

United States Geological Survey

Groundwater and Streamflow Information Program National Ground-Water Monitoring Network



Proposals for Cooperative Agreements – Fiscal Year 2021 Program Announcement/Funding Opportunity G21AS00419

Closing Date: May 24, 2021
4 pm, Eastern Standard 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 purpose of the program is to support data providers to the National Ground-Water Monitoring Network. The Network provides groundwater data from Principal Aquifers at a regional or National scale to assist in assessing ground water resources. Response to this request is required to obtain and retain a cooperative agreement under the National Ground-Water Monitoring Network. Public report burden for this collection is estimated to average 30 hours per agreement and 125 hours to prepare a final technical report. The OMB Control Number is 1028-0114 for this information collection; the expiration date is September 30, 2021. Direct comments regarding this collection of information may be sent to the Bureau Clearance Officer, U.S. Geological Survey, 12201 Sunrise Valley Drive, MS807, Reston VA 20192.

APPLICATIONS MUST BE SUBMITTED ELECTRONICALLY VIA

<http://www.grants.gov>

SEE INSTRUCTIONS

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POINTS TO REMEMBER

Contact Darryl Pope if you have any questions.

Ensure that the work you propose is submitted under the **proper objective** and that the work is eligible under that objective. Follow the requirements for each objective listed in Section 11.

Applications which show an understanding of and reference to the Framework Document and Tip Sheets will be scored higher.

Do not include work under Objectives 4, 5, or 6 in a proposal to become a new data provider (Objective 1).

For Objective 1, make sure you include a map with your potential sites and any existing NGWMN sites in your state (including those from other data providers) that includes the Principal aquifers.

For Objectives 3-6, include a separate map for each objective that shows the sites where work is proposed and the Principal aquifers. For Objective 5, always show any existing NGWMN sites on the map in addition to any proposed new or replacement wells.

Include a scale bar, north arrow, and an explanation for each map. If the map is zoomed in for detail, make sure to include an inset map showing the location on a statewide map.

If you are proposing work at specific sites for Objectives 3-6, make sure you include a **table of the sites** you will be working on. The table must include the NGWMN ID, the principal aquifer, and the well depth. All sites for which work is proposed (except new wells proposed for drilling) must be in the NGWMN Well Registry by May 24, 2021.

For well rehabilitation and well drilling work, include a paragraph describing each well where work is proposed. This should include the need for the work, a description of the work, and how the work benefits or fills gaps in the NGWMN.

Always include in-kind services match **for each objective** for any work proposed under Objectives 3, 4, 5, or 6. Objectives that have at least 25% match will receive a bonus score during proposal evaluation.

Providing **costs for individual work tasks** under an objective can help us partially fund work within an objective during proposal evaluation. Itemize costs for individual work tasks done by contractors.

Use the budget formats described in Section 11.C and depicted in the examples included in Attachment B.

Consider NGWMN Well Density guidelines when proposing gap filling activities.

Make sure the Budget Summary and the budget in the SF-424A form are consistent with the detailed budgets for each objective included in the proposal.

Make sure to proofread your proposal before submitting

Cooperative funding Agreements to Support National Ground-Water Monitoring Network Data Providers Fiscal Year 2021

CFDA 15.980

National Ground-Water Monitoring Network Cooperative Agreements

The Groundwater and Streamflow Information Program of the USGS is offering a cooperative agreement funding opportunity to state or local water-resources agencies that collect groundwater data to participate in the National Ground-Water Monitoring Network. The USGS is working to develop and administer a National Ground-Water Monitoring Network (NGWMN). This funding opportunity is to support data providers for the National Ground-Water Monitoring Network and to address the Department of the Interior's Secretarial Priorities.

Legal authority for this opportunity is provided under Public Law 111-11, Subtitle F—Secure Water: Section 9507 “Water Data Enhancement by the United States Geological Survey.” Funds will be used to support connecting new data providers to the Network and to support existing data providers to maintain persistent data service and to enhance the NGWMN.

1. Application Submission Closing Date

May 24, 2021, at 4 pm, Eastern Standard Time

2. Electronic Application Requirement

For the FY 2021 funding cycle all proposals shall be submitted electronically via Grants.gov (<http://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 must be submitted electronically through Grants.gov on or before:

May 24, 2021, at 4 pm, Eastern Standard 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 are from a university, contact your Office of Sponsored Programs. They may already have completed the registration process and should work with you to submit the application.

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

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.

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 “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. Grants.gov does not review application content for award determination. Grants.gov will not post the application if there are errors. Failure to correct errors and submit by the date and time for closing shall not be a reason for accepting a late application.

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 THE GRANT SPECIALIST.**

If you need help entering your proposal, you can reach the **Grants.gov Contact Center** at: 1-800-518-4726. 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 May 24, 2021 at 4:00 pm Eastern Standard Time.**

See Section 11, 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. When the USGS determines that a proposal will not be considered for award due to lateness, the applicant will be notified immediately.

Questions:

For Grants.gov issues, see
http://www.grants.gov/applicants/app_help_reso.js
or
<http://www.usgs.gov/contracts/grants/grantsgov.html>,
or contact:
Laura Mahoney, (703) 648-7344, lmahoney@usgs.gov

For grant issues, contact:
Sara Roser
(703) 648-7357
sroser@usgs.gov (email preferred)

For National Ground-Water Monitoring Network Program issues contact:
Daryll Pope
(804) 261-2630
dpope@usgs.gov

3. Award Description

The funding available for this Program Announcement is expected to be up to \$700,000 for Federal FY2021. This estimate does not bind the USGS to a specific number of awards or to the amount of any individual award. Work performance under these awards must be completed within the two-year cycle from the start date. The timing of funds availability and the signing of the award will determine the start date. Individual applications are restricted to a funding level of \$150,000 for a one-year project or \$300,000 for a two-year project. Funding for routine work under Objective 2 to maintain persistent data services is limited to \$20,000 per year (Objective 2A). Substantial involvement of the USGS is anticipated to provide support to new data providers during the site selection and classification process and to establish web services that interact with the NGWMN Data Portal. USGS also will provide guidance to existing data providers on techniques for collection of site information, on well maintenance activities, and on well drilling to support development of the NGWMN. Therefore, these awards will be in the form of cooperative agreements. NGWMN cooperative agreements address the Department of Interior's Secretarial Priorities to improve State and local groundwater monitoring efforts to more effectively manage groundwater resources at the regional and national scale (Secretarial Priority 1a, Attachment D) and to enhance communication and data sharing between State and local water resource agencies and the U.S. Department of the Interior (Secretarial Priority 3b, Attachment D).

