient agrees that it has established or will establish an account with ASAP. USGS will initiate enrollment in ASAP. If the Recipient does not currently have an ASAP account, they must designate an individual (name, title, address, phone and e-mail) who will serve as the Point of Contact (POC).
- b) With the award of each grant/cooperative agreement, a sub-account will be set up from which the Recipient can draw down funds. After Recipients complete enrollment in ASAP and link their banking information to the USGS ALC (14080001), it may take up to 10 days for sub-accounts to be activated and for funds to be authorized for drawdown in ASAP.
- c) Inquiries regarding payment should be directed to ASAP at 855-868-0151.
- d) Payments may be drawn in advance only as needed to meet immediate cash disbursement needs.

**A.2 Carryover Funds**

Multiple year awards may carry over unobligated funds to be expended in the following budget period. This is to allow a project that was unable to be completed by the end of the funded budget period to be completed. **Please note** that funds are only available through the ASAP system 90 days after each budget period ending date for that budget period. **No funds shall be carried over beyond the final year of an award. Prior year funds cannot be reallocated to new projects. Funds may only be reallocated with prior approval of the Contracting Officer and only during the federal fiscal year during which they were obligated.**

**A.3 Assistance Administration**

This award will be administered by:

U.S. Geological Survey  
Office of Acquisition and Grants  
12201 Sunrise Valley Drive, MS 205  
Reston, VA 20192  
Attn: Kimberly Dove, Grant Specialist  
Telephone: 703-648-7487

Email: [kdove@usgs.gov](mailto:kdove@usgs.gov)

#### **A.4 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 submitted to the Project Officer, Earl Greene at [eagreene@usgs.gov](mailto:eagreene@usgs.gov) until further notice by May 31 of each year. The report for the competitive program awards, internship awards and supplemental awards should be submitted 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

- (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.

**A.5 Annual Financial Report**

- a) The Recipient will submit an annual SF 425, Federal Financial Report, for each individual USGS award. The SF 425 is available at <https://www.grants.gov/web/grants/forms/post-award-reporting-forms>. The SF 425 will be due in accordance with the following schedule. USGS acknowledges that this annual reporting schedule may not always correspond with a specific budget period.

Award Performance Start Date	Annual Interim Report End Date (year following start date)	Annual Interim Report Due Date (90 days after report end date)
January 1- March 31	March 31	June 30
April 1- June 30	June 30	September 30
July 1- September 30	September 30	December 31
October 1 – December 31	December 31	March 31

- b) The SF 425 must be submitted electronically through the FedConnect Message Center ([www.fedconnect.net](http://www.fedconnect.net)) or, if FedConnect is not available, by e-mail to [SF425@usgs.gov](mailto:SF425@usgs.gov) with a cc to the Grant Specialist. Recipient must include the USGS award number in the subject line of all correspondence. 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.

**A.6 Final Financial Report**

- a) The Recipient will liquidate all obligations incurred under the award and submit a final SF 425, Federal Financial Report in accordance with A.5.b. no later than 90 calendar days after the Agreement completion date.

- b) 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 Agreement completion date, USGS shall unilaterally deobligate federal funds as reflected in the Final SF 425.
- c) 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 SF 425, Federal Financial Report, 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 USGS 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.

#### **A.7 Institute Director**

The Institute Director, who is designated by the Recipient, is responsible for the technical direction of the research.

#### **A.8 Project Officer**

- (a) The Project Officer will work closely with the Institute Director to ensure that all technical requirements are being met. The Project Officer's responsibilities include, but are not limited to, providing technical advice on the accomplishment of the Recipient's objectives; reviewing the technical content of the report and the other information delivered to the USGS; determining the adequacy of the program reports; and conducting site visits in coordination with the Contracting Officer as necessary.
- (b) The Project Officer does not have the authority to issue any technical direction which constitutes an assignment of additional work outside the scope of the award; in any manner causes a change in the total costs or the time required for performance of the award; or changes any of the terms, conditions, or general provisions of the award.

#### **A.9 Contracting Officer**

The Contracting Officer is authorized to enter into and/or terminate awards. The Contracting Officer is the sole authority designated to modify the funds and stated terms and conditions of the award. The Contracting Officer, in coordination with the Project Officer, will ensure the effective utilization of Federal funds.

