

United States Geological Survey

Water Availability and Use Science Program Water Use Data and Research



Proposals for Cooperative Agreements – Fiscal Year 2022 Program Announcement/Funding Opportunity G22AS00089

Closing Date: March 31, 2022
4 pm, Eastern Time

PAPERWORK REDUCTION ACT STATEMENT: The Paperwork Reduction Act says that the agency must tell you why we are collecting this information, how we will use it, and whether you have to give it to us. This information is being collected to determine the eligibility of the applicant and as a basis for approval or disapproval of the proposed project. The USGS is authorized under SECURE Water Act Section 9508 to assist state water resource agencies with improving their water use data collection activities. USGS has implemented the Water Use Data and Research program (WUDR), to work with state water agencies in gathering and analyzing their data, and assists this effort via cooperative agreements. WUDR supports State water resource agencies in developing water use and availability datasets and improving the collection and reporting frequency of water use categories, including the inclusion of categories that have been discontinued in the past due to limited resources. Response to this request is required to obtain and retain a cooperative agreement under the Water Use Data and Research program. Public report burden for this collection is estimated to average 40 hours per agreement and 28 hours to prepare both interim progress reports and final technical report. The OMB Control Number is 1028-0118 for this information collection; the expiration date is Dec. 31, 2023. Direct comments regarding this collection of information may be sent to the Bureau Clearance Officer, gs-info_collections@usgs.gov.

PRIVACY ACT STATEMENT: Authority: This information is solicited under the authority of 42 U.S.C. 10361-10368. Purpose: The primary purpose for collecting this information is to facilitate communication with primary investigators that submit and/or receive cooperative agreements through the U.S. Geological Survey (USGS) Water Use Data and Research Program. Routine Uses: Contact information will be used to communicate with primary investigators and other project or agency staff regarding notification of awards, progress reports, final technical reports and (or) other ad-hoc communication regarding the USGS Water Use Data and Research Program. USGS Water Use Data and Research Program administrators will have access to the information. Technical review panel members will also have access to contact information during the evaluation of project applications.

APPLICATIONS MUST BE SUBMITTED ELECTRONICALLY VIA

<http://www.grants.gov>

SEE INSTRUCTIONS

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PROGRAM ANNOUNCEMENT CHANGES

- The Water-Use Data and Research Coordinator has changed from Kim Shaffer to Erik Smith.
- Priorities in the Topic Eligibility Section have been updated to include:
 - Irrigation: adding efficiencies of irrigation systems and connecting source to place of use.
 - Industrial: improving knowledge on the industry class such as assigning NAICS codes.
 - Public supply: **IMPROVE SITE-SPECIFIC WATER-USE DATA FOR PUBLIC SUPPLY** such as reporting public-supply deliveries to customer groups (such as domestic, commercial, industrial) and estimating non-revenue public supply use, determining sale and purchases to other systems, estimating consumptive use, improving methods for computing domestic per capita use, or developing or acquiring ancillary data such as service area boundaries and population served. This should be accomplished **by increasing the “TIER LEVEL” for a category of use** (see Attachment A, Data Goals for Major Water-Use Categories).
 - Studies: For studies that **DEVELOP METHODS AND/OR COEFFICIENTS**, text has been added **“particularly on topics where the USGS is not currently conducting research”** to improve water-use estimates for categories of use where measured or reported data are not available.
- Information sessions will be held through Microsoft Teams. For any difficulties with the links, please contact wudr-coordinator@usgs.gov.

POINTS TO REMEMBER

DESCRIBE the project and the process you expect to follow to complete the project including scope and methods. If you are proposing multiple activities to complete the project, clearly state the work you will be doing for each activity.

CHECK the math on all budget components of the application package. Inconsistencies in budget details cause award delays and can result in reduced funding. Entries must be consistent in Box 18 of SF-424, Section B of SF-424A, Budget Summary in Attachment D, Item 6 of Attachment B, and workplan budget tables.

PROVIDE specifics for any travel costs including number of days, per diem, conference name, etc. Provide all details for contract work in budget tables and text.

ALWAYS contact us if you have questions, we are here to help. Questions specific to your proposal as to what will or will not be funded cannot be addressed.

START submitting your proposal to Grants.gov well in advance of the due date. **Do not wait until the due date to begin the submission process.**

INCLUDE all required sections of the application and use current templates in this program announcement. Templates might have changed from previous years.

COMMUNICATE with USGS Water-Science Center personnel where appropriate but federal employees may not assist in the development of proposals or review the proposals.

Cooperative Funding Agreements for the USGS Water Use Data and Research Program Announcement for Fiscal Year 2022

CFDA 15.981

The Water Availability and Use Science Program (WAUSP) of the U.S. Geological Survey (USGS) is offering a two-year cooperative agreement opportunity to State water resource agencies that collect water-use data to participate in the Water Use Data and Research (WUDR) program. This funding opportunity is to support State Water Resource agencies in the collection and reporting of water-use data for the WUDR program, and to address the Department of Interior's Secretarial Priorities.

Legal authority for this opportunity is provided under Public Law 111-11, Subtitle F—SECURE Water: Section 9508 “National Water Availability and Use Assessment Program.” The USGS WUDR program will provide financial assistance, through cooperative agreements with State Water Resource agencies, to improve the availability, quality, compatibility, and delivery of water-use data that is collected and/or estimated by States. The Act requires that these State Water Resource agencies make water-use or availability datasets resulting from this funding opportunity available in a machine-readable open format that the USGS can integrate with appropriate datasets maintained by the USGS.

The USGS National Water Use Science Project uses various scientific approaches to understand the Nation's water use. USGS has produced national estimates of the use of water since 1950, in five-year reports. These water-use estimates provide a historical and current account of how water is used for various water-use categories by applying statistical and scientific methods. This work is critical for a full understanding of the availability, quality, timing, and use of the water resources that are needed to meet the water demands of the Nation. The WUDR cooperative agreements provide financial assistance to State Agencies to assemble various water-use information. The water-use information is needed by all water managers and the general public to develop a complete understanding of how water is used for different categories of use (such as irrigation, or public supply). The WUDR program also supports the Department of the Interior's Secretarial priorities by enabling water managers, primarily State Water Resource Agencies, to monitor current conditions, and be able to plan and avoid future water conflicts that may result from changes in the environment.

The USGS National Water Use Science Project is operated in Water Science Centers located in all 50 States, Territories and District of Columbia. Water-use data are collected in each of these areas via collaboration with State and other Federal Agencies, Tribes, water authorities, county and local communities, corporations, academic and the private sector. The USGS builds relationships through data collection, collaborations on scientific studies, and interpretive reports via collaboration and communication between water-use scientists in USGS offices throughout the U.S. WUDR cooperative agreements address the Department of the Interior's Secretarial Priorities to enhance the collection, availability, quality and distribution of important water-use data, as well as improve communication between the U.S. Department of the Interior and State natural resource offices and water authorities.

1. Application Submission Closing Date: March 31, 2022, at 4 pm, Eastern Time

2. Electronic Application Requirement

For the FY 2022 funding cycle, all proposals shall be submitted electronically via Grants.gov (<https://www.grants.gov>). Hard/paper submissions will NOT be accepted. Electronic copies submitted via e-mail will NOT be accepted under any circumstances. All proposals shall be submitted electronically through Grants.gov on or before:

March 31, 2022 at 4 pm, Eastern Time

Please be aware that the electronic submission process requires first-time users to register using an e-Authentication process. This registration process can be somewhat complex and can take up to 3 weeks to complete. Be advised that it is virtually impossible to begin the process of electronic submission for the first time if you start just a few days before the due date.

If you have any questions or problems with the registration process, or the completion of the application package, please contact the Grants.gov Help Desk at 1-800-518-4726 or support@grants.gov.

Briefly, when you submit a grant application package to Grants.gov, you will receive a confirmation screen, as well as three additional emails over two business days from Grants.gov informing you of your application processing status:

1. Confirmation Screen
2. Submission Receipt (with a “Track My Application” link)
3. Submission Validation (or Rejection with Errors)
4. Agency Retrieval

CONFIRMATION: Submission Confirmation Screen.

After you submit your grant application package, a confirmation screen will appear on your computer screen. This screen confirms that you have submitted an application to Grants.gov.

NOTIFICATION 1: Submission Receipt Email

Within two business days after your application package has been received by the Grants.gov system, you will receive a submission receipt email which indicates that your submission has entered the Grants.gov system and is ready for validation. This email also contains a tracking number for use while tracking the status of the submission as well as a “Track My Application” link, to use to see the progress of your submission.

NOTIFICATION 2: Submission Validation Receipt Email – This is the important one!

After you receive the submission receipt email, the next email you will receive will be a message validating or rejecting your submitted application package with errors. The Grants.gov system is designed to check for technical errors within the submitted application package, but does not review application content for award determination. Grants.gov will not post the application if there are

errors. Failure to correct errors and re-submit by the posted Application Submission Deadline will result in the application being rejected for incomplete and late submission.

NOTIFICATION 3: Grantor Agency Retrieval Email

Once your application package has passed validation it is delivered to the grantor for award determination and further approval. After the grantor has confirmed receipt of your application, you will be sent a **third and final email** from Grants.gov. The grantor may also assign your application package an agency specific tracking number for use within their internal system. **IF YOU HAVE NOT RECEIVED THIS E-MAIL WITHIN FOUR DAYS OF THE CLOSING DATE, PLEASE CONTACT** Sara Roser, at (703) 648-7357, sroser@usgs.gov.

If you need help entering your proposal, you can reach the **Grants.gov Help Desk** at 1-800-518-4726 or email support@grants.gov. Their hours of operation are Monday-Friday, 7:00 a.m. to 9:00 p.m., Eastern Time, and they are closed on Federal Holidays.

During the application period, an applicant may submit a revised or corrected proposal through Grants.gov. Include a cover letter as the first page of the proposal stating that the proposal is revised and indicating that the previous submittal is to be withdrawn from consideration. **Such submissions must be completed by March 31, 2022 at 4:00 pm Eastern Time.**

For more information, see Section 7 of this document, Application Preparation Instructions, which describes requirements for the proposal and other application components.

Please allow sufficient time for the proposal to be submitted electronically through Grants.gov and allow time for possible computer delays. Applicants are strongly advised not to wait until the last minute for submission. A proposal received after the closing date and time will not be considered for award. If the USGS determines that a proposal will not be considered for award due to lateness, the applicant will be notified immediately.

A question at the top of the grant opportunity in Grants.gov will ask if you would like to receive email notifications of changes to this opportunity. Providing your email address at the prompt ensures you will be notified if changes are made to this program announcement after the original posting.

Questions?

For Grants.gov issues, see

<https://www.grants.gov/web/grants/support.html>

For grant issues, contact:

Sara Roser
(703) 648-7357
sroser@usgs.gov

For Water Use Data and Research program issues, contact:

Erik Smith, Coordinator, USGS WUDR Program
(512) 927-3584
wudr-coordinator@usgs.gov

Information Sessions

To facilitate the financial assistance application process, two conference calls will be conducted to accommodate inquiries from Applicants about the WUDR program and the proposal review, evaluation, and selection process. These calls will be held at the following dates and times (click the link for the Microsoft Teams meeting):

[Tuesday, Dec. 14, 2021 from 2:00-3:00 pm ET](#)

[Wednesday, Jan. 19, 2022 from 2:00-3:00 pm ET](#)

[Wednesday, Feb. 2, 2022 from 2:00-3:00 pm ET](#)

There will also be a reminders and budgets conference call on [March 2, 2022 from 2:00-3:00 pm ET](#).

3. Award Description

The total amount of funding available for this Program Announcement is expected to be up to a total of \$1,500,000 for Federal FY2022. Applications are restricted to a minimum federal funding level of \$24,000 and a maximum federal funding level of \$125,000 for work to improve the availability, quality, compatibility, and transfer of water use data that is collected and/or estimated by States. Additionally, federal funding per State is also restricted by the SECURE Water Act: total cumulative funds from the WUDR program to each State cannot exceed \$250,000. Please email wudr-coordinator@usgs.gov for your respective State's balance. These estimates do not bind the USGS to a specific number of awards or to the amount of any award. Work performance under these awards must be completed within the two-year cycle from the start date. The start date will be determined by the timing of funds availability and the issuance of the award. Substantial involvement of the USGS (local USGS Water Science Centers and/or the USGS National Water Use Team) is expected to aid state collaborators with refining existing water use databases, development of new techniques for estimating water use, and establishing data management policies for sharing of water use data that adhere to data goals for major water-use categories (Attachment A) previously developed by the USGS for all water use categories nationally; therefore, these awards will be in the form of cooperative agreements.

All projects must propose **start dates between September 1, 2022 and September 30, 2022.**

4. Eligibility Information

A. Applicant Eligibility

Applicants must be State Water Resource Agencies which collect or manage water-use data. Collaboration with existing projects conducted by USGS Water Science Centers is encouraged;

however, USGS personnel are prohibited from helping prepare any application materials for competitive funding and are ineligible to receive WUDR funds.

Applicants can include a cost-share contribution in the form of in-kind services.

A set cost-sharing percentage for the recipient is not mandated, but a match of in-kind services is encouraged and should be denoted within the budget as cost sharing.

In order to receive an award under this FY2022 Program Announcement, applicants must have submitted a FINAL (WUDR reviewed and approved) Workplan to the USGS WUDR Program Management (Erik Smith, wudr-coordinator@usgs.gov). If an applicant's proposal is recommended for funding but the WUDR Program Management has not approved the FINAL Workplan, the project will not be awarded funding.