All projects should propose start dates between November 1, 2021 and December 30, 2021.

4. National Ground-Water Monitoring Network

The National Ground-Water Monitoring Network (NGWMN) is designed to be a compilation of selected wells and springs from existing monitoring efforts to create a network to assess long-term water-level and water-quality trends at a National scale. The National Ground-Water Monitoring Network started as a product of the [Subcommittee on Ground Water](#) (SOGW) of the Federal [Advisory Committee on Water Information](#) (ACWI). The design for the National Ground-Water Monitoring Network is presented in the document 'A National Framework for Ground-Water Monitoring in the United States' and is available at: https://cida.usgs.gov/ngwmn/doc/ngwmn_framework_report_july2013.pdf. The Network focuses on monitoring groundwater in the Nation's most productive aquifers. The Network is designed primarily to help answer questions of groundwater availability at a Principal or major aquifer scale. The NGWMN focuses on serving data at actively monitored sites to help answer current groundwater availability questions. To create a unified network, field and data management techniques need to be as consistent as possible and sites need to be selected and classified in a common manner. In addition, site density in the Network should be consistent at the [Principal and Major aquifer](#) scale. This [spreadsheet](#) has the recommended well densities for each state and Principal aquifer.

Data from the NGWMN is served from a [Network Portal](#) that links to data from all the providers' various databases. To accomplish this, the data providers must set up and maintain persistent web services for their databases. The data elements from these web services are mapped to the Portal elements so that data can be retrieved to answer questions at a regional scale that crosses data provider boundaries.

The focus of the Network will be on long-term data collected at a sufficient frequency to determine seasonal and long-term effects. Water-level and water-quality data from both wells and springs are included in the NGWMN. The NGWMN program supports the Department of the Interior's Secretarial Priorities by allowing water managers, primarily State Water Resource Agencies, to share their water-level and water-quality monitoring data to help monitor current conditions and avoid future water conflicts that may result from changes in the environment.

5. Eligibility Information

A. Applicant eligibility

Applicants can be state or local water-resource agencies which collect groundwater data. Federal agencies are not eligible to apply for NGWMN Cooperative Agreements funding. Funds from the projects cannot be distributed to Federal agencies to act as a contractor. Agencies that are partnering with the local USGS Water Science Center to collect water-level or water-quality data as part of a Cooperative Matching Funds project are considered current data providers and are eligible for funding under Objectives 3-6 to enhance the NGWMN. Discussion and coordination with USGS NGWMN staff are encouraged; however, USGS personnel are prohibited from helping an organization directly prepare its application for competitive funding.

Application announcement date: April 6, 2021

Applications must be submitted by the closing date of May 24, 2021

B. Topic eligibility

Several objectives have been identified and prioritized to meet the overall goal of building a Network that covers the Nation with data from well-defined sites and using accepted data-collection and data-management techniques. These objectives support the DOI Secretarial Priorities by enhancing communication and data sharing between State and local water resource agencies and the U.S. Department of the Interior and improving State and local groundwater monitoring efforts to more effectively manage groundwater resources at the regional and national scale.

The highest priority of the NGWMN is to support persistent data services from existing data providers to the NGWMN Portal and to add new data providers to build a robust network. Existing data providers also may request funds for additional activities to enhance their NGWMN sites. These activities can include: filling site information gaps, performing maintenance activities at existing sites in the Network, drilling new wells for the NGWMN, or purchasing equipment to monitor continuous water-levels.

The following objectives will be supported for funding by the NGWMN:

1. Support to become a new data provider
2. Support persistent data service from existing data providers
3. Filling gaps in information at NGWMN sites

4. Well maintenance
5. Well drilling
6. Purchase equipment to support continuous water-level data collection

Agencies cannot propose work under Objectives 4, 5, or 6 in a proposal to become a new data provider (Objective 1).

Funding cannot be used to:

- Purchase software or software maintenance license fees that are used for routine processing of water-level or water-quality data.
- Purchase or lease vehicles to be used to support routine data collection efforts
- Purchase equipment or supplies for water-quality sampling
- Purchase equipment to support telemetry at NGWMN sites
- Purchase downhole cameras or supplies
- Purchase geophysical logging equipment or supplies
- Purchase GPS equipment
- Develop new agency databases
- Purchase land or obtain easements for site access
- Contract with USGS or other Federal agencies to perform work on the project

C. Proposal eligibility

The following items will result in a proposal or work under the related objective being deemed ineligible:

- Missing budget information
 - Overall budget
 - Detailed budget for each objective
- Proposals from data providers working with a local USGS Cooperative Matching Funds project to collect groundwater data that are missing a letter of support from the local USGS Water Science Center
- Funding request that exceeds award limits
- Proposals that contract with U.S. Government Agencies to provide funding to perform work on the project

D. Unsuitable Proposals

The following proposals are ineligible for consideration under this Announcement:

- Proposals from U.S. Government Agencies or U.S. Government employees
- Proposals from Federally Funded Research and Development Centers (FFRDC)
- Proposals principally involving the direct procurement of a product, equipment, or service not used for data collection
- Proposals that contract with U.S. Government Agencies to provide funding to work on the project

6. Objectives

The NGWMN is providing financial support for six objectives described in this section. The type of work supported under each objective is described in this section. The requirements that need to be addressed in the proposal for each objective are described in section 11.B, of this program announcement. Proposed work outside these objectives will not be funded.

If an agency is applying as a new data provider, then the ‘Support to become a new data provider’ objective must be completed before work can begin on any other objectives. During the second year of a new data provider project, the applicant can propose work under Objectives 2 and 3 that begins once the Objective 1 work is planned to be completed. New data provider proposals are not permitted to propose work under Objectives 4, 5, or 6 in their initial proposal.

Agencies who have an active project to become a new data provider or who are already a data provider may apply for any Objectives 2-6 under this Program Announcement.