**A.10 Adherence to Original Research Objectives and Budget Estimates**

- (a) Any commitments or expenditures incurred by the Recipient in excess of the funds provided by this award shall be the responsibility of the Recipient. Expenditures incurred prior to the effective date of this award cannot be charged against award funds unless provided for in this award.
- (b) The following changes require advance written approval by the Contracting Officer (CO). The request must be submitted to the CO at least 30 calendar days prior to the requested effective date of the change:
  - (1) Changes in the scope, objective, or key personnel referenced in the Recipient's proposal;
  - (2) Transfer of funds between direct cost categories when the cumulative amount of transfers during the project period exceeds 10 percent of the total award;
  - (3) Foreign travel;
  - (4) Acquisition of non-expendable personal property having a useful life of more than one year and having an acquisition cost \$5,000 or more; and
  - (5) Change in the project period for internships, competitive awards, supplemental awards funded by the USGS and other Federal agencies. The Recipient shall submit a revised budget indicating the planned use of all unexpended funds during the extension period. This request must be submitted no later than 30 days prior to the expiration date of the budget and or award period.
- (c) The Recipient shall submit a revised financial estimate and plan for (2) through (5) above.
- (d) The CO will notify the Recipient in writing within 30 calendar days after receipt of the request or revision or adjustment whether or not the request has been approved.

**A.11 Publications**

a) Acknowledgment of Support

Recipient is responsible for assuring that an acknowledgment of USGS support:

1. is made in any publication (including World Wide Web pages) of any material based on or developed under this Agreement, in the following terms:

This material is based upon work supported by the U.S. Geological Survey under Grant/Cooperative Agreement No. (*enter USGS award number located in Block #1 of award document*).

2. is orally acknowledged during all news media interviews, including popular media such as radio, television and news magazines.

b) Disclaimer

Recipient is responsible for assuring that every publication of material (including World Wide Web pages) based on or developed under this Agreement, contains the following disclaimer:

The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the opinions or policies of the U.S. Geological Survey. Mention of trade names or commercial products does not constitute their endorsement by the U.S. Geological Survey.

c) Publication

Publication of the results of any project carried out under this assistance award is authorized in professional journals, trade magazines, or may be made by the USGS. Such manuscripts or publications submitted to journals or professional publications for publication shall be accompanied by the following notation:

This manuscript is submitted for publication with the understanding that the United States Government is authorized to reproduce and distribute reprints for Governmental purposes.

d) Copies for USGS

Recipient is responsible for assuring that the USGS Project Office is provided access to, either electronically or in paper form, a copy of every publication planned for publication simultaneously with its submission for publication. One reprint of each published article shall be submitted to the USGS Project Office immediately following publication.

e) Department of the Interior Requirements

Two copies of each publication produced under a Grant or Cooperative Agreement shall be sent to the Natural Resources Library with a transmittal that identifies the sender and the publication. The address of the library is:

U.S. Department of the Interior  
Natural Resources Library

Division of Information and Library Services  
Gifts and Exchange Section  
18th and C Streets, NW  
Washington, DC 20240

**A.12 Involvement Statement**

There will be no substantial involvement by the USGS in performance of this grant.

**A.13 Pre-Agreement Costs**

The Recipient is not authorized to incur costs prior to the award of this Agreement. Costs incurred prior to the award of this agreement are not allowable.

**A.14 Modification**

This award may be modified in writing by mutual consent of the Recipient representative and the Contracting Officer.

**SECTION B – GENERAL PROVISIONS**

**B.1 Cost Principles, Audit, And Administrative Requirements**

The Recipient shall be subject to the following regulations, which are incorporated herein by reference. Copies of these regulations can be obtained from the Internet at:  
[http://www.whitehouse.gov/omb/grants\\_docs](http://www.whitehouse.gov/omb/grants_docs)

Educational Institutions / State and Local Governments / Non-Profit Organizations

2 CFR Part 200, *Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards*, as implemented by the Department of the Interior in 2 CFR Part 1402 and 43 CFR Part 12.

**B.2 Additional Regulations**

This award is subject to the following additional Governmentwide regulations:

- 2 CFR 180, Governmentwide Debarment and Suspension (Nonprocurement)
- 2 CFR 182, Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)

This award is subject to the following additional regulations of the U.S. Department of the

Interior:

- 2 CFR Part 1400, Nonprocurement Debarment and Suspension
- 2 CFR Part 1401, Requirements for a Drug Free Workplace (Financial Assistance)
- 43 CFR Part 17, Nondiscrimination in Federally Assisted Programs of the Department of the Interior
- 43 CFR Part 18, New Restrictions on Lobbying
  - Submission of an application also represents the applicant's certification of the statements in 43 CFR Part 18, Appendix A, Certification Regarding Lobbying
- 43 CFR Part 41, Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance [*Applies only if this award provides assistance to an education program or student(s)*]

### **B.3 Additional Articles Required For Compliance With Statute Or Regulation**

#### a) The Seat Belt Provision (Executive Order 13043)

Recipients of grants/cooperative agreements and/or sub-awards are encouraged to adopt and enforce on-the-job seat belt use policies and programs for their employees when operating company owned, rented, or personally owned vehicles. These measures include, but are not limited to, conducting education, awareness, and other appropriate programs for their employees about the importance of wearing seatbelts and the consequences of not wearing them.