(Instructions on what is required in the Workplan can be found at <http://water.usgs.gov/wausp/wudr/grant-application.html>.)

Application announcement date: December 8, 2021

Applications must be submitted by the closing date of March 31, 2022 at 4:00 pm Eastern Time.

B. Topic Eligibility

Water managers across the United States require more complete, timely, and accurate water-availability information to support policy and decision-making, specifically data associated with water withdrawals and consumptive use that are used to establish local and regional water budgets. State Water Resource Agencies are the primary authorities responsible for regulating and collecting data on water supplies, allocations, uses, and/or rights. The U.S. Geological Survey (USGS), through its Water Availability and Use Science Program (WAUSP), is the only Federal agency that explicitly collects water-use data as a part of its mission. The WAUSP works with State, local, and Federal partners to consolidate dozens of disparate datasets to create comprehensive reports of water use in the United States every five years. Because of differences in methodology and data quality, USGS water-use compilations require significant effort to standardize (to the extent possible) such data between States. The WAUSP products form the basis of the water-use component of the National Water Census as called for by the SECURE Water Act (Section 9508, Public Law 111–11).

In addition to the national compilation of water-use data, WAUSP is seeking to estimate daily water use nationally for HUC12 watersheds. Water-use measurements at a daily time-step at specific sites would enhance the WAUSP efforts.

Recognizing the limitations of current water-use data, the USGS Water Use Data and Research program will provide financial assistance, through cooperative agreements with State Water Resource Agencies, to improve the availability, quality, compatibility, and transfer of water-use data that are collected and/or estimated by States. The Act requires that these State Water Resource Agencies make water-use or availability datasets resulting from this funding opportunity available in a machine-readable open format that the USGS can integrate with appropriate datasets maintained by the USGS.

The USGS has identified priority topics for the FY2022 WUDR Program Announcement. Proposals that address one or more of these priority topics will be given funding preference.

The priority topics for the FY2022 WUDR Program Announcement are:

- **IMPROVE THE COLLECTION PROCESS OR QUALITY ASSURANCE OF WATER-USE DATA, OR IMPROVE THE TRANSFER OF WATER-USE DATA TO THE USGS and other data users.** Improving the collection process or quality assurance includes more frequent time steps (for example, daily or monthly), improving the spatial unit (site specific), producing machine readable digital data, and improving any data and metadata review methods that evaluate and ensure the quality of the information including statistical analyses, interpretative material for anomalous values, and explanations for trends. Improving the transfer of water-use data to the USGS and other data users including the development of data services, having data fully compatible to the USGS National Water Information System, or providing data (and metadata) in a machine-readable open format.
- **IMPROVE SITE-SPECIFIC WATER-USE DATA FOR IRRIGATION, OR INDUSTRIAL use categories.** This should be accomplished by **increasing the “TIER LEVEL” for a category of use** (see Attachment A, Data Goals for Major Water-Use Categories). This includes improvements to either estimated or reported data. Some examples include the collection of daily or monthly rather than annual withdrawals, acquiring source of water (groundwater with aquifer designation, surface water with water body or stream name). Additionally, digital boundary maps of irrigated lands with information about the sources of water and irrigation system types are desirable, efficiencies of irrigation systems and connecting source to place of use. For industrial, improving the knowledge on the industry class such as by assigning NAICS codes.
- **IMPROVE SITE-SPECIFIC WATER-USE DATA FOR PUBLIC SUPPLY** such as reporting public-supply deliveries to customer groups (such as domestic, commercial, industrial) and estimating non-revenue public supply use, determining sale and purchases to other systems, estimating consumptive use, improving methods for computing domestic per capita use, or developing or acquiring ancillary data such as service area boundaries and population served. This should be accomplished by **increasing the “TIER LEVEL” for a category of use** (see Attachment A, Data Goals for Major Water-Use Categories).
- Conduct studies that **DEVELOP METHODS AND/OR COEFFICIENTS** particularly on topics where the USGS is not currently conducting research to improve water-use estimates for categories of use where measured or reported data are not available. These methods should include model descriptions and plans for an uncertainty analysis. For example, socioeconomic data, regional planning data, satellite-based evapotranspiration data could be used to develop water-use estimates.

Proposals that address additional topics will be considered but may be given a lower funding preference than proposals that address the priority topics listed above.

5. USGS Data Goals for Major Water-Use Categories

More information on the USGS Water Use Data and Research (WUDR) Program can be found at: <http://water.usgs.gov/wausp/wudr/index.html>. Attachment A provides a table outlining three tiers for major categories of water use. Within the table, the USGS has identified baseline goals (Tier 1),

and additional levels (Tiers 2 and 3) of data, for all major categories of water use, most of which have been estimated by the USGS and published every 5 years since 1985 (<https://www.usgs.gov/mission-areas/water-resources/science/changes-water-use-categories>). These standards are provided to assist State water-resource agencies in determining areas in which to focus proposed work.

6. Unsuitable Proposals

The following proposals are ineligible for consideration under this Announcement at this time:

- Proposals from U.S. Government Agencies or U.S. Government employees.
- Proposals from Federally Funded Research and Development Centers (FFRDC).
- Work that was previously funded through the WUDR program, or other federal grant programs.

7. Application Preparation Instructions

Your electronic submission shall consist of forms SF-424, SF-424a, and SF-424b, plus the items described below. No additional documents or materials may be submitted. **Failure to comply with the required application components listed below may result in the proposal being rejected.**

Items A through F, as described below, shall be **combined in one document, in the order noted below**, and submitted through Grants.gov in either MS Word or Adobe PDF format. Items A-D shall not exceed a total of 15 single-spaced pages (including figures, tables, references, appendices, etc.), and the type size shall not be smaller than 12 point. All pages of the application shall be numbered. All text, figures, and tables shall be sized to fit on 8½” by 11” paper with 1-inch margins. The resume (Item E), Data Management Plan (Item F), SF forms, and negotiated rate agreement required tables do **not** count toward the 15-page limit.

In the Grants.gov forms, floating your mouse over a field will provide instructions for completing that field. You can also click on the ‘Check Package for Errors’ button to check the entire application for validation errors (incomplete fields, etc.).

The application submitted through Grants.gov as the ‘Project Narrative Attachment Form’ (in MS Word or Adobe PDF format) shall be assembled in the following order:

- A. Proposal Information Summary
- B. Proposal
- C. Budget Summary
- D. Detailed Budget
- E. Principal Investigator Resume
- F. Data Management Plan

A. Proposal Information Summary.

Provide a summary for the proposal using the format shown in Attachment B.

B. Proposal

Please include the following sections:

- 1) Project Summary. Provide an overall summary of the project including a brief description of work to be accomplished, USGS category(ies) of water use data collection or methodology development, how the proposed work increases the “TIER LEVEL” for a category of use (see Attachment A, Data Goals for Major Water-Use Categories), and geographic and temporal scale of data activity.
- 2) Project Description.
 - a) Problem Statement. Describe the problem and the state agency’s role relevant to the problem.
 - b) Project Objectives. Describe the objectives of the proposed work.
 - c) Approach. Proposals should thoroughly address how the proposed work will accomplish project objectives.
 - Describe specific methods that will be used to complete the project tasks.
 - Describe the significance of each task relative to the project objectives. If work is not being performed by the applicant agency, explain the role relative to water use of the party conducting the work.
 - Describe work being done by contractors.
 - Describe how science will be used to identify best practices to manage land and water resources and adapt to changes in the environment (U.S. Department of Interior Secretarial Priority 1a, see Attachment F).
 - d) Project Timeline and Milestones. Include a detailed timeline for the proposed work, relating tasks and subtasks described in the Approach section to completion dates. An example table is provided below. Please list **project objectives and describe specific, quantifiable and/or qualitative milestones and deliverables over the duration of the project to show how the project is successful, and what benefits/products (i.e. data) will be accrued if the project is successful**. Products or deliverables may include reports, datasets, maps, electronic data services, data portals, etc., that will be produced as part of the project. Please indicate if objectives or milestones relate to improving a tier level for a category of water use.

Objectives	Milestone/Output/Deliverable	Target Date
1.	1.	
	2.	
	3.	
2.	1.	
	2.	
	3.	
3.	1.	
	2.	
	3.	

- e) Previous WUDR competitive awards. Briefly describe how this proposed work is different from any previously funded WUDR projects from FY16 through FY21 Competitive Awards.
- f) Transfer of data to the USGS or other entities. Specifically describe how data will be transferred to the USGS. Data transfer guidance is available on the USGS WUDR website: <https://www.usgs.gov/media/files/water-use-data-and-research-program-data-transfer-guidance>. Describe how data will be made available to the USGS in a machine-readable open format, such that the data can be easily integrated (by the USGS) into USGS databases in compliance with the SECURE Water Act. If data will be made available to other entities, describe how the data will be made available.
- g) Relevance to State Priorities. Describe how the proposed tasks meet the priorities of the State water use program as described in the “Workplan”.
- h) Science and Technology Transferability. Describe how the methods, or technical components developed under the proposed project will be applicable to other states, agencies, and/or the USGS.
- i) Collaboration. Describe meetings, communication, and collaboration with other state and/or local agencies that collect water-use data that occurred in the development of this proposal. Describe collaboration with the USGS, including Water Science Center contacts. Describe collaboration that will be ongoing through the proposed project period with local, state, federal agencies (including USGS), or educational institutions.
- j) Team Experience. Succinctly describe the relevant experience of the project team members.
- k) IT Infrastructure
 - i) Describe databases that are used to store data.
 - ii) Briefly describe any current data sharing applications or web sites.
 - iii) Describe IT staff experience and availability.
 - iv) Discuss any security requirements or limitations.

C. Budget Summary

Provide a budget summary using the format shown in Attachment C. The budget items should correlate with the detailed budget below.

D. Detailed Budget

A budget sheet for each year is required that provides more detail than what is entered under the SF-424A form. In this budget breakdown sheet please separate federal funds from cost-sharing funds (see ‘In-kind Resource Match’ section below). A set cost-sharing percentage for the recipient is not mandated, but a match of in-kind services is encouraged and should be denoted within the budget as cost sharing. The cost for the project should include both the agency in-kind services and the work to be funded by the WUDR funding opportunity. **Please provide the following information for each objective or major task.** Applicants should include the following categories for both federal and in-kind services:

a. Salaries

- Please provide a list of staff that will work on each objective listed in the proposal. If staff will work on more than one objective, include an entry with the hours for that employee on each objective.
- Objective Name: For each objective provide a table with the following items for each staff member that will work on the objective:
 1. employee name,
 2. title,
 3. hourly rate of compensation,
 4. fringe benefit rate **and** hourly rate of fringe benefit,
 5. the total hourly rate (item 3 + item 4),
 6. the number of hours planned,
 7. the cost (item 5 times item 6),
 8. the percent of the cost that is Federally funded, and
 9. the percent of cost that is agency in-kind services. (item 8 and item 9 should add to 100%).

b. Supplies: For each major type of supply, enter a description and the cost for supplies needed for the project (include percent of cost that is Federally funded and/or provided as in-kind);

c. Equipment: Enter a description and the cost for each piece of equipment needed for the project. Please list any computer purchases separately. If possible, computer purchases should be as in-kind services to avoid property ownership issues;

d. Contractors: Provide the following detailed breakdown for each contractor needed for the project:

1. hourly rate of compensation,
2. fringe benefit rate and hourly rate of fringe benefit,
3. the total hourly rate (item 1 + item 2),
4. the number of hours planned,
5. the cost (item 3 times item 4),
6. the percent of the cost that is Federally funded, and
7. the percent of cost that is Agency in-kind services. (items 6 and 7 should add to 100%).

e. Travel: Provide detailed information on proposed travel, i.e. where to, why, how many, how long, per diem, mileage, anticipated conference name, if applicable, and lodging rates, etc. (include percent of cost that is Federally funded and/or provided as in-kind); and

f. Indirect Cost/General and Administrative (G&A) Cost: Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the cost principles applicable to the Applicant's organization. If the Applicant has separate rates for recovery of labor overhead and G&A costs, each charge should be shown. Explain the distinction between items included in the two cost pools. The Applicant should propose rates for evaluation purposes, which they are also willing to establish as fixed or ceiling rates in any resulting award. NOTE: A copy of the indirect negotiated cost agreement with the Federal Government must be provided with the application package. Pursuant to the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal

Awards, Section 200.414, in the absence of a negotiated rate agreement, non-Federal entities may use a de minimis rate of 10% of modified total direct costs (MTDC).

In-Kind Resource Match

Examples of in-kind resource match are: salaries, contract support, student assistance fees, travel expenses, software purchase, equipment dedicated to the project, production of outreach materials, and indirect costs or overhead charges. All contributions, including cash and third party in-kind, will be accepted as part of the recipient's in-kind match when such contributions meet all of the following criteria:

- verifiable from the recipients' records,
- not included as contributions for any other federally-assisted project or program,
- necessary and reasonable for proper and efficient accomplishment of project or program objectives,
- allowable under the applicable cost principles,
- not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost matching,
- provided for in the approved budget when required by the Federal awarding agency, and
- conform to the provision of the appropriate OMB Circular, as applicable.

Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as in-kind match if the service is an integral and necessary part of the project. Rates for volunteer services shall be consistent with those paid for similar work in the recipient's organization. In those instances in which the required skills are not found in the recipient organization, rates shall be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.

Match calculation: For example, with a request for an award of \$5,000 of Federal assistance, a 50-50 cost share contribution by the applicant would be \$5,000 in value for a total of \$10,000 value committed to the project (\$5,000 and \$5,000 Federal and applicant, respectively).

Applicant must document the amount and type of in-kind resource that will be contributed to the fulfillment of the project and include this information in the detail budget breakdown.

E. Principal Investigator Resume

Please include a resume for the technical lead for the proposed project. The resume should only include relevant professional experience. Do not include personal address, phone number, or e-mail.

F. Data Management Plan

Proposals submitted to USGS must include a supplementary document of no more than four 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. Please see **section 9 (b)(2) Data Availability, found on page 36** in the program announcement that states that data collected under a federal grant must be made available to the USGS. In rare cases, a DMP may include only the statement that no detailed plan is needed (e.g. "No data are expected to be produced from this project"), if the statement is accompanied by a clear justification.

DMPs should include the following. Two examples of data management plans are included in Attachment D, and the use of one of these formats is strongly encouraged. Additional examples are available at <https://www.usgs.gov/products/data-and-tools/data-management/data-management-plans>.

- 1) The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced during the project;
- 2) 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);
- 3) Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
- 4) Provisions for re-use, re-distribution, and the production of derivatives; and
- 5) 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 (<https://www2.usgs.gov/datamanagement/plan/dmplans.php>).

Note: The DMP does not count toward the 15-page limit.

8. Rejection of Applications after Initial Review

If an application does not meet all requirements specified in the Announcement, as determined by the Contracting Officer in consultation with the USGS WUDR Program Coordinator, the institution and principal investigator will be promptly notified that the proposal will not be reviewed, indicating the reason for its rejection. States may make revisions and apply for funding again during later years, if funding for the WUDR program continues.

9. Application Evaluation Procedure and Criteria

Applications will be reviewed by the USGS WUDR Technical Committee and will be considered in accordance with the criteria written below: The weighting factor that will be applied to each criterion is shown as a percentage.

1. Technical quality of the proposal. This criterion considers the scientific merit of the proposed approach, whether the approach is innovative or employs a proven, reliable technique that is

appropriate to the problem, and the probability of achieving positive results within the designated period. The proposal includes all required information listed in Section 7 (Application Preparation Instructions). The title of the proposal includes the agency name, the geographic area, and a brief statement of the work to be accomplished. The proposal should include a clear presentation of the project phases, milestones/deliverables, and estimated timeline for the milestones/deliverables for the proposed project duration. This criterion also considers whether the proposed budget is commensurate with the level of effort needed to accomplish the project objectives and whether the cost of the project is reasonable relative to the value of the anticipated results. (40%) Evaluation is based on the following:

- a. The proposal is clearly written and has all required sections.
- b. The proposal addresses Secretarial Priorities for Financial Assistance (Attachment F, no. 1a).
- c. Sufficient detail on the approach is included in the proposal.
- d. The proposed approach is technically appropriate.
- e. The timeline is included and appropriate.
- f. Milestones are described, relevant to the approach, and included on the timeline.
- g. The budget is appropriate for the scope of work and detailed by major objectives or tasks.

2. Providing water use data to the USGS. The SECURE Water Act (Section 9508, “National Water Availability and Use Assessment Program”, Public Law 111–11) authorizes the USGS to provide financial assistance to State water resource agencies to improve the availability, quality, compatibility and transfer of water-use data that is collected and/or estimated by States. The Act requires that these State water-use and availability datasets be integrated with appropriate datasets that are developed and/or maintained by the USGS. This criterion evaluates whether the State water resource agency proposed study fulfills this requirement of the SECURE Water Act (listed above). (20%) Evaluation is based on both of the following:

- a. The proposed work will improve the accessibility, quality, compatibility and transfer of water-use data that is collected and/or estimated by States.
- b. The proposed work will provide water-use data that complements the missions of the USGS Water Use Program, and state, local, and other federal agencies to estimate water use in the United States.
- c. The results of the proposed study will be provided to the USGS. Where applicable, data will be provided to the USGS in a machine-readable open format, and easily integrated by the USGS into appropriate water use and availability datasets that are developed and/or maintained by the USGS. Additional data transfer guidance is available on the USGS WUDR website: <https://water.usgs.gov/wausp/wudr/documents.html>.
- d. Data are made available within 120 days of the project end date.

3. Relevance to State priorities. This criterion evaluates whether the State water resource agency proposal helps to achieve the State’s identified priorities. The proposal should demonstrate the need for the effort/activity, and how it relates to the State’s identified priorities. (10%) Evaluation is based on both of the following:

- a. The proposal identifies the relevant State priority(ies).
 - b. The proposal identifies how the study will address the State priority(ies)..
4. Science and Technology - Relevance to Others. This criterion evaluates the potential for the results (tools developed, methods, approaches) of the proposed study to be applied to or used by other State water resource agencies. This criterion also evaluates the transferability, and/or usefulness of the results of the proposed study to USGS programs, databases, and/or studies. The proposal describes how the methods, or technical components developed under the proposed project will be applicable to other states, agencies and or the USGS. (10%) Evaluation is based on both of the following:
- a. The technical tools, data, methods, or products of the proposed study are useful and relevant to other States.
 - b. The technical tools, data, methods, or products of the proposed study are useful and relevant to USGS programs or studies.
5. Collaboration. This criterion evaluates collaboration with relevant agencies or organizations within or outside the State, and collaboration with USGS Water-Science Center personnel where appropriate. (10%) Evaluation is based on all of the following:
- a. The proposal clearly describes collaboration with other State or local agencies during the development of the proposal.
 - b. The proposal addresses Secretarial priorities (Attachment F, 3b) to improve communication between the U.S. Department of the Interior and State natural resource offices and water authorities through collaboration opportunities with USGS personnel.
 - c. The proposal identifies collaboration (meetings, coordination, communication, etc.) with other federal, State, or local agencies that is planned to occur during the project period.
6. Previous Performance and Experience of Principal Investigator and Members of State Team. This criterion considers experience and competence of the State water resource agency principal investigator and team, and if applicable, the promptness with which the research results were disseminated to the scientific community from previous WUDR funding. When applicable, this factor includes the timely publication of project results and data in peer-reviewed scientific and technical journals or state agency publication or program related website, the impact of the results, and whether reporting requirements from previous USGS awards have been satisfied. Previous Performance includes completion of Federal awards. (10%) Evaluation is based on all of the following:
- a. A resume describing relevant professional experience for the principal investigator is attached.
 - b. The proposal describes the relevant experience of the team members.
 - c. The experience of team members is appropriate.
 - d. Previous projects and publications were completed on time. This includes previous WUDR project awards, and/or other USGS awards or cooperative agreements.

10. Reporting Requirements and Instructions

Progress Reports and Final Technical Reports shall describe in detail the work performed and results obtained during the grant period. Final Technical Reports and data are due 120 days after the conclusion of the project period. Any information contained in a previously submitted progress report shall be repeated or restated in the Final Technical Report. All reporting requirements are described in Attachment E Section 5. Reporting Requirements.

Data are to be submitted as machine readable, open format to WUDRP Program Management. All reports are to be submitted as pdf files, and submitted via e-mail attachment to WUDR Program Management:

Erik Smith wudr-coordinator@usgs.gov

11. Involvement of Federal Employees

Federal employees, including USGS employees, are prohibited from serving in any capacity (paid or unpaid) on any application submitted under this Announcement; federal employees may not assist in the development of proposals or review the proposals. Proposals that have a real or apparent conflict of interest related to Federal employees will not be processed for evaluation. This does not prohibit cooperation or collaboration between USGS and non-USGS scientists once a grant or cooperative agreement is in place; however, Federal employees are not eligible to receive funds associated with this program.

12. Award Terms and Conditions

Award Recipient must comply with award Terms and Conditions (Attachment E). Submittal of an application constitutes the applicant's acceptance of the terms and conditions for inclusion on any award resulting from their application. Any concerns with the requirements of the Special Terms and Conditions shall be presented to the Contracting Officer at least three (3) days prior to the closing date of the Announcement.

- A. No pre-award costs are authorized.
- B. No-Cost extensions to the project period are discouraged.
- C. Project Report. A final technical report and datasets must be completed and submitted to the USGS within 120 days of the end date of the project.

Attachment A

Data Goals for Major Water-Use Categories

Historically, the USGS has computed water use for all major categories of water use (see table below) and published every 5 years since 1985. Currently, the USGS is building models to predict and forecast water use at greater spatial and temporal scales (HUC12, daily), that are integrated into operational national hydrologic models that consider water availability and ecological and anthropogenic needs. These guidelines are provided to assist State water resource agencies in determining areas in which to focus proposed work. States that currently meet the data goals for major water-use categories outlined in Tier 1 for a specific water-use category would focus on Tier 2 and/or Tier 3. States are not required to meet Tier 1 in all categories, before addressing Tier 2 and/or Tier 3 data needs. Data collected and studies conducted in Tiers 1, 2, and 3 should be designed to benefit both local and national estimates and provide information for water availability studies by water managers, academia, federal, and/or local agencies. The definitions of basic water-use terms and categories as used by USGS can be found on the USGS website (<https://www.usgs.gov/mission-areas/water-resources/science/water-use-terminology>).

In addition to the standards listed in the table, baseline goals for all categories of water use include:

1. Facility or system withdrawals for the following categories: Public Supply, Self-supplied Industrial, Irrigation-Crop, Thermoelectric, Irrigation-Golf Course, Livestock (major facilities), Mining and Aquaculture.
2. Withdrawals, deliveries or returns by water source – groundwater, surface water, reclaimed wastewater, wastewater effluent, and/or recycled water. For groundwater sources the aquifer should be identified.
3. Withdrawals by water type – fresh or saline.

Category	Tier 1	Tier 2	Tier 3
Public Supply	- Monthly withdrawals, reported by system and water source and water type. - Deliveries to domestic users from public-supply systems, and populations served. - Report system information relevant to HUC-8 and county, and groundwater withdrawals with aquifer designation.	- Site-specific annual and monthly withdrawals (by intake and/or well or well field) reported by water source, and by water type. - Quantity of water purchased between systems and source(s) of water. - Quantity of water sold between systems. - Reporting and/or verification of water deliveries for domestic, commercial, industrial, thermoelectric and other use.	- Interbasin transfers. - System uses (internal and other non-revenue uses) and losses. - Improve population served estimates. - Use of reclaimed wastewater for public or landscape irrigation. - Site-specific daily withdrawals (added June 2020).
Industrial	- Annual withdrawals by facility reported by water source, by water type, and industry classification. - Groundwater withdrawals reported with reference to aquifer.	- Site-specific (by intake and/or well) annual and monthly withdrawals reported by water source, by water type, and industry classification. - Deliveries from public supply to industrial facility, and deliveries from other sources, such as treated wastewater.	- Site-specific daily withdrawals (added June 2020) - Site-specific consumptive use estimates. - Site-specific discharges to surface water or land application.
Irrigation-Crop	- Aggregate annual withdrawals reported by water source, by water type, acres irrigated, and method of irrigation. - Aggregate areas may be sub-county levels, but are feasible to summarize to county or watershed.	- Site-specific withdrawals by well or diversion from surface-water feature, or delivery from reclaimed wastewater. - Monthly withdrawals reported by water source, type, acres irrigated, crop, and method of irrigation.	- Site-specific daily withdrawals (added June 2020) - Consumptive use and conveyance loss estimates by aggregate area (sub-county, watershed (HUC8 or up to HUC12). - Site-specific return flows.

Category	Tier 1	Tier 2	Tier 3
Thermo-electric	- Site-specific, annual and monthly withdrawals and net power generation reported by cooling-system type (once-through or recirculating), by water source and by water type, and the source of the information (plant, govt. agency, etc.). - Site-specific return flows.	Site-specific annual and monthly consumptive use.	Site-specific daily withdrawals (added June 2020).
Self-Supplied Domestic	Self-supplied domestic populations, by HUC-8 and county, and by water source.	- Studies of actual metered domestic withdrawals, monthly by source. - Improve estimates of self-supplied populations by utilizing property data and/or public water supply service areas, or other methods.	
Irrigation – Golf Courses	- Site-specific annual and monthly withdrawals reported by water source, by water type, and acres irrigated. - Groundwater withdrawals designated by aquifer.	- Consumptive use estimates, by course, reported monthly or annual. - Acres irrigated by system type, by course.	
Livestock	Annual withdrawals for major facilities, reported by water source and by water type.	- Site-specific annual and monthly withdrawals for all facilities reported by source of water, and by water type. - Site-specific animal counts and animal type.	- Improved and verified coefficients for water use per head for animal type, confined or open-range, seasonal variability, and other variables. - Water withdrawals from sources supported by USDA programs to protect streams.

Category	Tier 1	Tier 2	Tier 3
Mining	Annual withdrawals reported by HUC-8 and county, by source of water, and by water type.	- Site-specific annual and monthly withdrawals. - Site-specific commodity identified.	- Evaluation/reporting on water use by process (commodity processing, dewatering, dust suppression, etc.). - Reporting on return flows/discharge of water from dewatering.
Aqua-culture	Annual withdrawals reported by HUC-8 and county, by source of water, and by water type.	- Site-specific annual and monthly withdrawals. - Site-specific facility information (method, species cultured, etc.).	
Commer-cial	Annual and monthly deliveries from public supply for commercial use.	Site-specific annual and monthly withdrawals for self-supplied establishments.	
Hydro-electric Power	Site-specific, annual and monthly water use (water use to spin turbines) by water source and water type, and the source of the information (plant, govt. agency, etc.).		