Objective 1: Support to become a new data provider

This objective provides funding to perform work necessary to become a data provider to the NGWMN. The agency will select and classify sites from their existing networks for inclusion in the NGWMN. They will provide data from agency databases to the NGWMN Portal by creating new web services or repurposing existing web services. They will document field and data management practices specific to their agency so that users of the NGWMN data have information on the quality of data from the varied sources. A brief report summarizing the work to become a new data provider is required.

Ideally, work to become a new data provider would be completed in year one of a two-year project but may continue into a second year if necessary. Note that no other objectives may be initiated on the project until the ‘Support to become a new data provider’ objective is complete.

The expected total costs to become a new data provider commonly ranges from about \$60,000 to \$120,000. Costs may vary depending on Information Technology (IT) costs, security issues, the number of sites that need to be reviewed and classified, and indirect rates.

Web services established in this objective are how agency data are shared with the NGWMN Data Portal. Guidance for setting up the web services is available in the [Web Service Development](#) tip sheet. The web services must return the minimum data elements as described in the [Minimum Data Elements Tip Sheet](#). The service must return the data in XML format. We encourage, but do not require the use of data standards for the XML web services that are established. These include: [WaterML2](#) for water-levels, [GWML2](#) for lithology and construction information, and [WQX](#) for water quality data.

For water-level network sites, separate web services are required to serve water-level, well-construction, and lithology data.

For water-quality network sites, water-quality data can be provided by either setting up new web services or by making the data available through the [USEPA Water Quality Exchange](#). New data providers are encouraged to provide data through the Water Quality Exchange as this makes the data available to the NWQMC Water-Quality Data Portal, which can be used to provide the data to the NGWMN. If web services are used to serve the water-quality data instead, they should follow the guidelines in the [Water-Quality Web Services Tip Sheet](#) and use of the WQX standard is encouraged. In either case, separate web services are required for water-level, well construction, lithology, and water-quality data (if not provided through the USEPA Water Quality Exchange).

If using the USEPA Water Data Exchange, data providers would need to regularly upload their data to ensure that recent data are available.

During the site selection and classification portion of the project, providers should identify sites that would be beneficial to the NGWMN but are missing some required data elements. These sites can be added to the NGWMN Well Registry but should not yet be displayed on the Portal (Display Flag set to 'N'). These sites will then be eligible for funding under Objective 3 to fill the site information gaps. If all sites have missing data elements, work to fill those gaps for selected wells may be proposed under Objective 3 in a project to become a new data provider.

Software purchases or license fees to support delivery of NGWMN data via web services are supported. However, software purchases related to storage of agency data or routine processing of data are not supported.

Travel costs are not supported for work under Objective 1.

Objective 2: Support persistent data service from existing data providers

This objective provides funding to perform activities necessary to maintain persistent data services from agency databases to the NGWMN Portal and to support work to add new sites to the network and upgrade or improve web services. Work under this objective can consist of two parts that will require separate budgets and work plans and will be evaluated separately.

Part A: Work under Part A is to support data providers to keep the sites and information in the NGWMN current and to maintain the database connections (web services) to the NGWMN Data Portal. Support for this work is limited to a maximum of \$20,000 per year. Activities supported under this are:

- Maintain web services that provide data to the portal
- Fix any issues with the services so that data continues to flow to the NGWMN Data Portal
- Keep the list of sites in the NGWMN Well Registry up to date
 - Remove sites that are no longer active

- Add new replacement sites to the NGWMN
- Keep metadata for NGWMN sites in the Well Registry up to date
- Provide updates to the NGWMN Data Provider page for their agency

Part B: Work supported under Part B allows agencies to apply for funding to support additional work. There is no funding limit on this additional work beyond the annual and project limits (\$150,000 for a one-year project or and \$300,000 for a two-year project). This additional work may include:

- Upgrade web services in conjunction with major agency database upgrades,
- Add new fields to existing services that have recently been requested by the NGWMN Portal staff,
- Upgrade existing services to provide data using established XML data standards (WaterML2, GWML, or WQX),
- Modify existing water-quality services to meet guidelines in the Water-Quality Web Services Tip Sheet,
- Modify existing databases to store fields required as Minimum Data Elements by the NGWMN and modify existing web services to serve these new fields,
- Expand web services. This can include adding new web services that were not originally set up when the agency became a data provider. For example, an agency that currently provides only water-level data could use this objective to add a web service to serve water-quality data, or
- Expand the number of sites in the NGWMN. This may include selecting sites for a Principal aquifer that was not part of the data provider's original project. This can support selecting and classifying the new sites and adding the sites to the NGWMN Well Registry. Adding less than 20 new sites to the NGWMN should be done under Objective 2A. Expansion of sites under 2B should be for 20 or more new sites.

Software purchases or license fees to support delivery of NGWMN data via web services are supported. However, software purchases related to storage of agency data or routine processing of data are not supported.

Water-level monitoring or water-quality data collection is not supported under this objective. Purchase of monitoring equipment or supplies is not supported under this objective. Quality assurance of routinely collected data is not supported.

Travel costs are not supported for work under Objective 2.

Objective 3: Filling gaps in information at NGWMN sites

This objective provides funding to perform work necessary to fill metadata gaps in the required data elements listed in the NGWMN [Minimum Data Requirements](#) tip sheet. The work may include data entry from available sources or field data collection efforts that fill metadata gaps.

For existing data providers, work to fill site information gaps can only be proposed for sites that are in the NGWMN Well Registry at the time of the proposal due date.

New data providers can propose work that they know will need to be done at all sites prior to entry into the NGWMN. The specific sites do not need to be listed, since they have not been selected yet.

Examples of supported site information gap-filling activities include:

- Data collection to fill metadata gaps
 - Sounding wells to determine depth
 - Well logging to determine well construction details including screen intervals, casing diameter and depth, etc. Logging can include downhole camera surveys
 - Well logging to determine lithology
 - GPS or leveling of land surface altitude and/or measuring points at wells
 - GPS update of Latitude/Longitude
 - Entry of data collected under this objective into agency databases and the NGWMN Well Registry
- Data entry to fill metadata or NGWMN data gaps
 - Entry of lithologic data from paper files
 - Entry of well construction data from paper files
 - Entry of historical water-level or water-quality data for NGWMN sites into current agency databases

Water-level monitoring or water-quality data collection is not supported under this objective. Purchase of monitoring equipment or supplies is not supported under this objective. Purchase of downhole cameras, geophysical logging equipment, or GPS equipment is not supported. Equipment rental and travel costs are allowed. Software purchases to analyze data collected during the project are supported.