#### b) Federal Leadership on Reducing Text Messaging while Driving (Executive Order 13513)

Recipients are encouraged to adopt and enforce policies that ban text messaging while driving, including conducting initiatives of the type described in section 3(a) of the order. ([http://www.whitehouse.gov/the\\_press\\_office/Executive-Order-Federal-Leadership-on-Reducing-Text-Messaging-while-Driving/](http://www.whitehouse.gov/the_press_office/Executive-Order-Federal-Leadership-on-Reducing-Text-Messaging-while-Driving/))

#### c) Use of U.S. Flag Air Carriers (49 USC Section 40118)

Any air transportation to, from, between or within a country other than the U.S. of persons or property, the expense of which will be paid in whole or in part by U.S. Government funding, must be performed by, or under a code-sharing arrangement with, a U.S. flag air carrier if service provided by such a carrier is "available" (49 U.S.C. 40118, commonly referred to as the Fly America Act). Tickets (or documentation for electronic tickets) must identify the U.S. flag air carrier's designator code and flight number. See the Federal Travel Regulation §301-10.131 - §301-10.143 for definitions, exceptions, and documentation requirements. (See also Comp. Gen. Decision B-240956, dated September 25, 1991.)

#### d) Trafficking in Persons (2 CFR Part 175)

a. *Provisions applicable to a recipient that is a private entity.*

1. You as the recipient, your employees, subrecipients under this award, and

subrecipients' employees may not—

- i. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;
- ii. Procure a commercial sex act during the period of time that the award is in effect; or
- iii. Use forced labor in the performance of the award or subawards under the award.

2. We as the Federal awarding agency may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity —

- i. Is determined to have violated a prohibition in paragraph a.1 of this award term; or
- ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either—
  - A. Associated with performance under this award; or
  - B. Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, “OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement),” as implemented by our agency at *[agency must insert reference here to its regulatory implementation of the OMB guidelines in 2 CFR part 180 (e.g., “2 CFR part XX”)]*.

*b. Provision applicable to a recipient other than a private entity.*

We as the Federal awarding agency may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity—

1. Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or
2. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either—
  - i. Associated with performance under this award; or
  - ii. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, “OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement),” as implemented by our agency at *[agency must insert reference here to its regulatory implementation of the OMB guidelines in 2 CFR part 180 (e.g., “2 CFR part XX”)]*.

*c. Provisions applicable to any recipient.*

1. You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.
2. Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:
  - i. Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and

- ii. Is in addition to all other remedies for noncompliance that are available to us under this award.
- 3. You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

d. *Definitions.*

For purposes of this award term:

- 1. "Employee" means either:
  - i. An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or
  - ii. Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.
- 2. "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.
- 3. "Private entity":
  - i. Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.
  - ii. Includes:
    - A. A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).
    - B. A for-profit organization.
- 4. "Severe forms of trafficking in persons," "commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

e) Reporting Subawards and Executive Compensation Information (2 CFR Part 170).

a. *Reporting of first-tier subawards.*

- 1. *Applicability.* Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e. of this award term).
- 2. *Where and when to report.*
  - i. You must report each obligating action described in paragraph a.1. of this award term to <http://www.fsrs.gov>.
  - ii. For subaward information, report no later than the end of the month following

the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. *What to report.* You must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

b. *Reporting Total Compensation of Recipient Executives.*

1. *Applicability and what to report.* You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—

i. the total Federal funding authorized to date under this award is \$25,000 or more;

ii. in the preceding fiscal year, you received—

(A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. *Where and when to report.* You must report executive total compensation described in paragraph b.1. of this award term:

i. As part of your registration profile at <https://www.sam.gov>.

ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. *Reporting of Total Compensation of Subrecipient Executives.*

1. *Applicability and what to report.* Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—

i. in the subrecipient's preceding fiscal year, the subrecipient received—

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

2. *Where and when to report.* You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.*, between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

d. *Exemptions*

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

i. Subawards,  
and

ii. The total compensation of the five most highly compensated executives of any subrecipient.

e. *Definitions.* For purposes of this award term:

1. *Entity* means all of the following, as defined in 2 CFR part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization;

iv. A domestic or foreign for-profit organization;

v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. *Executive* means officers, managing partners, or any other employees in management positions.

3. *Subaward:*

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. \_\_\_ .210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations").

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. *Subrecipient* means an entity that:
  - i. Receives a subaward from you (the recipient) under this award; and
  - ii. Is accountable to you for the use of the Federal funds provided by the subaward.
5. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):
  - i. *Salary and bonus*.
  - ii. *Awards of stock, stock options, and stock appreciation rights*. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
  - iii. *Earnings for services under non-equity incentive plans*. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
  - iv. *Change in pension value*. This is the change in present value of defined benefit and actuarial pension plans.
  - v. *Above-market earnings on deferred compensation which is not tax-qualified*.
  - vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

f) System of Award Management and Universal Identifier Requirements (2 CFR Part 25)

a. *Requirement for System of Award Management*

Unless you are exempted from this requirement under 2 CFR 25.110, you as the recipient must maintain the currency of your information in the SAM until you submit the final financial report required under this award or receive the final payment, whichever is later. This requires that you review and update the information at least annually after the initial registration, and more frequently if required by changes in your information or another award term.

b. *Requirement for Unique Entity Identifier Numbers*

If you are authorized to make subawards under this award, you:

1. Must notify potential subrecipients that no entity (*see* definition in paragraph C of this award term) may receive a subaward from you unless the entity has provided its unique entity identifier number to you.
2. May not make a subaward to an entity unless the entity has provided its DUNS number to you.

c. *Definitions*

For purposes of this award term:

1. *System of Award Management (SAM)* means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional

information about registration procedures may be found at the SAM Internet site (currently at <http://www.sam.gov>).

2. *Unique entity identifier* means the identifier required for SAM registration to uniquely identify business entities.

3. *Entity*, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:

i. A Governmental organization, which is a State, local government, or Indian Tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization;

iv. A domestic or foreign for-profit organization; and

v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. *Subaward*:

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.330).

iii. A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. *Subrecipient* means an entity that:

i. Receives a subaward from you under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

g) Prohibition on Members of Congress Making Contracts with Federal Government (41 USC Section 6306)

No member of or delegate to the United States Congress or Resident Commissioner shall be admitted to any share or part of this award, or to any benefit that may arise therefrom; this provision shall not be construed to extend to an award made to a corporation for the public's general benefit.

h) Enhancement of Recipient and Subrecipient Employee Whistleblower Protection (41 USC Section 4712)

a. This award, related subawards, and related contracts over the simplified acquisition threshold and all employees working on this award, related subawards, and related contracts over the simplified acquisition threshold are subject to the whistleblower rights and remedies established at 41 USC 4712.

b. Recipients, their subrecipients, and their contractors awarded contracts over the simplified acquisition threshold related to this award, shall inform their employees in writing, in the predominant language of the workforce, of the employee whistleblower

rights and protections under 41 USC 4712.

- c. The recipient shall insert this clause, including this paragraph (c), in all subawards and in contracts over the simplified acquisition threshold related to this award.

- i) Patent Rights (37 CFR § 401.14)

Unless otherwise provided in the Agreement, if this Agreement is for experimental, developmental, or research work, the following clause (implementing the Bayh-Dole Act, [35 U.S.C. § 200 et seq.]) shall apply. The recipient shall include this clause in all subawards for experimental, developmental, or research activities.