Category	Tier 1	Tier 2	Tier 3
Waste-water Treatment	Site-specific, annual and monthly return flows from public wastewater treatment and industrial facilities.	Site-specific discharges to surface water or land application.	
Water Use Data Storage and Availability			
Water-use database	Monthly and annual withdrawal data are reported to the state agency and stored in an electronic format.	Withdrawal data are entered electronically into a database. Automatic QA/QC checks are integrated into the electronic database and/or data entry routines.	Withdrawal data include water source, water type and location (county and HUC-12). Data are made available for export by the state agency or for download.

Attachment B

USGS Water Use Data and Research Cooperative Agreement Proposal Information Summary Template

Use the format below for the **required** Proposal Information Summary

1. Short Project Title: **THE SHORT PROJECT TITLE SHOULD BE USED ON THE SF FORMS FOR GRANTS.GOV AND WILL BE USED ON THE AWARD COVER PAGE.** The short project title should include the State or State agency name, the year, and WUDR or Water Use in the title. The following are two examples: “Pennsylvania DEP 2022 WUDR Project” or “Texas Water Use Data Project FY2022”
2. Descriptive Project Title: The descriptive project title will be used by the WUDR program. Please do not use this title in the SF forms for Grants.gov. The descriptive project title should include the agency name, the geographic area, and a brief statement of the work to be accomplished. The following is an example descriptive project title: “Quality Assurance Enhancements to Web Based Water Use Reporting Application to support Pennsylvania Department of Environmental Protection’s Water Use Data Program”
3. Project Keywords: List 3 to 5 keywords for the proposed work.
4. Primary Investigator: **List technical contact and contact information here. Only show one PI. The primary investigator must be a recipient agency employee.**
(Name)
(Agency Name)
(Street Address/P.O. Box)
(City, State, Zip Code)
(Telephone Number), (FAX Number), (E-mail Address)
5. Authorized Institutional Representative: **Provide name of Institutional/Financial contact here.**
(Name)
(Agency Name)
(Organizational Unit)
(Street Address/P.O. Box)
(City, State, Zip Code)
(Telephone Number), (FAX Number), (E-mail Address)
6. Amount Requested: (List amount of Federal funds requested for this Proposal)
7. Proposed Start Date: (The date you would like to start work, between September 1, 2022 and September 30, 2022)
8. Proposed Duration: (12 or 24 months, no awards are issued for less than 12 months)
9. Previous WUDR Funding: Amount
Performance Period

Attachment C

Budget Summary

Indirect cost rate:

Budget summary

Category	Federal \$	Agency in-kind \$	Total \$
1. Salary (wages, fringe)			
2. Travel			
3. Equipment			
4. Supplies			
5. Contractors			
6. Total Direct Costs (items 1-5)			
7. Indirect cost			
8. Total Cost (items 6 and 7)			

In-kind services percent:

Attachment D

Data Management Plan - Example Templates

Below are two example data management plans. The use of one of these templates is strongly encouraged. Additional examples are available at <https://www.usgs.gov/products/data-and-tools/data-management/data-management-plans>. Please see **section 9 (b)(2) Data Availability, found on pages 36** in the program announcement that states that data collected under a federal grant must be made available to the USGS.

Template 1: This template is for use with projects involving data collection or data digitizing, processing, or other transformations:

PI Name:

Project Title:

1. Will this project utilize existing data? ☐Yes/☐No

If yes, where is the existing data hosted/stored currently? (Paper files, Excel spreadsheets, custom database, etc.)

2. Will your Project collect or process new data? ☐Yes/☐No

If yes, what file format will be used to collect the new data? (Paper, web forms, PDF forms, etc.)

3. Are there access/use limitations associated with your data? ☐Yes/☐No

If yes, describe the limitations, including proprietary or sensitive data elements, etc.

4. Is existing data currently available to the public? ☐Yes/☐No

a. Where are the data made available?

b. Describe how any proprietary/sensitive data is handled.

c. Are any fees associated with release of the data?

d. What data format is the data released in? ☐CSV ☐Shapefile ☐GeoTIFF ☐Other:

e. Is associated metadata made available, and if so what format?

5. Is new data planned to be made available to the public?
 - a. Where will the data made available?
 - b. Describe how any proprietary/sensitive data will be handled.
 - c. Will any fees be associated with release of the data?
 - d. What data format will the data be released in? ☐CSV ☐Shapefile ☐GeoTIFF ☐Other:
 - e. Will associated metadata be made available, and if so what format will be used?
6. Describe the approach for backup of all data associated with this project.
7. What is the lifespan of this data? ☐Maintained indefinitely/☐Moved to archive storage after ___ years/☐Destroyed after ___years/☐Other:
8. Does data for this project rely on proprietary or licensed software? List software:
9. Describe quality assurance and/or quality control procedures that are associated with data collection and processing:

Template 2: This template is for use with projects involving custom software/code, database, or web tools development:

PI Name:

Project Title:

1. Describe the custom software to be developed.
2. If code is available/planned to be made available via an online repository, provide a link.
3. Identify any restrictions on access or reuse of the software.
4. Describe the approach for backup of the software during this project.
5. Describe the strategy for ongoing support and maintenance of the software after development.
6. Identify the computing language/framework to be used. (JavaScript/SQL/R/Python/.Net/etc)
7. Identify the operating system environment. (Windows/Linux/MacOS/etc.)

Attachment E

Water Use Data and Research Program Terms and Conditions

1. Acceptance

Acceptance of a Federal Financial Assistance award from the Department of the Interior (DOI) carries with it the responsibility to be aware of and comply with the terms and conditions of award.

Acceptance is defined as the start of work, drawing down funds, or accepting the award by signature or electronic means. Awards are based on the application submitted to and approved by DOI and are subject to the terms and conditions incorporated either directly or by reference below.

2. USGS Involvement

Substantial involvement is anticipated through the terms of this Agreement between the USGS and the Recipient. A summary of the involvement is as follows:

The Water Use Data and Research (WUDR) Program will be carried out in close collaboration with Water Use Specialists at USGS Water Science Centers, and/or the USGS National Water Use Team during the development of technical requirements and categorical water use data collection and methods development. The Recipients will be integral in data collection, methods development, and data management activities, potentially working with local cooperators and other federal agencies to facilitate project development and data acquisition and management. The USGS WUDR Technical Team will manage and develop all the technical requirements and guidance associated with the WUDR Program. Together the USGS and state collaborators will refine existing water use databases, develop new techniques for estimating water use, and establish data management policies for sharing of water use data that adhere to data goals for major water-use categories previously developed by the USGS (Attachment A). Data and information collected as part of this program must be stored electronically, provided to the USGS in machine readable open format to input into existing USGS databases (when applicable), but may be disseminated via a variety of means, including graduate student theses, USGS series reports, and scientific publications.

3. Funding

- (a) The total estimated cost of the USGS share for the performance of this Agreement is (total amount of the agreement).
- (b) The amount obligated under this Assistance Award Modification, hereinafter referred to as “obligated funds,” presently the sum of (total amount of the agreement), shall be available for payment of costs incurred by the recipient in performance of this agreement for the period (to be completed at time of award).

In no event shall costs be incurred in performance of this agreement in excess of the funds currently obligated.

4. 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.

5. Reporting Requirements

(a) **Required reports/documents**. The Principal Investigator is required to submit the following reports or documents. Further description of requirements follows the table below.

Report/ Document	Method of Delivery	Submit To	When Due
(1) Progress Report	Send PDF file as an email attachment.	WUDR Program Management. See Section 5.(b)(1)	Every 6 months for the duration of the project. See details of formatting in section 5.(b)(1) below
(2) Final Technical Report	Send PDF file as an email attachment	WUDR Program Management. See Section 5.(b)(2)(i)	Within 120 calendar days after the end of the award. See details of formatting in section 5.(b)(2) below
(3) Data	Send machine readable datafile.	WUDR Program Management. See Section 5.(b)(3)	Within 120 calendar days after the end of the award. See details of formatting in section 5.(b)(3) below
(4) SF 425 Federal Financial Report	See Section 5.(b)(4)	See Section 5.(b)(4)	See Section 5.(b)(4)
(5) Final SF 425 Federal Financial Report	See Section 5.(b)(5)	See Section 5.(b)(5)	See Section 5.(b)(5)

(b) Report preparation instructions. The Recipient shall prepare the reports/documents in accordance with the following instructions:

- (1) **Progress Reports.** The Recipient shall submit one copy of each Progress Report to the WUDR Program Management (wudr-coordinator@usgs.gov) and one copy of the transmittal letter to the USGS Grant Specialist (sroser@usgs.gov). The WUDR Program will share information (excluding budget information) from the progress reports with USGS Water Science Center (WSC) Staff (for example, the WSC Director and WSC Water Use Specialist). Unless otherwise specified in this Agreement, semi-annual progress reports should be submitted every six months after the start date of the project. In the case of multi-year Agreements, failure to submit timely reports may delay processing of funding increments. For Agreements with a total anticipated performance period of twelve months (12) months or less, only one Progress Report will be required. A Progress Report is not required if concurrent with Final Technical Report, unless the Recipient requests an extension to the project period.

The progress reports shall include the following information:

- (i) A list of project accomplishments to date.
- (ii) A comparison of accomplishments to the planned objectives and timeline for the progress period.
- (iii) Reasons why any established goals were changed or not met.
- (iv) Additional pertinent information, including an explanation of cost overruns.
- (v) Outline anticipated activities and adjustments to the program during the next progress period.
- (vi) List any changes to lead project personnel and provide contact information.

Between the required reporting dates, events may occur which have significant impact upon the project or program. In such cases, the Recipient shall inform the USGS as soon as the following types of conditions become known:

- (i) Problems, delays, or adverse conditions which will materially impair the ability to meet the objective of the Agreement. This disclosure must include a statement of the action taken, or contemplated, and any assistance needed to resolve the situation.
- (ii) Favorable developments which enable meeting time schedules and objectives sooner or at less cost than anticipated or producing more or different beneficial results than originally planned.

- (2) **Final Technical Report.** Final Technical Reports shall describe in detail the work performed and results obtained during the grant period. Final Technical Reports are due 120 days after the conclusion of the project period. Any information contained in a previously submitted progress report shall be repeated or restated in the Final Technical Report.

(i) Submit the Final Technical Report as an Adobe Acrobat PDF file. Submit the report as an e-mail attachment to WUDR Program Management:

Erik Smith wudr-coordinator@usgs.gov

(ii) The Final Technical report should consist of the following sections:

(A) Cover page

The cover page should include the following information:

- Award Number
- Agency Name
- Title
- Author(s) and Affiliation(s) with address and zip code
- Author's Telephone numbers and email address
- Term covered by award (start and end dates)
- Date of final report

(B) Main body of the report

- Overview of work as related to the proposal objectives and products.
- Description of existing water use data collection activities in the State.
- Description of activities, methods developed, and accomplishments resulting from the award. Include specific details on how the "TIER LEVEL" for categories of use (see Attachment A, Data Goals for Major Water-Use Categories) increased. This includes improvements for estimated or reported data.
- Description of any updates made to databases or data delivery during period of award.
- Description of any problems encountered during project period.
- Notice of any changes in databases or web services that are being planned that would impact future integration of data into USGS databases.

(3) Data

- Provide a machine-readable data file, or provide a link for data available through web services. Contact wudr-coordinator@usgs.gov to determine the best method (email, ftp, website download, etc.) to provide data to the USGS.
- Provide a list of data elements for all datafiles.
- Describe the source(s) of data and method(s) used to generate the datafile(s).
- Provide metadata. Examples of Metadata standards endorsed by the Federal Geographic Data Committee (FGDC) are available

at <https://www.usgs.gov/products/data-and-tools/data-management/metadata-creation>.

- For spreadsheets, include a “README” worksheet for each workbook with the source of the data and the date of the data pull. In addition, please provide details in the worksheet on unit(s), year(s), acronyms, abbreviations, codes and methods.
- Notice of any changes in databases or web services that are being planned that would impact future access to data by the USGS.

(4) Annual SF 425 Federal Financial Reports

- (i) 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.html>. The SF 425 will be due within 90 days following the end of the budget year (first year of the award).
- (ii) The SF 425 must be submitted by e-mail to SF425@usgs.gov with a cc to the Grant Specialist (sroser@usgs.gov). The Recipient must include the USGS award number in the subject line of all correspondence. If, after 90 days, the 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.

(5) Final SF 425 Federal Financial Report

- (i) The Recipient will liquidate all obligations incurred under the award and submit a final SF 425, Federal Financial Report in accordance with 5(b)(3)(ii) no later than 120 calendar days after the Agreement completion date.
- (ii) 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.
- (iii) Subsequent revision to the final SF 425 will be considered only as follows:
 - (A) 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.
 - (B) When the revision represents additional reimbursable costs claimed by the Recipient, a revised final SF 425 may be submitted to the USGS Grant Specialist 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., 16 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.

6. 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 Cooperative Agreement No. (*insert agreement number*).