Objective 4: Well maintenance

This objective provides funding to perform maintenance work on wells in the NGWMN to ensure that data are of high quality. The work may include well redevelopment, well rehabilitation or repair, periodic pumping to ensure connection to the aquifer, or testing of the well to ensure performance. Other routine well-maintenance activities may also be supported including replacing shelters or installing protective casing.

For existing data providers, well maintenance tasks can only be done at sites that are in the NGWMN Well Registry at the time of the proposal due date.

Examples of supported Well Maintenance activities include:

- Well redevelopment
- Periodic pumping of observation wells to assess/maintain connection to aquifer
- Well-integrity testing

- Well rehabilitation
- Well repair
- Installation of protective surface casing at wells
- Well camera investigations

Water-level monitoring or water-quality data collection is not supported under this objective. Purchase of monitoring equipment or supplies is not supported under this objective.

Purchase of downhole cameras, geophysical logging equipment, or GPS equipment is not supported. Equipment rental and travel costs are allowed. Software purchases to analyze data collected during the project are supported.

Objective 5: Well drilling

This objective provides funding to install wells to enhance or maintain the NGWMN. Well installation may include replacement wells for existing NGWMN sites and installation of wells at new locations that fill spatial gaps in the NGWMN Network.

Drilling shall be done by qualified and licensed agency staff or by using a contract driller. All state drilling requirements must be met. Well drilling activities cannot be contracted to the USGS. In addition, USGS staff cannot be contracted to serve in any role in the drilling operations using NGWMN cooperative agreement funds.

Water-level monitoring or water-quality data collection is not supported under this objective. Purchase of monitoring equipment or supplies is not supported under this objective. Supplies needed for well drilling are allowed. Equipment rental and travel costs are allowed. Software purchases to analyze data collected during the project are supported.

Objective 6: Purchase equipment to support continuous water-level data collection

This objective supports the purchase of water-level monitoring equipment for NGWMN continuous water-level sites. Once every five years, equipment may be purchased to replace equipment at current NGWMN sites with continuous data collection. Equipment may also be purchased under Objective 6 to upgrade the water-level monitoring frequency at existing NGWMN sites to continuous data collection. This could be for NGWMN Trend sites with only quarterly or monthly discrete data collected or to equip an existing NGWMN Surveillance site to be a Trend monitoring site.

Equipment purchases can include data loggers, pressure transducers, and cables to collect continuous water-level data. Funding for equipment to provide realtime data via satellite telemetry or cell phone networks is not supported. Telemetry equipment can be installed at the sites but must be purchased by the agency and may be used as in-kind services match.

This objective can be used to cover only equipment purchase costs and personnel time needed for documentation of equipment purchases in the project final report. Water-level monitoring operations and maintenance or field visit costs are not supported under this objective but can be used as in-kind services. Salary for equipment purchase or installation is not eligible for funding but can be used as in-kind services.

7. Network Policies, Standards and Procedures

The requirements for the National Ground-Water Monitoring Network are described in the National Ground-Water Management Framework Document, which is available online at: http://acwi.gov/sogw/ngwmn_framework_report_july2013.pdf

“Tip Sheets” are available to provide guidance related to the NGWMN and can be found at: <https://cida.usgs.gov/ngwmn/learnmore.jsp> under the ‘Data Provider’ tab. The tip sheets are a quick reference for data providers on the following topics:

- [Well Selection Criteria for Water Levels](#)
- [Well Selection Criteria for Water Quality](#)
- [Defining the Subnetwork](#)
- [Defining Monitoring Categories](#)
- [Populating the Well Registry](#)
- [Minimum Data Requirements for Candidate sites](#)
- [Web Service Development](#)
- [Water-Quality Web Services](#)

These tip sheets should be used as guidance during a project to become a new data provider. They contain information on well selection and classification, minimum requirements for NGWMN sites, adding sites to the NGWMN, and guidelines on web services.

The Well Selection tip sheets both reference a spreadsheet that lists well densities for the NGWMN by Principal aquifer and State. Applicants should consult this [spreadsheet](#) before they propose adding new wells to the NGWMN or drilling new wells to enhance the Network.

In most cases, sites should not be added to the NGWMN (added to the Well Registry and have Display of the site turned on) until the Minimum Data Elements for the sites are available. Work under Objective 3 to fill site-information gaps can be done on wells that are not yet active in the NGWMN, if they have been added to the Well Registry and have the Display Flag set to ‘N’.

8. Multi-year proposals

All agreements will be for a maximum period of two years. The total funding for an individual award may not exceed \$150,000 for a one-year project or \$300,000 for a two-year project. All work must be completed by the end of the two-year cycle (dependent upon actual project period of performance) and final reports (Attachment C 5.b.2) generated within 90 days of completion. For two-year projects, a progress report (Attachment C 5.b.1) should be submitted 60 days prior to the end of the 1st year of the project.

9. In-Kind Services Cost-Share Guidelines

In-kind services cost sharing is used to create partnerships to meet the goals of building and enhancing the NGWMN. This allows agencies to contribute work they are doing at NGWMN sites to match the Federal funding provided for the NGWMN. Only work performed at NGWMN sites or potential new NGWMN sites (well drilling) can be used as in-kind services. In-kind services are not required for work proposed under Objectives 1 or 2 because work done under these objectives is generally of benefit primarily to the NGWMN.

While no specific match rate is required, a 1:1 match rate of agency in-kind services to USGS funding is suggested (50% match). The formula for calculating the match percent is: $((\text{in-kind services costs}) / (\text{in-kind services costs} + \text{USGS Funding})) * 100$. Agencies providing at least 25% match for work proposed on Objectives 3, 4, 5, or 6 will receive a scoring bonus when the proposals are evaluated. Objectives with at least 50% match will receive the largest bonus. Details on scoring are described in section 13.

Since each objective is scored independently during review, in-kind services cost sharing must be provided separately for each objective. Include in-kind services cost sharing in the detailed budget for each objective and provide similar details like that required for work to be funded by the USGS. List the individuals who will be doing the work and the tasks they will be doing.