- a. *Definitions*

1. INVENTION means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the USC, to any novel variety of plant which is or may be protected under the Plant Variety Protection Act (7 U.S.C. § 2321 et seq.).
2. SUBJECT INVENTION means any invention of the recipient conceived or first actually reduced to practice in the performance of work under this Agreement, provided that in the case of a variety of plant, the date of determination (as defined in section 41(d)) must also occur during the period of performance.
3. PRACTICAL APPLICATION means to manufacture in the case of a composition or product, to practice in the case of a process or method, or to operate in the case of a machine or system; and, in each case, under such conditions as to establish that the invention is being utilized and that its benefits are to the extent permitted by law or Government regulations available to the public on reasonable terms.
4. MADE when used in relation to any invention means the conception or first actual reduction to practice of such invention.
5. SMALL BUSINESS FIRM means a small business concern as defined at section 2 of Pub. L. 85-536 (15 U.S.C. 632) and implementing regulations of the Administrator of the Small Business Administration. For the purpose of this clause, the size standards for small business concerns involved in government procurement and subcontracting at 13 CFR 121.3-8 and 13 CFR 121.3-12, respectively, will be used.
6. NON-PROFIT ORGANIZATION means a domestic university or other institution of higher education or an organization of the type described in Section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. § 501(c)) and exempt from taxation under Section 501(a) of the Internal Revenue Code (26 U.S.C. § 501(a)) or any domestic non-profit scientific or educational organization qualified under a State non-profit organization statute. b. Allocation of Principal Rights The recipient may retain the entire right, title, and interest throughout the world to each subject invention subject to the provisions of this Patent Rights clause and 35 U.S.C. § 203. With respect to any subject invention in which the recipient retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up

license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world. If the Agreement indicates it is subject to an identified international agreement or treaty, the U.S. Geological Survey (USGS) also has the right to direct the recipient to convey to any foreign participant such patent rights to subject inventions as are required to comply with that agreement or treaty.

b. *Allocation of Principal Rights*

1. The recipient may retain the entire right, title, and interest throughout the world to each subject invention solely made by recipient subject to the provisions of this Patent Rights clause, including (2) below, 35 U.S.C. §§ 202, 203 and 37 CFR § 401.14. Inventions made under this Agreement jointly by USGS and recipient will be jointly owned by both parties. However, where a USGS employee is a coinventor, the USGS may, for the purpose of consolidating rights in the invention and if it finds that it would expedite the development of the invention:
  - (a) license or assign whatever rights it may acquire in the subject invention to the nonprofit organization, small business firm, or non-Federal inventor in accordance with the provisions of this chapter; or
  - (b) acquire any rights in the subject invention from the nonprofit organization, small business firm, or non-Federal inventor, but only to the extent the party from whom the rights are acquired voluntarily enters into the transaction and no other transaction under this chapter is conditioned on such acquisition.

With respect to any subject invention in which the recipient retains title, the Federal Government shall have a non-exclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the U.S. the subject invention throughout the world. If the Agreement indicates it is subject to an identified international agreement or treaty, the U.S. Geological Survey (USGS) also has the right to direct the recipient to convey to any foreign participant such patent rights to subject inventions as are required to comply with that agreement or treaty.

2. If the recipient performs services at a Government owned and operated laboratory or at a Government owned and recipient operated laboratory directed by the Government to fulfill the Government's obligations under a Cooperative Research and Development Agreement (CRADA) authorized by 15 U.S.C. 3710a, the Government may require the recipient to negotiate an agreement with the CRADA collaborating party or parties regarding the allocation of rights to any subject invention the recipient makes, solely or jointly, under the CRADA. The agreement shall be negotiated prior to the recipient undertaking the CRADA work or, with the permission of the Government, upon the identification of a subject invention. In the absence of such an agreement, the recipient agrees to grant the collaborating party or parties an option for a license in its inventions of the same scope and terms set forth in the CRADA for inventions made by the Government.

j) Prohibition on Issuing Financial Assistance Awards to Entities that Require Certain Internal

Confidentiality Agreements (P.L. 113-235)

Section 743 of Division E, Title VII of the Consolidated and Further Continuing Resolution Appropriations Act of 2015 (Pub. L. 113-235) prohibits the use of funds appropriated or otherwise made available under that or any other Act for grants or cooperative agreements to an entity that requires employees or contractors of such entity seeking to report fraud, waste, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.

Recipients must not require their employees or contractors seeking to report fraud, waste, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.

Recipients must notify their employees or contractors that existing internal confidentiality agreements covered by this condition are no longer in effect.

**B.4 Additional General Terms and Conditions**

a) Research Integrity

- 1) USGS requires that all grant or cooperative agreement Recipient organizations adhere to the Federal Policy on Research Misconduct, Office of Science and Technology Policy, December 6, 2001, 65 Federal Register (FR) 76260. The Federal Policy on Research Misconduct outlines requirements for addressing allegations of research misconduct, including the investigation, adjudication, and appeal of allegations of research misconduct and the implementation of appropriate administrative actions.
- 2) The Recipient must promptly notify the USGS Project Office when research misconduct that warrants an investigation pursuant to the Federal Policy on Research Misconduct is alleged.

b) Data Availability

- 1) Applicability. The Department of the Interior is committed to basing its decisions on the best available science and providing the American people with enough information to thoughtfully and substantively evaluate the data, methodology, and analysis used by the Department to inform its decisions.
- 2) Use of Data. The regulations at 2 CFR 200.315 apply to data produced under a Federal award, including the provision that the Federal Government has the right to

obtain, reproduce, publish, or otherwise use the data produced under a Federal award as well as authorize others to receive, reproduce, publish, or otherwise use such data for Federal purposes.