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) USGS Logo

Use of the USGS logo (also known as "visual identity" or "identifier") constitutes the recipient's agreement to and acceptance of the following terms:

- The USGS identifier is trademarked and not in the public domain.
- Use of the trademarked USGS identifier is authorized by USGS for use only by recipients of USGS funding.
- Use is authorized on information products that result from research funded by the financial assistance award.
- Use the USGS identifier for any other purpose without written permission from USGS is prohibited; doing so constitutes trademark infringement.
- Recipient will adhere to the design requirements, which are as follows:
 - The USGS identifier must appear in black, white, or green only.
 - The USGS identifier cannot be modified in any way except for proportional sizing.
 - The USGS identifier should appear at the same size as logos of other agencies, if any.

- If used on a digital product, the USGS identifier should link to <https://www.usgs.gov/>.

(d) 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.

(e) Copies for USGS

Recipient is responsible for assuring that the USGS Project Office is provided a digital version, preferably as a MS Word DOCx file, of every accepted manuscript upon acceptance for publication by the journal.

(f) Department of the Interior Requirements

Two copies of each publication produced under a 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

7. 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).

- (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.

8. Revisions and Prior Approvals

Modifications to this Agreement shall generally be executed by mutual written consent of the parties, with the exception of certain purely administrative changes that may be executed unilaterally by the USGS. Recipients may make certain limited budgetary and programmatic changes without prior USGS approval as outlined in 2 CFR 200.308 and 200.407. Any proposed change which requires prior written approval of the USGS shall be submitted in writing to the address at D.1 at least thirty (30) days prior to the requested effective date of the proposed change. The USGS will respond to the change request within thirty (30) days of receipt.

- (a) Extensions. Recipients are specifically advised that requests for extension or other change to the budget or project period(s) require prior written approval. Such requests must be submitted as outlined above and be accompanied by a statement supporting the extension and a revised budget indicating the planned use of all unexpended funds during the proposed extension period.
- (b) Transfer of Funds. Recipients are specifically advised that prior written approval of the USGS Contracting Officer is not required for transfer of funds between direct cost categories when the cumulative amount of the transfer during the performance period does not exceed ten percent (10%) of the total USGS award. Prior written approval is required from the USGS Contracting Officer for transfers of funds in excess of the ten percent limitation.
- (c) Carry Forward of Funds. Recipients are specifically advised that prior written approval by the USGS Contracting Officer is required to carry forward unobligated balances to subsequent budget periods. It is expected that funds be expended during the budget period for which they are obligated. The request must include the amount of funds to be carried over, why the carry-over of funds is necessary, and for how long the funds should be carried over.

9. General Provisions

(a) Department of the Interior Standard Terms and Conditions

The Recipient shall be subject to the Department of the Interior Standard Terms and Conditions which are incorporated herein by reference and available on the Internet at: <https://www.doi.gov/grants/doi-standard-terms-and-conditions>

(b) Additional Terms and Conditions

(1) Research Integrity

- i) 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, 2000, 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.

- ii) 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.

(2) Data Availability

- (i) 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.
- (ii) 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.
- (iii) 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, used to gather and analyze the data.

(3) Conflict of Interest

(i) 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.

(ii) 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.

(iii) 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.

- (iv) 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.

- (v) 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.

- (vi) 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).

(4) Program Income

- (i) 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).
- (ii) 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).

(5) Government Furnished Equipment or Equipment Authorized for Purchase

Title to equipment 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 an inventory of such equipment as long as there is a need for such equipment 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 equipment to accomplish the purpose of the project, the Recipient shall use the equipment in connection with other Federal awards the Recipient has received. Disposal of equipment shall be in accordance with 2 CFR 200.313.

Insert the following if no equipment will be provided or purchased:

No equipment is provided or authorized for purchase on this grant/cooperative agreement.

Insert the following if property will be provided or purchased:

The following equipment will be vested with the Recipient: (list equipment)

Insert the following award term if the recipient is an individual, small business, non-profit organization, university or other institution of higher education. This award term does not apply to State, Local or Tribal governments or foreign entities.

(6) 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.

(i) *Definitions*

- A. 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.).
- B. 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.
- C. 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.
- D. MADE when used in relation to any invention means the conception or first actual reduction to practice of such invention.

- E. **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.
- F. **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.

(ii) *Allocation of Principal Rights*

- A. 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:
1. 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
 2. 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.

- B. 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.

(iii) *Invention Disclosure, Election of Title and Filing of Patent Applications by Recipient*

- A. The recipient will disclose each subject invention to USGS within two months after the inventor discloses it in writing to recipient personnel responsible for the administration of patent matters. The disclosure to USGS shall be in the form of a written report and shall identify the Agreement under which the invention was made and the inventor(s). It shall be sufficiently complete in technical detail to convey a clear understanding of the nature, purpose, operation, and, to the extent known, the physical, chemical, biological or electrical characteristics of the invention. The disclosure shall also identify any publication, on sale or public use of the invention, whether a manuscript describing the invention has been submitted for publication and, if so, whether it has been accepted for publication, at the time of disclosure. In addition, after disclosure to USGS, the recipient will promptly notify USGS of the acceptance of any manuscript describing the invention for publication, or of any on sale or public use planned by the recipient.
- B. The recipient will elect in writing whether or not to retain title to any such invention by notifying USGS within two years of disclosure to USGS. However, in any case where publication, on sale, or public use has initiated the one-year statutory period wherein valid patent protection can still be obtained in the U.S., the period for election of title may be shortened by USGS to a date that is no more than 60 days prior to the end of the statutory period.
- C. The recipient will file its initial patent application on an invention to which it elects to retain title within one year after election of title or, if earlier, prior to the end of any statutory period wherein valid patent protection can be obtained in the U.S. after a publication, on sale, or public use. The recipient will file patent applications in additional countries or international patent offices within either ten months of the corresponding initial patent application, or six months from the date when permission is granted by the Commissioner of Patents and Trademarks to file foreign patent applications when such filing has been prohibited by a Secrecy Order.
- D. Requests for extension of the time for disclosure to USGS, election, and filing under subparagraphs A., B., and C. may, at the discretion of USGS, be granted.

(iv) *Conditions When the Government May Obtain Title*

The recipient will convey to USGS, upon written request, title to any subject invention:

- A. if the recipient fails to disclose or elect the subject invention within the times specified in paragraph c. above, or elects not to retain title, provided that USGS may only request title within 60 days after learning of the failure of the recipient to disclose or elect within the specified times;

- B. in those countries in which the recipient fails to file patent applications within the times specified in paragraph c. above, but prior to its receipt of the written request of USGS, the recipient shall continue to retain title in that country; or in any country in which the recipient decides not to continue the prosecution of any application for, to pay the maintenance fees on, or defend in a reexamination or opposition proceeding on, a patent on a subject invention.

(v) *Minimum Rights to Recipient*

- A. The recipient will retain a non-exclusive royalty-free license throughout the world in each subject invention to which the Government obtains title, except if the recipient fails to disclose the subject invention within the times specified in paragraph c. above. The recipient's license extends to its domestic subsidiaries and affiliates, if any, within the corporate structure of which the recipient is a party and includes the right to grant sublicenses of the same scope to the extent the recipient was legally obligated to do so at the time the Agreement was made. The license is transferable only with the approval of USGS except when transferred to the successor of that part of the recipient's business to which the invention pertains.
- B. The recipient's domestic license may be revoked or modified by USGS to the extent necessary to achieve expeditious practical application of the subject invention pursuant to an application for an exclusive license submitted in accordance with applicable provisions at 37 CFR Part 404. This license will not be revoked in that field of use or the geographical areas in which the recipient has achieved practical application and continues to make the benefits of the invention reasonably accessible to the public. The license in any foreign country may be revoked or modified at discretion of USGS to the extent the recipient, its licensees, or its domestic subsidiaries or affiliates have failed to achieve practical application in that foreign country.
- C. Before revocation or modification of the license, USGS will furnish the recipient a written notice of its intention to revoke or modify the license, and the recipient will be allowed thirty days (or such other time as may be authorized by USGS for good cause shown by the recipient) after the notice to show cause why the license should not be revoked or modified. The recipient has the right to appeal, in accordance with applicable regulations in 37 CFR Part 404 concerning the licensing of Government-owned inventions, any decision concerning the revocation or modification of its license.

(vi) *Recipient Action to Protect Government's Interest*

- A. The recipient agrees to execute or to have executed and promptly deliver to USGS all instruments necessary to: (i) establish or confirm the rights the Government has throughout the world in those subject inventions for which the recipient retains title; and (ii) convey title to USGS when requested under paragraph d. above, and to enable the Government to obtain patent protection throughout the world in that subject invention.
- B. The recipient agrees to require, by written agreement, its employees, other than clerical and non-technical employees, to disclose promptly in writing to personnel identified as responsible for the administration of patent matters and in a format suggested by the recipient each subject invention made under this Agreement in order that the recipient can comply with the disclosure provisions of paragraph c. above, and to execute all papers necessary to file patent applications on subject inventions and to establish the

Government's rights in the subject inventions. The disclosure format should require, as a minimum, the information requested by paragraph c.1 above. The recipient shall instruct such employees through the employee agreements or other suitable educational programs on the importance of reporting inventions in sufficient time to permit the filing of patent applications prior to U.S. or foreign statutory bars.

- C. The recipient will notify USGS of any decision not to continue prosecution of a patent application, pay maintenance fees, or defend in a reexamination or opposition proceeding on a patent, in any country, not less than 30 days before the expiration of the response period required by the relevant patent office.
- D. The recipient agrees to include, within the specification of any U.S. patent application and any patent issuing thereon covering a subject invention, the following statement: "This invention was made with Government support under (identify the Agreement) awarded by the U.S. Geological Survey. The Government has certain rights in this invention."
- E. The recipient or its representative will complete, execute and forward to USGS a confirmation of a License to the U.S. Government and the page of a United States patent application that contains the Federal support clause within two months of filing any domestic or foreign patent application.

(vii) *Subcontracts*

- A. The recipient will include this Patent Rights clause, suitably modified to identify the parties, in all subcontracts, regardless of tier, for experimental, developmental or research work. The subcontractor will retain all rights provided for the recipient in this Patent Rights clause, and the recipient will not, as part of the consideration for awarding the subcontract, obtain rights in the subcontractors' subject inventions.
- B. In the case of subcontracts, at any tier, when the prime award by USGS was a contract (but not a cooperative agreement), USGS, subcontractor, and contractor agree that the mutual obligations of the parties created by this Patent Rights clause constitute a contract between the subcontractor and the Foundation with respect to those matters covered by this Patent Rights clause.

(viii) *Reporting on Utilization of Subject Inventions*

The recipient agrees to submit on request periodic reports no more frequently than annually on the utilization of a subject invention or on efforts at obtaining such utilization that are being made by the recipient or its licensees or assignees. Such reports shall include information regarding the status of development, date of first commercial sale or use, gross royalties received by the recipient and such other data and information as USGS may reasonably specify. The recipient also agrees to provide additional reports in connection with any march-in proceeding undertaken by USGS in accordance with paragraph j. of this Patent Rights clause. As required by 35 U.S.C. § 202(c)(5), USGS agrees it will not disclose such information to persons outside the Government without the permission of the recipient.

(ix) *Preference for United States Industry*

Notwithstanding any other provision of this Patent Rights clause, the recipient agrees that neither it nor any assignee will grant to any person the exclusive right to use or sell any subject invention in the U.S. unless such person agrees that any products embodying the subject invention or produced through the use of the subject invention will be manufactured

substantially in the U.S. However, in individual cases, the requirement for such an agreement may be waived by USGS upon a showing by the recipient or its assignee that reasonable but unsuccessful efforts have been made to award licenses on similar terms to potential licensees that would be likely to manufacture substantially in the U.S. or that under the circumstances domestic manufacture is not commercially feasible.

(x) *March-in Rights*

The recipient agrees that with respect to any subject invention in which it has acquired title, USGS has the right in accordance with procedures at 37 CFR § 401.6 and USGS regulations at 45 CFR § 650.13 to require the recipient, an assignee or exclusive licensee of a subject invention to grant a non-exclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant or applicants, upon terms that are reasonable under the circumstances and if the recipient, assignee, or exclusive licensee refuses such a request, USGS has the right to grant such a license itself if USGS determines that:

- A. such action is necessary because the recipient or assignee has not taken or is not expected to take within a reasonable time, effective steps to achieve practical application of the subject invention in such field of use;
- B. such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the recipient, assignee, or their licensees;
- C. such action is necessary to meet requirements for public use specified by Federal regulations and such requirements are not reasonably satisfied by the recipient, assignee, or licensee; or
- D. such action is necessary because the agreement required by paragraph i. of this Patent Rights clause has not been obtained or waived or because a licensee of the exclusive right to use or sell any subject invention in the U.S. is in breach of such agreement.