Examples of in-kind resource match are: salaries, contracts for work supported under this proposal, contractual support, travel expenses, software purchase, equipment or supplies used for the project, and indirect costs or overhead charges. **Agency activities related to operation and maintenance of NGWMN sites that are a part of their current (local agency) network can be used as in-kind services match. This can be either the collection of water-level data for a NGWMN site or sampling of a NGWMN site.** If equipment purchases will not be exclusively used on the project or at NGWMN sites, the cost of the equipment should be pro-rated based on how much the equipment will be used for the NGWMN during the performance period of the project. Work to perform quality assurance of data at NGWMN sites can also be used as in-kind services match. Drilling work used as match can only be for wells that will be added to the NGWMN. The need for these wells should be described in the same detail required for other NGWMN sites. Their benefit to the NGWMN needs to be shown. All in-kind service activities must occur during the performance period of the project.

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 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.
- 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.

Third-party in-kind services can include work done by another state or local agency in support of your project.

The 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 detailed budget breakdown.

10. Final Project Report

A Final Technical Report is required that describes in detail the work performed and results obtained during the grant period. The report does not have to be formally published by the agency; however, the report will be made available through on the agency's Data Provider page on the NGWMN Data Portal. Work proposed under each objective should be documented in the Final Project Report.

Costs for preparation of the Final Project Report should be included in the work plan for each objective in the proposal. Check to ensure that the planned staff hours and total cost of the Final Project Report are reasonable.

The Final Technical report should include:

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

Main body of the report

The main body of the report should include:

- Overview of work planned and accomplished during the project
- Detailed description of work accomplished under each objective

For new data providers:

- Description of existing water-level and/or water-quality networks including the objectives of the networks
- Description of site selection criteria and process
- Description of process used to assign Subnetworks and Monitoring Categories for both water-level and water-quality networks (as appropriate for your Network)
- Description or link to Field techniques for water-level measurement and water-quality sample collection (as appropriate for your network)
- Description of data management procedures in place. Describe data quality and quality assurance processes
- List of Minimum Data elements and how they are provided to the Data Portal (via the Well Registry or web services)
- Notes on any sites that have missing required data elements
- Note any sites that do not meet requirements in Table 4.5.1.1 and/or 4.5.2.1 of the Framework Document.
- A description of the web services used or installed for this project
- Analyte list used for water-quality sampling networks
- List of laboratories and their accreditation for analyzing properties and constituents included in the monitoring program if water-quality data are served
- Describe any work done under Objectives 2 or 3 as part of the initial project

For existing data providers:

- Description of work done to support the NGWMN as a data provider for each objective
- Describe any data-collection, well-maintenance, or well-drilling activities completed during the project
- Describe any methods used for data collection
- Describe the procedures used to quality assure any data collected before it was entered into agency databases or the NGWMN Well Registry
- Table listing any new or replacement wells added to the NGWMN. Include the Principal Aquifer, well depth, and the NGWMN site number. If the well is a replacement well, list the site number for the previous well
- Description of any updates made to web services during period of award
- Description of any problems encountered in serving data to the NGWMN data portal
- Well construction diagrams for any new wells
- Provide a summary of any equipment purchased under Objective 6 and list each well showing the equipment purchased and the date the equipment was installed.

Details on deadlines and how to submit the Final Project Report are included in Attachment C Section 5.2.

11. Application Preparation Instructions

Your electronic submission shall consist of forms SF-424, SF-424A, and SF-424B. Form SF-424D is needed for proposals that include work under Objective 5. The items described below in items A through F should be included in the application package as the ‘Project Narrative Attachment Form’. Failure to comply with the required application components listed below may result in the proposal being rejected.

Items A through G 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. The application shall not exceed 20 single-spaced pages 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 negotiated rate agreement, figures, tables, detailed budgets for objectives, timelines for objectives, required maps, letters of support, and the Data Management Plan do not count toward the 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. Detailed Budget for each objective
- D. Timeline for each objective
- E. Data Management Plan
- F. Staff Qualifications
- G. Supporting Letters

A. Proposal Information Summary

Provide a summary for the proposal using the format shown in Attachment A. The project title should not exceed 80 characters. The project title should be the same as that used in the title box of Form SF-424. List the Technical Contact/Principal Investigator for the proposed work. Provide a start date for the proposed work sometime in the period from November 1, 2021 through December 30, 2021.

B. Proposal

Make sure your proposal includes background information about your agency and network, a summary of your planned project, and a detailed description of the project with a separate section for each objective that is part of the project (see guidance below).

Maps and tables in proposal should be numbered and referenced in the text. Tables and figures can appear in the proposal, at the end of the proposal, or in an appendix.

Tables of sites at which field work is proposed must be included and should include the NGWMN site number, the Principal aquifer, and the well depth. A listing of specific work proposed at each well and the estimated cost is recommended.

Maps of sites where specific work is proposed need to be included, but do not count toward the page limit. If maps do not show the entire state, include an inset map. All maps should include a north arrow, scale bar, and explanation. Label the sites on the map using NGWMN site number or index number if possible. Include [USGS National Aquifers](#) on the map(s). Data layers with the Principal aquifers and Aquifers of Alluvial and Glacial Origin are available at:

[Principal Aquifer of the United States](#)
[Aquifers of Alluvial and Glacial Origin](#)

Do not include links to any data or information on a web site as part of your proposal. If the content is important, include it in the proposal. We will not consider any information from referenced websites as part of the proposal evaluation process. The only exception to this is that you may include links to references for methods you propose to use as part of your proposal.

Include references for any methods used to perform work on NGWMN sites or describe the methods you will be using in detail. You may include links to the references for the methods used.

A separate budget is required for each objective proposed. **The detailed budget for each objective should be for the entire period of the project.** Examples are given in Attachment B.

There should be a consistency between the work plan, detailed budget, and timeline for each objective. Tasks described in the work plan should be included in the detailed budget and the timeline for each objective.

a. Background information

Provide supporting information about your agency, monitoring networks, and your database and IT infrastructure. Because membership on the NGWMN Program Board that evaluates the proposals may change from year to year, all proposals should have this information included so that it is available during proposal review. Describe your network and your involvement with the NGWMN in enough detail so that new Board members have the necessary background to evaluate your current proposal. Each proposal should stand on its own and not rely on background information included in previous proposals. The following items should be addressed:

- i. Description of Agency and purpose of monitoring. Give a brief description of your agency, its role, and the purpose for which the

monitoring data are being collected. Identify the USGS Principal or major aquifers and areas that are monitored.