- 3) Availability of Data. The recipient shall make the data produced under this award and any subaward(s) available to the Government for public release, consistent with applicable law, to allow meaningful third party evaluation and reproduction of the following:
  - a. The scientific data relied upon;
  - b. The analysis relied upon; and
  - c. The methodology, including models, use to gather and analyze the data.

c) Conflict of Interest

1) Applicability.

- a. This section intends to ensure that non-Federal entities and their employees take appropriate steps to avoid conflicts of interest in their responsibilities under or with respect to Federal financial assistance agreements.
- b. In the procurement of supplies, equipment, construction, and services by recipients and by subrecipients, the conflict of interest provisions in 2 CFR 200.318 apply.

2) Requirements.

- a. Non-Federal entities must avoid prohibited conflicts of interest, including any significant financial interests that could cause a reasonable person to question the recipient's ability to provide impartial, technically sound, and objective performance under or with respect to a Federal financial assistance agreement.
- b. In addition to any other probations that may apply with respect to conflicts of interest, no key official of an actual or proposed recipient or subrecipient, who is substantially involved in the proposal or project, may have been a former Federal employee who, within the last one (1) year, participated personally and substantially in the evaluation, award, or administration of an award with respect to that recipient or subrecipient or in development of the requirement leading to the funding announcement.
- c. No actual or prospective recipient or subrecipient may solicit, obtain, or use non-public information regarding the evaluation, award, or administration of an award to that recipient or subrecipient or the development of a Federal financial assistance opportunity that may be of competitive interest to that recipient or subrecipient.

3) Notification.

- a. Non-Federal entities, including applicants for financial assistance awards, must disclose in writing any conflict of interest to the DOI awarding agency or pass-through entity in accordance with 2 CFR 200.112, Conflicts of Interest.
- b. Recipients must establish internal controls that include, at a minimum, procedures to identify, disclose, and mitigate or eliminate identified conflicts of interest. The recipient is responsible for notifying the USGS Contracting Officer in writing of any conflicts of interest that may arise during the life of the award, including those that have been reported by subrecipients.

4) Restrictions on Lobbying. Non-Federal entities are strictly prohibited from using funds under this grant or cooperative agreement for lobbying activities and must provide the required certifications and disclosures pursuant to 43 CFR Part 18 and 31 USC 1352.

5) Review Procedures. The USGS Contracting Officer will examine each conflict of interest disclosure on the basis of its particular facts and the nature of the proposed grant or cooperative agreement, and will determine whether a significant potential conflict exists and, if it does, develop and appropriate means for resolving it.

6) Enforcement. Failure to resolve conflicts of interest in a matter that satisfies the Government may be cause for termination of the award. Failure to make required disclosures may result in any of remedies described in 2 CFR 200.338, Remedies for Noncompliance, including suspension or debarment (see also 2 CFR Part 180).

d) Program Income

- 1) If the Recipient is an educational institution or nonprofit research organization, any other program income will be added to funds committed to the project by the Federal awarding agency and Recipient and be used to further eligible project or program objectives, as described in 2 CFR 200.307(e)(2).
- 2) For all other types of Recipients, any other program income will be deducted from total allowable costs to determine the net allowable costs before calculating the Government's share of reimbursable costs, as provided in 2 CFR 200.307(e)(1).

e) Government Furnished Property Or Property Authorized For Purchase

Title to nonexpendable personal property acquired wholly or in part with Federal funds shall be vested in the Recipient unless otherwise specified in the award document. The Recipient shall retain control and maintain a property inventory of such property as long as there is a need for such property to accomplish the purpose of the project, whether or not the

project continues to be supported by Federal funds. When there is no longer a need for such property to accomplish the purpose of the project, the Recipient shall use the property in connection with other Federal awards the Recipient has received. Under no circumstances shall title to such property be vested in a sub-tier Recipient. Disposal of nonexpendable personal property shall be in accordance with 2 CFR 200.311.

There is no non-expendable personal property authorized on this grant/cooperative agreement.

---End of Special Terms and Conditions---