(xi) *Special Provisions for Agreements with Non-profit Organizations*

If the recipient is a nonprofit organization, it agrees that:

- A. rights to a subject invention in the U.S. may not be assigned without the approval of USGS, except where such assignment is made to an organization which has as one of its primary functions the management of inventions, provided that such assignee will be subject to the same provisions as the recipient;
- B. the recipient will share royalties collected on a subject invention with the inventor, including Federal employee co-inventors (when USGS deems it appropriate) when the subject invention is assigned in accordance with 35 U.S.C. § 202(e) and 37 CFR § 401.10;
- C. the balance of any royalties or income earned by the recipient with respect to subject inventions, after payment of expenses (including payments to inventors) incidental to the administration of subject inventions, will be utilized for the support of scientific or engineering research or education; and
- D. it will make efforts that are reasonable under the circumstances to attract licensees of subject inventions that are small business firms and that it will give preference to a small business firm if the recipient determines that the small business firm has a plan or proposal for marketing the invention which, if executed, is equally likely to bring the invention to practical application as any plans or proposals from applicants that are not small business firms; provided that the recipient is also satisfied that the small business firm has the capability and resources to carry out its plan or proposal. The decision whether to give a

preference in any specific case will be at the discretion of the recipient. However, the recipient agrees that the Secretary of Commerce may review the recipient's licensing program and decisions regarding small business applicants, and the recipient will negotiate changes to its licensing policies, procedures or practices with the Secretary when the Secretary's review discloses that the recipient could take reasonable steps to implement more effectively the requirements of this paragraph (xi)D.

(xii) *Communications*

All communications required by this Patent Rights clause must be submitted through the Office of Policy and Analysis (OPA), U.S. Geological Survey, Reston, VA 20192, gs_usgs_patents@usgs.gov.

10. Special Provisions

Use this section to insert any special provisions that may be applicable to this Agreement. Otherwise put NONE.

11. Documents Incorporated by Reference and Order of Precedence

(a) Documents Incorporated by Reference

The following documents are hereby incorporated into this Agreement by reference:

- (1) The Recipient's proposal (title and date)
- (2) The Recipient's application for financial assistance (SF424, SF424A, SF424B), dated (date)

(b) Order of Precedence

In the event of any inconsistency within this Agreement, the following order of precedence shall be followed:

- (1) The cover page.
- (2) Sections 1 through 10 of this Agreement.
- (3) Documents incorporated by reference (see Section 11) in the order in which they are incorporated.

– END OF ASSISTANCE AWARD DOCUMENT –

Attachment F: Priorities for Financial Assistance

The Secretary of the Interior's Top Ten Priorities

1. *Creating a conservation stewardship legacy second only to Teddy Roosevelt*
 - a. Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;
 - b. Examine land use planning processes and land use designations that govern public use and access;
 - c. Revise and streamline the environmental and regulatory review process while maintaining environmental standards.
 - d. Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;
 - e. Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;
 - f. Identify and implement initiatives to expand access to DOI lands for hunting and fishing;
 - g. Shift the balance towards providing greater public access to public lands over restrictions to access.
2. *Utilizing our natural resources*
 - a. Ensure American Energy is available to meet our security and economic needs;
 - b. Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications;
 - c. Refocus timber programs to embrace the entire 'healthy forests' lifecycle;
 - d. Manage competition for grazing resources.
3. *Restoring trust with local communities*
 - a. Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;
 - b. Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.
4. *Ensuring sovereignty means something*
 - a. Support tribal self-determination, self-governance, and sovereignty;
 - b. Solidify mutual interests between the U.S. and the freely associated states and territories.
5. *Generating additional revenues to support DOI & National interests*
 - a. Ensure that the public receives the full market value for the natural resources produced on federal lands;
 - b. Ensure that fees or costs levied for DOI services are reasonable and targeted to achieve cost recovery;
 - c. Consider the impact of DOI decisions on economic development and job creation.

6. *Protecting our people and the border*
 - a. Actively support efforts to secure our southern border;
 - b. Ensure DOI law enforcement staffing addresses public safety risks anticipated on DOI land.
 - c. Promote a “public service” demeanor within our law enforcement community.
7. *Striking a regulatory balance*
 - a. Reduce the administrative and regulatory burden imposed on U.S. industry and the public;
 - b. Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.
8. *Modernizing our infrastructure*
 - a. Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;
 - b. Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;
 - c. Prioritize DOI infrastructure needs to highlight:
 1. Construction of infrastructure;
 2. Cyclical maintenance;
 3. Deferred maintenance.
9. *Reorganizing for the next 100 years*
 - a. Improve alignment and integration of the DOI organizational structure;
 - b. Redistribute organizational resources (people and funding) to enhance mission achievement and improved public service;
 - c. Improve organizational alignment with Executive Branch counterparts with major land management assets or influence.
10. *Achieving our goals and leading our team forward*
 - a. Senior executives are expected to provide leadership in achieving goals of the President and the Secretary;
 - b. The Management Team is expected to:
 1. Ensure cost-effective operations and quality service to the public;
 2. Facilitate organizational cooperation and conflict resolution;
 3. Ensure the workplace environment is conducive to employee productivity and safety;
 4. Hold individuals accountable for actions that violate DOI policies and requirements.

Other Key Initiatives

1. Employment of veterans
2. Supporting DOI infrastructure needs
3. Creating jobs in the American economy
4. Access to outdoor recreation opportunities

Attachment G

Budget Example 1

C. Budget Summary

Indirect Cost Rate: 16.8% (applied to salary only in this example; rate agreement in this example does not include fringe)

Category	Federal \$	Agency in-kind \$	Total \$
1. Salary (wages, fringe)	\$19,165.00	\$21,717.40	\$40,882.40
2. Travel	\$11,195.00	\$0	\$11,195.00
3. Equipment	\$40,000.00	\$4,000.00	\$44,000.00
4. Supplies	\$ 0	\$0	\$ 0
5. Contractors	\$20,000.00	\$20,000.00	\$40,000.00
6. Total Direct Costs (items 1-5)	\$90,360.00	\$45,717.40	\$136,077.40
7. Indirect cost	\$3,219.72	\$3,648.52	\$6,868.24
8. Total Cost (items 6 and 7)	\$93,579.72	\$49,365.92	\$142,945.64

In-kind services percent: 35 percent

D. Detailed Budget

a. Salaries (Fringe Benefit Rate is 21.1 percent)

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Objective #1: Add Quality Assurance/Quality Control to Online Water Withdrawal Registration – Year 1								
Salaries								
Name of Manager A	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	50	\$2,438.50	0% \$0	100% \$2,438.50
Name of Programmer B	Programmer	\$39.58	\$8.35	\$47.93	200	\$9,586.00	100% \$9,586.00	0% \$0
Name of Student C	Geologist Student	\$12.76	\$2.69	\$15.45	120	\$1,854.00	100% \$1,854.00	0% \$0
Equipment						\$0		
Supplies						\$0		
Contractor						\$0		
Travel						\$0		
Objective #1 total					370	\$13,878.50	82% \$11,440.00	18% \$2,438.50
Objective #2: Add Meters to 20 sites (public supply, thermoelectric, irrigation) Meet with facilities to determine facilities willing to participate, procure meters, meters installed by contracted pump installation company – Year 1								
Salaries								
Name of Manager A	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	120	\$5,852.40	0% \$0	100% \$5,852.40
Name of Student C	Geologist Student	\$12.76	\$2.69	\$15.45	100	\$1,545.00	100% \$1,545.00	0% \$0
Equipment	20 meters at \$2,000 per meter					\$40,000.00	100% \$40,000.00	0% \$0
Supplies						\$0		
Contractor	Contractor install 20 meters at a rate of \$2,000 per meter.					\$40,000.00	50% \$20,000.00	50% \$20,000.00
Travel	Travel to meetings with facilities (30 day trips at \$0.50/mile for an estimated 133 miles round-trip = \$1,995) Travel to make sure 20 meters were installed correctly at 20 sites (Lodging: 4 nights at \$110 per night (\$440), Meals: \$60 per day for 5 days for 1 individual (\$300), and mileage will be \$0.50/mile for an estimated 920 miles round-trip (\$460)					\$1,995.00 \$1,200.00	100% \$3,195.00	0% \$0
Objective #2 total					220	\$90,592.40	71% \$64,740.00	29% \$25,852.40

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Objective #3: Collect meter data in database, field visits to test pump rates for accuracy with Ultrasonic flow meter (Years 1 and 2, split evenly except Ultrasonic flow meter bought in Year 1)								
Salaries								
Name of Manager A	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	100	\$4,877.00	0% \$0	100% \$4,877.00
Name of Student C	Geologist Student	\$12.76	\$2.69	\$15.45	300	\$4,635.00	100% \$4,635.00	0% \$0
Equipment	One ultrasonic flow meter					\$4,000.00		100% \$4,000.00
Supplies						\$0		
Contractor						\$0		
Travel	Six Field visits to 20 facilities for 1 individual: (6 weeks (4 nights and 5 days each), Lodging: 24 nights at \$110 per night (\$2,640), Meals: \$60 per day for 30 days (\$1,800), and an estimated 920 miles round-trip (\$2,760): Total \$7,200 Additional 12 day trips will be made for site visits for equipment problems, mileage will be \$0.50/mile for an estimated 133 miles round-trip (\$800)					\$8,000.00	100% \$8,000.00	
<u>Objective #3 total</u>					400	\$21,512.00	59% \$12,635.00	41% \$8,877.00
Objective #4: Add Aquifer designation to facilities in database (public supply tier 1 criteria will be met) Year 2								
Salaries								
Name of Manager A	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	20	\$975.40	0% \$0	100% 975.40
Name of Student C	Geologist Student	\$12.76	\$2.69	\$15.45	100	\$1,545.00	100% \$1,545.00	0% \$0
Name of Geologist D	Geologist	\$39.58	\$8.35	\$47.93	40	\$1,917.20	0% \$0	100% \$1,917.20
Equipment, Supplies, Contractor, Travel						0		
<u>Objective #4 total</u>					160	\$4,437.60	35% \$1,545.00	65% \$2,892.60
Objective #5: Progress reports (every 6 months) and final technical report; Progress reports are 30 hours (10 hours*3) for Name of Manager A; Remainder time is for final technical report; Year 1: \$975.40; Year 2: \$4,681.50								
Salaries								
Name of Manager A	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	90	\$4,389.30	0% \$0	100% \$4,389.30
Name of Student C	Geologist Student	\$12.76	\$2.69	\$15.45	20	\$309.00	0% \$0	100% \$309.00

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Name of Geologist D	Geologist	\$39.58	\$8.35	\$47.93	20	\$958.60	0% \$0	100% \$958.60
Equipment, Supplies, Contractor, Travel						0		
Objective #5 total						\$5,656.90	0% \$0	100% \$5,656.90

b. Supplies: None

c. Equipment

1. Ultrasonic flow meter to measure the flow in pipes to verify installed meters cost is \$4,000.
2. Twenty meters to be installed to get real-time data will be \$40,000 (20 * \$2,000).

d. Contractors (Cost estimate is based on verbal conversation with licensed pump installers, specific estimates require State purchasing process). Contractors install 20 meters at a rate of \$2,000 per meter.

- 1) Contractor Names: Contractor Y
- 2) Company Name: Contractor Y Company
- 3) Title: Project Leader and Field Technician
- 4) Hourly Rate of Compensation: \$65
- 5) Hourly Rate of Fringe: N/A
- 6) Total Hourly Rate: \$65
- 7) Number of Hours Planned: 170 hours (8.5 hours per site)
- 8) Salary Cost: \$11,050
- 9) Travel: \$2,150 (\$107.50 per site, pre-install visit, install visit, visit with State agency; mileage of 50 miles round-trip for 3 visits at \$0.50/mile (\$75), hotel cost of \$25 per site for install visit, meal cost of \$7.50 per site for install visit)
- 10) Cellular data subscription for 2 years (\$340 per site, or \$170 per year per site): \$6,800
- 11) Flow meter telemetry monitoring unit (\$1,000 per site): \$20,000
- 12) Total: \$40,000
- 13) Percent Cost Federally Funded: 50 percent or \$20,000
- 14) Percent Cost In-kind Funded: 50 percent or \$20,000

OR

- 1) Contractor Name: Contractor Z
- 2) Company Name: Contractor Z Company
- 3) Title: Pump Installer

- 4) Hourly Rate of Compensation: \$67.25
- 5) Hourly Rate of Fringe: N/A
- 6) Total Hourly Rate: \$67.25
- 7) Number of Hours Planned: 160 hours (8 hours per site)
- 8) Salary Cost: \$10,760
- 9) Travel: \$2,200 (\$110 per site, pre-install visit, install visit, visit with State agency; mileage of 50 miles round-trip for 3 visits at \$0.50/mile (\$75), hotel cost of \$25 per site for install visit, meal cost of \$10 per site for install visit)
- 10) Cellular data subscription for 2 years (\$340 per site, or \$170 per year per site): \$6,800
- 11) Flow meter telemetry monitoring unit (\$1,012 per site): \$20,240
- 12) Total: \$40,000
- 13) Percent Cost Federally Funded: 50 percent or \$20,000
- 14) Percent Cost In-kind Funded: 50 percent or \$20,000

e. Travel

1. Travel to meetings with facilities (Federal funds: \$1,995)

Name of Manager A and Name of Student C will travel to meet with facilities that are potentially interested in having a metered installed and see if the site has an ideal set-up for a meter. Cost is estimated at 30 day trips at \$0.50/mile will be made for an estimated 133 miles round-trip per site (\$1,995). More than one facility may be visited in a day. These will be day trips with mileage, but no lodging or per diem will be needed.