- ii. Description of the Agency's existing monitoring networks. Provide a detailed description of existing monitoring networks relevant to the needs of the NGWMN. Describe how the data are used to support your agency monitoring goals.
- iii. Describe any projects with the NGWMN. If applicable, briefly describe any past projects with the NGWMN. Summarize your involvement with the Network. Indicate the number of sites your agency is currently providing to the NGWMN. **Provide a table listing any funding for active projects that your agency will receive during the performance period of the proposed work.** Break the costs down by objective and year.
- iv. Information Technology (IT) Infrastructure. Describe the databases used to store data at your agency and the web server infrastructure if applicable. Briefly describe any current data sharing applications, services or web sites. Discuss any security requirements or limitations.

b. Project Summary

Briefly describe the work that is proposed for the project. Describe which objectives will be included in the project and the overall timeframe of the project.

c. Project Description

For each objective for which you are applying, provide a separate work plan. Describe each objective in detail so that individual objectives (and tasks within objectives) can be considered for funding separately.

Provide a work plan that describes the tasks necessary to accomplish the objective. Describe the need for the proposed work and the benefits to the NGWMN. The work plan should include the items listed below for the corresponding objective. Identify the personnel involved. For each task, justify the need for the work and the methods that will be used to do the work. Include either detailed descriptions of the methods that are proposed or provide references for the methods you will be using. For field work, indicate the number of staff that will be in the field each day for each task and justify the need for the staff.

Refer to section 6 above for guidance on what work is allowable under each objective.

Objective 1: Support to become a new data provider

For proposals for new data providers include a map of the potential sites that new NGWMN sites will be selected from. This map should include any existing sites in the NGWMN (those contributed by another agency) and the Principal Aquifers of the United States layer. If some of the wells are in glacial aquifers, include the 'Aquifer of Alluvial and Glacial Origin' layer as well.

The following tasks should be included in the work plan for this objective for a new data provider. For each task indicate who will be doing the work:

- Select sites for the NGWMN. Describe the available sites and why they are appropriate for the NGWMN. Select appropriate sites for the NGWMN according to criteria in the NGWMN Framework document, the [Well Selection Criteria for Water Levels](#) and [Well Selection Criteria for Water Quality](#) tip sheets, and the [Minimum Data Requirements](#) tip sheet.
- Classify sites into Subnetworks and Monitoring Categories: Classify sites as described in the NGWMN Framework document and [Defining the Subnetwork](#) and [Defining Monitoring Categories](#) tip sheets.
- Provide required data elements for selected sites. Data are provided either in the Well Registry or through web services. The required data elements are listed and the source of data for each element is described in the [Minimum Data Requirements](#) tip sheet.
- Identify any gaps in required data elements for sites that are selected.
- Populate the NGWMN Well Registry with site and network information. See the [Populating the Well Registry](#) tip sheet. This can be done interactively in the Well Registry or by populating the site and network data in a NGWMN provided template spreadsheet and uploading that spreadsheet into the Well Registry.
- Connect agency databases to the NGWMN Portal using web services. Separate web services will be required for water-level data, well construction data, and lithology data. If water-quality data are to be served, a water-quality data web service will also be needed unless otherwise available from the USEPA Water Quality Exchange (<http://www.waterqualitydata.us/>). Guidance for setting up the web services is available in the [Web Service Development](#) tip sheet. Specific guidance for water-quality web services is given in the [Water-Quality Services tip sheet](#).
- Document data collection and Data Management protocols. This is needed so that the NGWMN can provide users of the NGWMN data an understanding of the quality of the data. Our goal is to provide water-level and water-quality data of known quality.
- Prepare a brief report. Document the work done for the tasks above. This should include: the criteria used to select and classify wells, a description of web services set up for the project and the underlying supporting IT infrastructure, a description of the field data collection, and a description of data management practices. This report will be used to populate a Data Provider page that includes information on site selection, classification, data collection, data management, and general information about the data provider and their networks. Examples of Data Provider pages are available at:
 - <https://cida.usgs.gov/ngwmn/provider/KSGS>
 - <https://cida.usgs.gov/ngwmn/provider/SCDNR>
 - <https://cida.usgs.gov/ngwmn/provider/OWRB>

Agencies proposing to become a new data provider may not include work under Objectives 4, 5, or 6 in their initial proposal

Work under this objective does not require any agency in-kind services match.

Objective 2: Support persistent data service from existing data providers

Work under Objective 2 can consist of two parts. Part A is basic work to provide persistent data service to the NGWMN. Work allowable under Part A is described in Section 6 under Objective 2. This work can be funded at a maximum of \$20,000 per year. Part B consists of special tasks that occasionally will be needed to upgrade the sites or connection to the NGWMN Data Portal. Work allowable under Part B is described in Section 6 under Objective 2. There is no set funding limit for this work other than the annual and per project limit that applies to all projects.

Prepare a separate work plan and budget for work proposed under Part A and Part B. Work proposed under Part A and Part B will be evaluated and scored separately.

Part A: The following tasks should be included in the work plan for work under Part A for this objective. For each task, indicate who will be doing the work.

- Keep the list of sites in NGWMN Well Registry up to date. See the Populating the Well Registry tip sheet. Add any new qualified sites to the Well Registry and remove any sites that are no longer active.
- Classify any new sites according to Subnetwork and Monitoring Categories as described in the NGWMN Framework document and the Defining the Subnetwork and Defining Monitoring Categories tip sheets. Review classification of existing sites to see if they are still appropriate.
- Populate data elements for any new sites in agency databases and the NGWMN Well Registry. See the Populating the Well Registry tip sheet.
- Keep site information on existing sites updated in the Well Registry as new data becomes available.
- Maintain web services connections to the NGWMN Portal. NGWMN Portal staff will be in communication with the agency staff if the web services are not providing data for several days.
- In conjunction with the NGWMN Portal staff, update web services to serve any new required elements. New required elements will be occasionally added to the Minimum Data Requirements tip sheet.
- Review NGWMN Data Portal Data Provider pages for your agency and provide updates to the NGWMN, as needed.
- Document persistent data services activities in final report for the project.

Part B: The following tasks should be included in the work plan for work under part B for this objective. For each task indicate who will be doing the work.