Total = \$1,995

2. Travel to make sure meters were installed correctly (Federal funds: \$1,200)

Name of Manager A will travel 5 days to visit the 20 installed meters. Cost is estimated at \$110 per night lodging for 4 nights for 1 individual (\$440), Meals: \$60 per day for 5 days for 1 individual (\$300), and mileage will be \$0.50/mile for an estimated 920 miles round-trip (\$460). Total = \$1,200

3. Field visits to sites (Federal funds: \$8,000)

Name of Manager A or Name of Student C will routinely visit the 20 sites 6 times over the course of the project (one individual for a 4 night and 5 day trip each of the 6 times). The 6 field visits to the 20 sites for 1 individual will include: Lodging: 24 nights at \$110 per night (\$2,640), Meals: \$60 per day for 30 days (\$1,800), and an estimated 920 miles per round-trip for 6 trips (5,520 miles, \$2,760): Subtotal = \$7,200

In addition, Name of Manager A and/or Name of Student C will visit sites when there are suspect readings or equipment issues. This will be on a as needed basis and the estimated 12 day trips for equipment problems includes mileage of \$0.50/mile for an estimated 133 miles round-trip for 12 trips (\$800). Subtotal: \$800

Total: \$8,000

f. Indirect Cost/General and Administrative (G&A) Cost

Indirect Cost Rate: 16.8% of salary only (does not include fringe in this example).

Indirect cost Federal funding is: \$3,219.72

Indirect cost Agency in-kind funding is: \$3,648.52

Indirect cost Total (federal plus agency in-kind) is: \$6,868.24

Also, remember to include the indirect cost agreement for both State Water Resource agencies and the contractor if they exist.

Example Budget 2

Indirect Cost Rate: 16.8% (applied to salary and fringe in this example)

C. Budget Summary

Category	Federal \$	Agency in-kind \$	Total \$
1. Salary (wages, fringe)	\$20,979.50	\$5,824.40	\$26,831.90
2. Travel	\$1,200.00	0	\$1,200.00
3. Equipment	\$3,038.00	0	\$3,038.00
4. Supplies	\$1,720.00	0	\$1,720.00
5. Contractors	\$90,287.00	0	\$90,297.00
6. Total Direct Costs (items 1-5)	\$117,224.50	\$5,824.40	\$123,076.90
7. Indirect cost	\$3,524.56	\$983.20	\$4,507.76
8. Total Cost (items 6 and 7)	\$120,749.06	\$6,835.60	\$127,584.66

In-kind services percent: 5.4 percent

D. Detailed Budget

a. Salaries (Fringe Benefit Rate is 21.1 percent)

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Objective #1: Add Aquifer and HUC to database – Year 1								
Salaries								
Name of Manager A	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	50	\$2,438.50	100% \$2,438.50	0% 0

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Name of GIS Specialist B	GIS Specialist	\$39.58	\$8.35	\$47.93	200	\$9,586.00	100% \$9,586.00	0% \$0
Equipment						0		
Supplies	GIS license software (\$800 per year for one person * 2 years) will be \$1,600.					\$1,600.00	100% \$1,600.00	0% \$0
Contractor						0		
Travel						0		
Objective #1 total					250	\$13,624.50	\$13,624.50 100%	\$0 0%
Objective #2: GIS and Field investigations to determine crop type and irrigation method and write final technical report – Year 1 and 2 (50 percent- Year 1 and 50 percent Year 2)								
Salaries								
Name of Manager A (Year 1)	Manager/ Principal Investigator	\$40.27	\$8.50	\$48.77	120	\$5,852.40	0% \$0	100% \$5,852.40
Name of Manager A (Year 2)*	Manager/ Principal Investigator	\$41.08	\$8.67	\$49.75	180	\$8,955	100% \$8,955	0% \$0
Equipment	Two iPad Pros to log field investigation crop type and irrigation methods and take pictures. Two * \$799 per iPad Pro (\$1,598). Cellular Service for 2 iPad Pros (18 months * \$40 per month per iPad Pro * 2 iPad Pros) (\$1,440).					\$1,598 \$1,440	100% \$3,038	0% \$0
Supplies	Field data Software for I-pad pros (\$60 * 2 iPad Pros) will be \$120.					\$120	100% \$120	0% \$0
Travel	Travel to meet with 20 County Agriculture Specialists (Lodging: 4 nights at \$110 per night (\$440), Meals: \$60 per day for 5 days for 1 individual (\$300), and mileage will be \$0.50/mile for an estimated 920 miles round-trip (\$460).					\$1,200	100% \$1,200	0% \$0
Objective #2 Contractor Budget								
Salaries								
Name of Professor D	University Professor	\$120.40	\$48.00	\$168.40	80	\$13,472.00	100% \$13,472.00	0% \$0
Contractor Tuition	Two years (four semesters) of master’s student tuition (\$32,100) Two academic years of master’s student stipend and fringe benefits (\$38,200).					\$32,100.00 \$38,200.00	100% \$70,300.00	0% \$0
Contractor Equipment	Laptop for master’s student to support master’s student work for the objective, with adequate storage					\$1,720.00	100% \$1,720.00	0% \$0

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
	and processing, with extra storage, keyboard and extra monitor. (One laptop at \$1,720).							
Contractor Supplies	GIS software (1 copy at \$800) for 2 year for 1 person.					\$1,600.00	100% \$1,600.00	0% \$0
Contractor Travel	Travel to irrigation areas to determine crop type and irrigation method (30 day trips at \$0.50/mile for an estimated 133 miles round-trip = \$1,995). Travel to meet with 20 County Agriculture Specialists (Lodging: 4 nights at \$110 per night (\$440), Meals: \$60 per day for 5 days for 1 individual (\$300), and mileage will be \$0.50/mile for an estimated 920 miles round-trip (\$460).					\$1,995.00 \$1,200.00	100% \$3,195.00	0% \$0
Objective #2 Contractor total					80	\$90,287.00	100% \$90,287.00	0% \$0
<u>Objective #2 total</u>					380	\$109,452.40	94.7% \$103,600.00	5.3% \$5,852.40

*Year 2 includes a 2 percent cost of living increase for State staff.

g. Supplies:

1. GIS license software will be \$1,600 (\$800 per year for one person * 2 years).
2. Field data Software for I-pad pros will be \$120 (\$60 * 2 iPad Pros).

h. Equipment

1. Two iPad Pros to log field investigation crop type and irrigation methods and take pictures will be \$1,598 (2 * \$799 per iPad Pro).
2. Cellular Service for 2 iPad Pros will be \$1,440 (18 months * \$40 per month per iPad Pro * 2 iPad Pros).

i. Contractors (Cost estimate is based on verbal conversation with University Professor, specific estimates require State purchasing process).

- 1) Contractor Names: Professor D
- 2) Company Name: University Z
- 3) Title: Professor

- 4) Hourly Rate of Compensation: \$120.40
- 5) Hourly Rate of Fringe: \$48.00
- 6) Total Hourly Rate: \$168.40
- 7) Number of Hours Planned: 80
- 8) Salary Cost: \$13,472
- 9) Travel: **Travel to irrigation areas to determine crop type and irrigation method** (30 day trips at \$0.50/mile for an estimated 133 miles round-trip = \$1,995). **Travel to meet with 20 County Agriculture Specialists** (Lodging: 4 nights at \$110 per night (\$440), Meals: \$60 per day for 5 days for 1 individual (\$300), and mileage will be \$0.50/mile for an estimated 920 miles round-trip (\$460).
- 10) Tuition: Two years (four semesters) of master's student tuition (\$32,100). Two academic years of master's student stipend and fringe benefits (\$38,200). Total \$70,300.
- 11) Equipment: Laptop for master's student to support master's student work for the objective, with adequate storage and processing, with extra storage, keyboard and extra monitor. (One laptop at \$1,720).
- 12) Supplies: GIS software will cost \$1,600 (1 copy at \$800 per year for 2 years).
- 13) Total: \$90,287
- 14) Percent Cost Federally Funded: 100 percent or \$90,287
- 15) Percent Cost In-kind Funded: 0 percent or \$0

j. Travel

1. Travel to meetings with facilities (Federal funds: \$1,200)

Name of Manager A will travel 5 days to meet with 20 County Agriculture Specialists to discuss crop irrigation method and crop type. Cost is estimated at \$110 per night lodging for 4 nights for 1 individual (\$440), Meals: \$60 per day for 5 days for 1 individual (\$300), and mileage will be \$0.50/mile for an estimated 920 miles round-trip (\$460). Total = \$1,200

Total: \$1,200

k. Indirect Cost/General and Administrative (G&A) Cost

Indirect Cost Rate: 16.8% of salary and fringe. No indirect on contract, travel, supplies, or equipment.

Indirect cost Federal funding is: \$3,524.56

Indirect cost Agency in-kind funding is: \$983.20

Indirect cost Total (federal plus agency in-kind) is: \$4,507.76

Also, remember to include the negotiated indirect cost agreement for both State Water Resource agencies and the contractor if they exist.

Attachment H

Reminders and Suggestions

- 1) Discuss ideas with USGS State staff about the WUDR grant and discuss this collaboration in the proposal.
- 2) USGS personnel cannot write or review competitive proposals.
- 3) Find someone that writes grants in your office to review your proposal.
- 4) Provide clarity between tasks completed under previous WUDR projects.
- 5) Make sure that the data management plan follows one of the formats stipulated in the program announcement.
- 6) Provide a milestones table with concrete deliverables for each task and target dates for completion of those tasks.
- 7) USGS cannot help with contract negotiations or selection.
- 8) Please be aware that the electronic submission process requires first time users to register using an eAuthentication process. This registration process can be somewhat complex and can take up to 3 weeks to complete. Be advised that it is virtually impossible to begin the process of electronic submission for the first time if you start just a few days before the due date.
- 9) Please use the e-mail address wudr-coordinator@usgs.gov to send questions, progress reports, and final reports.
- 10) **Provide details on the proposal.** Failure to include the necessary details may cause parts or all of the project to not be funded.
 - a. Please include the methods that will be used.
 - b. Give detailed descriptions of deliverables.
 - c. Provide details on specific tasks.
 - d. Provide details on required qualifications of intern staff.
 - e. Provide units of measure and temporal aggregation.
 - f. Provide details on how sites are selected.
 - g. Include details about methods used.
 - h. Provide details on field verification and validation.
 - i. Define the geographic scope of the work (definite area of interest or list of priority areas).
 - j. Define specific years that data will include.
 - k. Define percentage of sites that work will include (majority, over 60 percent).
 - l. If using a model, include the model name and details about calibrating and validating the model.
 - m. If you have IT support, supplies, or publication costs, please provide details on what specifically these costs will include.
- 11) **Please review budget summary and detailed budget** application instructions on pages 12-14 and 25. Failure to include the necessary details may cause parts or all of the project to not be funded.
 - a. Research cost effective plans
 - b. Include salary rates

- c. Include the negotiated rate agreement for both the State agency and the contractor, if applicable
- d. Provide details on qualifications of staff that will be hired (like interns)
- e. Provide details on the work that the contractor will do
- f. Make sure if you have travel costs to include where to, why, how many, how long, per diem, mileage, anticipated conference name.
- g. For supplies and equipment for both the State agency and the contractor, please include specific details on the individual items that will be bought, cost per unit, and how many units will be bought.
- h. If there are raises or cost of living increases, please include footnotes that describe the changes so that calculations add up properly.
- i. Check all calculations to verify that the numbers add up with the information that is provided.
- j. Please include the negotiated indirect cost agreement for both the State water resource agency and the contractor if available and applicable.
- k. Please make sure to only include one principal investigator as the contact for the proposal.

Attachment I

Water-Use Data and Research Program Template

A. **Proposal Information Summary.**

USGS Water Use Data and Research Cooperative Agreement Proposal Information Summary

Use the format below for the **required** Proposal Information Summary. Blue text denotes what to add. Please change the font color back to black before submitting.

1. Short Project Title: **THE SHORT PROJECT TITLE SHOULD BE USED ON THE SF FORMS FOR GRANTS.GOV AND WILL BE USED ON THE AWARD COVER PAGE.** The short project title should include the State or State agency name, the year, and WUDR or Water Use in the title. The following are two examples: “Pennsylvania DEP 2022 WUDR Project” or “Texas Water Use Data Project FY2022”
2. Descriptive Project Title: The descriptive project title will be used by the WUDR program. Please do not use this title in the SF forms for Grants.gov. The descriptive project title should include the agency name, the geographic area, and a brief statement of the work to be accomplished. The following is an example descriptive project title: “Quality Assurance Enhancements to Web Based Water Use Reporting Application to support Pennsylvania Department of Environmental Protection’s Water Use Data Program”
3. Project Keywords: List 3 to 5 keywords for the proposed work.
4. Primary Investigator: **List technical contact and contact information here. Only show one PI. The primary investigator must be a recipient agency employee.**
(Name)
(Agency Name)
(Street Address/P.O. Box)
(City, State, Zip Code)
(Telephone Number), (FAX Number), (E-mail Address)
5. Authorized Institutional Representative: **Provide name of Institutional/Financial contact here.**
(Name)
(Agency Name)
(Organizational Unit)
(Street Address/P.O. Box)
(City, State, Zip Code)
(Telephone Number), (FAX Number), (E-mail Address)
6. Amount Requested: (List amount of Federal funds requested for this Proposal)
7. Proposed Start Date: (The date you would like to start work, between September 1, 2022 and September 30, 2022)
8. Proposed Duration: (12 or 24 months, no awards are issued for less than 12 months)

9.Previous WUDR Funding: Amount, Performance Period

B. Proposal

Please include the following sections:

- 1) **Project Summary.** Provide an overall summary of the project including a brief description of work to be accomplished, USGS category(ies) of water use data collection or methodology development, how the proposed work increases the “TIER LEVEL” for a category of use (**see Attachment A, Data Goals for Major Water-Use Categories**), and geographic and temporal scale of data activity.
- 2) **Project Description.**
 - a. **Problem Statement.** Describe the problem and the state agency’s role relevant to the problem.
 - b. **Project Objectives.** Describe the objectives of the proposed work.
 - c. **Approach.** Proposals should thoroughly address how the proposed work will accomplish project objectives.
 - Describe specific methods that will be used to complete the project tasks.
 - Describe the significance of each task relative to the project objectives. If work is not being performed by the applicant agency, explain the role relative to water use of the party conducting the work.
 - Describe work being done by contractors.
 - Describe how science will be used to identify best practices to manage land and water resources and adapt to changes in the environment (**U.S. Department of Interior Secretarial Priority 1a, see Attachment F**).
 - d. **Project Timeline and Milestones.** Include a detailed timeline for the proposed work, relating tasks and subtasks described in the Approach section to completion dates. An example table is provided below. Please list **project objectives and describe specific, quantifiable and/or qualitative milestones and deliverables over the duration of the project to show how the project is successful, and what benefits/products (i.e. data) will be accrued if the project is successful.** Products or deliverables may include reports, datasets, maps, electronic data services, data portals, etc., that will be produced as part of the project. Please indicate if objectives or milestones relate to improving a tier level for a category of water use.