The following tasks should be included in the work plan for this objective for a data provider who will be adding more than 20 new sites:

- Select sites for the NGWMN. Describe the new sites to be added and why they would benefit the NGWMN. Select appropriate sites for the NGWMN according to criteria in the NGWMN Framework document, the Well Selection Criteria for Water Levels and Well Selection Criteria for Water Quality tip sheets, and the Minimum Data Requirements tip sheet.
- Provide a map showing potential new sites, active NGWMN sites (including those from other agencies) and the Principal Aquifer.
- Classify sites into Subnetworks and Monitoring Categories: Classify sites as described in the NGWMN Framework document and Defining the Subnetwork and Defining Monitoring Categories tip sheets.
- Provide required data elements for selected sites. Data are provided either in the Well Registry or through web services. The required data elements are listed and the source of data for each element is described in the Minimum Data Requirements tip sheet.
- Populate the NGWMN Well Registry with site and network information. See the Populating the Well Registry tip sheet. This can be done by populating the site and network data in a NGWMN provided templated spreadsheet and uploading that spreadsheet into the Well Registry.
- Prepare a brief report. Document the work done for the tasks above. This should include the criteria used to select and classify wells.

The following tasks should be included in the work plan for this objective for a data provider who will adding web services:

- Connect agency databases to the NGWMN Portal using web services. Describe the new web services that are to be added to the NGWMN. Explain why they were not included in the original project and why they would benefit the network now. Guidance for setting up the web services is available in the Web Service Development tip sheet.
- If applicable, set up the Water-quality web services using guidance given in the Water-Quality Services tip sheet.
- Prepare a brief report. Document the work done for the tasks above. This should include a description of web services set up for the project.

Other work can also be included in this objective. This can include updates to existing services, adding new fields to existing services, or upgrading existing services to XML standards. This can also cover modifications to existing databases to store fields required as Minimum Data Elements by the NGWMN and the modifications to existing web services to serve these new fields. For each work item proposed, include the following:

- Describe the need for the work, the planned approach and the benefit to the NGWMN.
- Describe the tasks needed to accomplish the work.
- Document any work in the final report for the project.

If you have work proposed for both Part A and Part B in the same proposal, provide separate work plans and budgets for Part A and B.

Work under this objective does not require any agency in-kind services match.

Objective 3: Filling gaps in information at NGWMN sites

Multiple site information gaps can be addressed as part of this objective. Make sure to provide background information, specific work needed, and the cost for each gap. Include a timeline that shows all the site information gaps and a planned timeframe for all tasks required for each gap.

A Data Management Plan is required for any data collected or added to agency databases. All projects that are proposing work under Objective 3 should include this work in their Data Management Plan.

The following information should be provided for each proposed site information gap filling task:

- Describe the information gap. Refer to the [Minimum Data Requirements](#) tip sheet as needed.
- Describe your planned approach to fill the gap.
- Describe any field techniques and equipment you will be using to collect data. Provide references for methods, if applicable.
- **Provide a table of the proposed data-collection activities at each well including the NGWMN site number and the approximate cost of the work.**
- Include a map of sites where work is proposed. The map should include the Principal aquifer.
- Describe your plan to perform quality assurance on new data as it is collected and entered into databases.
- If any GPS work is proposed, specify the equipment and methods to be used and the expected vertical and horizontal accuracy.

The following tasks should be included in the work plan for this objective. For each task indicate who will be doing the work and their qualifications:

- For each site information gap, describe all tasks needed to complete the work.
- Document gap filling activities in the final report for the project.

Work under Objective 3 can be done under a New Data Provider Project. If all potential sites have data missing, work can be proposed to correct this for the approximate number of sites that are expected to be selected. If only some potential sites are missing required elements, propose work for the approximate number of sites. In this case, a table of sites for which work is to be done is not required.

Objective 4: Well maintenance

Multiple well maintenance activities can be addressed as part of this objective. Make sure to provide background information, specific work needed, and the cost for each activity. Include a timeline that shows all the well maintenance activities and a planned timeframe for all tasks required for each activity. Photographs of wells needing maintenance can be helpful.

A table of sites requiring well maintenance is required. Specific maintenance activities to be performed at each well must be listed. Show the cost of work to be conducted at each site. Include a map of the sites for proposed maintenance activities in relation to existing NGWMN sites.

A Data Management Plan is required for any data collected or added to agency databases. Any data collected as part of well maintenance activities should be entered into agency databases and included in the Data Management Plan.

The following information should be provided for each proposed well maintenance activity:

- Describe the need for the maintenance activity.
- Describe the approach that will be used for the activity. Provide references, if possible.
- **Provide a table of the proposed maintenance activities at each well that includes the NGWMN site number and the approximate cost of the work.** This table should be included as an appendix to the proposal and will not count against the page limit for the proposal. All wells for which well maintenance work is proposed need to be in the NGWMN Well Registry by the due date for this funding opportunity.
- Include a map of sites where work is proposed. The map should include the Principal aquifer.
- Summarize the total cost of the proposed maintenance work.
- For Well rehabilitation/repair or redevelopment activities include a paragraph for each well for which work is proposed that includes:
 - Background and history of the well.
 - The benefit of the well to the NGWMN.
 - Evidence of impairment.
 - Explanation of how the planned approach will resolve the impairment. Describe past successes with the method.
 - For repairs, provide details on the current well construction and describe the proposed construction after the repair.
 - Cost of the proposed work.
- For periodic pumping of wells to maintain connection to the aquifer, specify the planned pumping frequency (ex: every 5 years). Well pumping work should be as quantitative as possible so that results through time can be used to assess

changes in the connection to the aquifer connectivity. Drawdown measurement and calculation of specific capacity is encouraged.

- For more detailed well integrity testing a quantitative method such as a slug test or aquifer test is preferred. These allow determination of properties that can help assess changes in the well integrity after repeated measurement. Include references for any slug or aquifer test methods and any planned analysis techniques.
- For periodic pumping or well integrity testing include a paragraph describing the need for the work and the planned approach for collection and analysis. A separate paragraph for each well is not required for well integrity testing. For slug tests include details on the slug testing work. This should include; the type of slug test (physical slug or air slug), the diameter of the slug, data recording interval, and the number of field personnel needed for the slug testing.