Objectives	Milestone/Output/Deliverable	Target Date
2.	4.	
	5.	
	6.	
4.	4.	
	5.	
	6.	
5.	1.	
	2.	
	3.	

- e. Previous WUDR competitive awards. Briefly describe how this proposed work is different from any previously funded WUDR projects from FY16 through FY21 Competitive Awards.
- f. Transfer of data to the USGS or other entities. Specifically describe how data will be transferred to the USGS. Data transfer guidance is available on the USGS WUDR website: <https://www.usgs.gov/media/files/water-use-data-and-research-program-data-transfer-guidance>. Describe how data will be made available to the USGS in a machine-readable open format, such that the data can be easily integrated (by the USGS) into USGS databases in compliance with the SECURE Water Act. If data will be made available to other entities, describe how the data will be made available.
- g. Relevance to State Priorities. Describe how the proposed tasks meet the priorities of the State water use program as described in the “Workplan.”
- h. Science and Technology Transferability. Describe how the methods, or technical components developed under the proposed project will be applicable to other states, agencies, and/or the USGS.
- i. Collaboration. Describe meetings, communication, and collaboration with other state and/or local agencies that collect water-use data that occurred in the development of this proposal. Describe collaboration with the USGS, including Water Science Center contacts. Describe collaboration that will be ongoing through the proposed project period with local, state, federal agencies (including USGS), or educational institutions.
- j. Team Experience. Succinctly describe the relevant experience of the project team members.
- k. IT Infrastructure
 - i. Describe databases that are used to store data.
 - ii. Briefly describe any current data sharing applications or web sites.
 - iii. Describe IT staff experience and availability.
 - iv. Discuss any security requirements or limitations.

C. **Budget Summary**

Provide a budget summary using the format shown below. The budget items should correlate with the detailed budget below.

Budget Summary

Indirect cost rate:

Budget summary table

Category	Federal \$	Agency in-kind \$	Total \$
1. Salary			
2. Fringe			
3. Travel			
4. Equipment			
5. Supplies			
6. Contractors			
7. Total Direct Costs (items 1-5)			
8. Indirect cost			
9. Total Cost (items 6 and 7)			

In-kind services percent:

D. Detailed Budget

A budget sheet for each year is required that provides more detail than what is entered under the SF-424A form. In this budget breakdown sheet please separate federal funds from cost-sharing funds (see ‘In-kind Resource Match’ section below). A set cost-sharing percentage for the recipient is not mandated, but a match of in-kind services is encouraged and should be denoted within the budget as cost sharing. The cost for the project should include both the agency in-kind services and the work to be funded by the WUDR funding opportunity. **Please provide the following information for each objective or major task.** Applicants should include the following categories for both federal and in-kind services:

1. Salaries

- a. Please provide a list of staff that will work on each objective listed in the proposal. If staff will work on more than one objective, include an entry with the hours for that employee on each objective.
- b. Objective Name: For each objective provide a table with the following items for each staff member that will work on the objective
 1. employee name,
 2. title,
 3. hourly rate of compensation,
 4. fringe benefit rate **and** hourly rate of fringe benefit,
 5. the total hourly rate (item 3 + item 4),
 6. the number of hours planned,
 7. the cost (item 5 times item 6),
 8. the percent of the cost that is Federally funded, and
 9. the percent of cost that is agency in-kind services. (item 8 and item 9 should add to 100%)

Detailed Budget Table

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Objective #1: list objective, years and funding per year or percent of funding per year								
Salaries								
Name	Title	\$	\$	\$		\$	% \$	% \$
Name	Title	\$	\$	\$		\$	% \$	% \$
Equipment	Include what is being purchased and why, how many, and the price per unit					\$	% \$	% \$
Supplies	Include what is being purchased and why, how many units, and the price per unit					\$	% \$	% \$
Contractor	Include what the contractor will do and provide hours, what is being purchased, how many units, and the price per unit					\$	% \$	% \$
Travel	Please include the reason for travel, the number of people traveling, the lodging rate and number of nights, per diem or cost of meals per day and the number of days, and mileage and mileage rate. Also include the conference name, if applicable.					\$	% \$	% \$
Objective #1 total					Include total hours	\$	% \$	% \$
Objective #2: list objective, years and funding per year								
Salaries								
Name	Title	\$	\$	\$			% \$	% \$
Name	Title	\$	\$	\$			% \$	% \$
Equipment	Include what is being purchased and why, how many units, and the price per unit					\$	% \$	% \$
Supplies	Include what is being purchased and why, how many units, and the price per unit					\$	% \$	% \$
Travel	Please include the reason for travel, the number of people traveling, the lodging rate and number of nights, per diem or cost of meals per day and the number of days, and mileage and mileage rate. Also include the conferences name, if applicable.					\$	% \$	% \$
Objective #2 Contractor Budget								
Salaries								
Contractor Name	Title	\$	\$	\$		\$	% \$	% \$

Categories and Staff	Title	Salary Hourly Rate	Fringe Hourly Rate	Salary & Fringe Rate	Hours Planned	Total Cost	Percent and amount that is Federally funded	Percent and amount that is in-kind services
Contractor Travel	Please include the reason for travel, the number of people traveling, the lodging rate and number of nights, per diem or cost of meals per day and the number of days, and mileage and mileage rate. Also include the conference name, if applicable.					\$	% \$	% \$
Contractor Equipment						\$	% \$	% \$
Contractor Supplies						\$	% \$	% \$
Objective #2 Contractor total					Include total hours	\$	% \$	% \$
<u>Objective #2 total</u>					Include total hours	\$	% \$	% \$

Include a footnote if there is a cost of living increase.

2. **Supplies**. For each major type of supply, enter a description and the cost for supplies needed for the project (include percent of cost that is Federally funded and/or provided as in-kind);
3. **Equipment**: Enter a description and the cost for each piece of equipment needed for the project. Please list any computer purchases separately. If possible, computer purchases should be as in-kind services to avoid property ownership issues;
4. **Contractors**: Provide the following detailed breakdown for each contractor needed for the project:
 1. hourly rate of compensation,
 2. fringe benefit rate and hourly rate of fringe benefit,
 3. the total hourly rate (item 1 + item 2),
 4. the number of hours planned,
 5. the cost (item 5 times item 6),
 6. the percent of the cost that is Federally funded, and
 7. the percent of cost that is Agency in-kind services. (items 8 and 9 should add to 100%)
5. **Travel**: Provide detailed information on proposed travel, i.e. where to, why, how many, how long, per diem, mileage, anticipated conference name, if applicable, and lodging rates, etc. (include percent of cost that is Federally funded and/or provided as in-kind); and
6. **Indirect Cost/General and Administrative (G&A) Cost**: Show the proposed rate, cost base, and proposed amount for allowable indirect costs based on the cost principles applicable to the Applicant's organization. If the Applicant has separate rates for recovery

of labor overhead and G&A costs, each charge should be shown. Explain the distinction between items included in the two cost pools. The Applicant should propose rates for evaluation purposes, which they are also willing to establish as fixed or ceiling rates in any resulting award. NOTE: A copy of the indirect negotiated cost agreement with the Federal Government must be provided with the application package. Pursuant to the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Section 200.414, in the absence of a negotiated rate agreement, non-Federal entities may use a de minimis rate of 10% of modified total direct costs (MTDC).

In-Kind Resource Match

Examples of in-kind resource match are: salaries, contract support, student assistance fees, travel expenses, software purchase, equipment dedicated to the project, production of outreach materials, and indirect costs or overhead charges. All contributions, including cash and third party in-kind, will be accepted as part of the recipient's in-kind match when such contributions meet all of the following criteria:

- verifiable from the recipients' records,
- not included as contributions for any other federally-assisted project or program,
- necessary and reasonable for proper and efficient accomplishment of project or program objectives,
- allowable under the applicable cost principles,
- not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost matching,
- provided for in the approved budget when required by the Federal awarding agency, and
- conform to the provision of the appropriate OMB Circular, as applicable.

Volunteer services furnished by professional and technical personnel, consultants, and other skilled and unskilled labor may be counted as in-kind match if the service is an integral and necessary part of the project. Rates for volunteer services shall be consistent with those paid for similar work in the recipient's organization. In those instances in which the required skills are not found in the recipient organization, rates shall be consistent with those paid for similar work in the labor market in which the recipient competes for the kind of services involved. In either case, paid fringe benefits that are reasonable, allowable, and allocable may be included in the valuation.

Match calculation: For example, with a request for an award of \$5,000 of Federal assistance, a 50-50 cost share contribution by the applicant would be \$5,000 in value for a total of \$10,000 value committed to the project (\$5,000 and \$5,000 Federal and applicant, respectively).

Applicant must document the amount and type of in-kind resource that will be contributed to the fulfillment of the project and include this information in the detail budget breakdown.

E. Principal Investigator Resume

Please include a resume for the technical lead for the proposed project. The resume should only include relevant professional experience. Do not include personal address, phone number, or e-mail.

F. Data Management Plan

Proposals submitted to USGS must include a supplementary document of no more than four 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. Please see **section 9 (b)(2) Data Availability, found on page 36** in the program announcement that states that data collected under a federal grant must be made available to the USGS. In rare cases, a DMP may include only the statement that no detailed plan is needed (e.g. "No data are expected to be produced from this project"), if the statement is accompanied by a clear justification.

DMPs should include the following. Two examples of data management plans are included in Attachment D, and the use of one of these formats is strongly encouraged. Additional examples are available at <https://www.usgs.gov/products/data-and-tools/data-management/data-management-plans>.

- 1) The types of data, samples, physical collections, software, curriculum materials, and other materials to be produced during the project;
- 2) 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);
- 3) Policies for access and sharing including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements;
- 4) Provisions for re-use, re-distribution, and the production of derivatives; and,
- 5) 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 (<https://www2.usgs.gov/datamanagement/plan/dmplans.php>). Note: The DMP does not count toward the 15-page limit.

Data Management Plan

Template 1: This template is for use with projects involving data collection or data digitizing, processing, or other transformations:

PI Name:

Project Title:

1. Will this project utilize existing data? ☐Yes/☐No

If yes, where is the existing data hosted/stored currently? (Paper files, Excel spreadsheets, custom database, etc.)

2. Will your Project collect or process new data? ☐Yes/☐No

If yes, what file format will be used to collect the new data? (Paper, web forms, PDF forms, etc.)

3. Are there access/use limitations associated with your data? ☐Yes/☐No

If yes, describe the limitations, including proprietary or sensitive data elements, etc.

4. Is existing data currently available to the public? ☐Yes/☐No

a. Where are the data made available?

b. Describe how any proprietary/sensitive data is handled.

c. Are any fees associated with release of the data?

d. What data format is the data released in? ☐CSV ☐Shapefile ☐GeoTIFF ☐Other:

e. Is associated metadata made available, and if so what format?

5. Is new data planned to be made available to the public?

a. Where will the data made available?

b. Describe how any proprietary/sensitive data will be handled.

c. Will any fees be associated with release of the data?

d. What data format will the data be released in? ☐CSV ☐Shapefile ☐GeoTIFF ☐Other:

e. Will associated metadata be made available, and if so, what format will be used?

6. Describe the approach for backup of all data associated with this project.
7. What is the lifespan of this data? ☐ Maintained indefinitely/☐ Moved to archive storage after ___ years/☐ Destroyed after ___ years/☐ Other:
8. Does data for this project rely on proprietary or licensed software? List software:
9. Describe quality assurance and/or quality control procedures that are associated with data collection and processing:

Template 2: This template is for use with projects involving custom software/code, database, or web tools development:

PI Name:

Project Title:

1. Describe the custom software to be developed.
2. If code is available/planned to be made available via an online repository, provide a link.
3. Identify any restrictions on access or reuse of the software.
4. Describe the approach for backup of the software during this project.
5. Describe the strategy for ongoing support and maintenance of the software after development.
6. Identify the computing language/framework to be used. (JavaScript/SQL/R/Python/.Net/etc)
7. Identify the operating system environment. (Windows/Linux/MacOS/etc.)