The following tasks should be included in the work plan for this objective. Indicate who will be doing the work and their qualifications:

- For each well maintenance activity, describe the tasks needed to complete the work.
- Describe plans to enter and perform quality assurance on any data collected during well maintenance in your database.
- Document well maintenance work in the final project report.

Work is not allowed under Objective 4 in a proposal for a new data provider project.

Objective 5: Well drilling

Provide a table of all proposed new or replacement wells. Include the proposed depth, Principal Aquifer, and approximate cost of each well. If the well is to be a replacement for an existing NGWMN site, list the existing site name and NGWMN number, and the period of record.

Include a map showing proposed new or replacement wells. Map should include existing NGWMN sites (including sites from other agencies) and the Principal aquifer.

Provide the following information on your well drilling plans:

- Describe proposed drilling methods and the reason for their use. Provide references, if necessary. Justify the use of advanced drilling methods such as sonic drilling.
- A well construction diagram is beneficial. For proposals with multiple wells, a generic construction diagram is acceptable.
- Demonstrate that you will meet any state drilling requirements.
- Describe who you plan to have drill the wells. If the wells are to be drilled by agency staff, they must possess required permits or licenses.
- Ensure that all wells drilled for the NGWMN are entered in the NGWMN Well Registry. This includes wells drilled as in-kind services. When a replacement

well is proposed, the original well can remain in the NGWMN Data Portal to provide historic data but no longer needs to be measured.

- **Include a signed copy of SF-424D** (Assurances – Construction Programs) when submitting the proposal through Grants.gov.
- Total cost of each well should include well drilling costs (either in-house or contracted), supplies, equipment, travel, salaries of agency staff in planning and installing the well. This allows partial funding of select wells, if necessary.

The following information should be provided for each proposed new well or replacement well. Any wells drilled as part of in-kind services should be described with the same level of detail.

- For any proposed new NGWMN wells, include a paragraph for each well that clearly describes the need for the well in the NGWMN. Describe the NGWMN data gap in terms of the NGWMN Well Density guidelines. Demonstrate, as best you can, that no other existing wells from the USGS or other agencies are available to fill the gap. Describe any reconnaissance work that you have done on the site and any efforts made to obtain landowner permission to drill the well. Describe the Principal aquifers which will be monitored and what gaps will be filled by the well. Include the estimated depth of the well and proposed well construction plans. Provide the estimated cost to drill the well.
- For any proposed replacement wells include a paragraph for each well. Provide the history of the well. Explain how the well fills a gap in the NGWMN. Explain why well is unsuitable. Explain why rehabilitation of the existing NGWMN well is not possible or cost-effective. Explain why the replacement well is needed for the NGWMN. Provide the construction details for the well to be replaced and for the proposed well. This should show that the proposed well will monitor the same aquifer as the well it is replacing. Provide the estimated cost to drill the well. Describe any efforts to establish a correlation between the new and replacement wells.

The following items are examples of what might be included in the work plan for this objective:

- Planning and preparation for well drilling
- Site reconnaissance
- Obtaining landowner permission for drilling and access.
- Well drilling
- Sealing of existing well when drilling a replacement NGWMN well
- Data collection at the new well to obtain minimum data elements for the NGWMN. This can include geophysical logging, GPS surveys, and well integrity testing.
- Classifying new wells according to Tip Sheets.
- Entry of well-construction details on new well into agency database and NGWMN Well Registry.

- Documenting well-drilling activities in the final report for the project. All data collected on the new well needs to be publicly available either through the portal, in the project report, or online.

Work is not allowed under Objective 5 in a proposal for a new data provider project. Funding cannot be used to purchase land or obtain easements for drilling.

Objective 6: Purchase equipment to support continuous water-level data collection

Provide a narrative on the need for the equipment purchase. Describe if the equipment will be used to replace equipment at current NGWMN sites or to upgrade current NGWMN to continuous water-level data collection. Describe how the equipment will help fill gaps in the NGWMN Trend Monitoring Network. Describe any equipment that will be purchased under this objective. Include the manufacturer, model, per unit cost, per foot cost for transducer cable, and your reason for selecting the equipment.

Include a table showing each well for which equipment will be purchased. This table should include: the NGWMN Site Number, the principal aquifer, the current monitoring frequency of the site (continuous, monthly, quarterly, annually, etc.), the current monitoring category of the site (Trend, Surveillance), the well depth, datalogger model, transducer model, cable per foot costs, and the length of cable required.

This objective can be used to cover only equipment costs. Salary costs for this objective are only allowed to produce the required documentation for the final report. Salary costs associated with equipment purchase or installation can be used as in-kind services. The final report should provide a summary of the equipment purchased and a list of each well showing the equipment purchased and the date the equipment was installed.

C. Overall Budget and Detailed Budget for each Objective

An overall summary budget for the entire project should be provided using the following format. Example budget summaries are included in Attachment B.

Format for Budget Summary

Indirect cost rate: xx%

Category	Federal Funding	Agency In-Kind Funding	Total Funding
1. Salary (wages, fringe)			
2. Supplies			
3. Equipment			
4. Travel			
5. Contracts			
6. Total Direct Costs (sum of items 1-5)			
7. Indirect cost			
8. Total Cost (sum of 6 and 7)			

Format for Detailed Budgets for each Objective

A detailed budget is required for each requested objective. Separate budgets will allow the NGWMN to fund objectives in proposals independently based on NGWMN priorities. The cost for the objective should include the work to be funded by the USGS and any agency in-kind services. The in-kind services can include agency work to collect and maintain their sites that are part of the NGWMN if the work takes place during the performance period of the project. The in-kind services work to collect data at NGWMN sites should be included in the detailed budget for the objective and should include details on the number of sites for which data is collected. This data collection work can include both salaries and travel to collect NGWMN data. Examples of a detailed budget for each objective are provided in Attachment B. Provide a detailed budget for each objective in a similar format.

- 1) Objective name and type
- 2) Overall budget summary
Provide cost of federally funded portion cost of objective, cost of in-kind services provided as match, and total cost of objective.
Provide overhead rate used to calculate indirect costs (See note on indirect costs in section below budget).
- 3) Budget
 - a) Salary: Provide a table with the following items for each staff member that will provide services on the objective:
 1. Employee name,
 2. Task,
 3. Hourly rate of compensation,
 4. Hourly rate of fringe benefit,
 5. Total hourly rate (a3 + a4),
 6. Number of hours,
 7. Salary cost (a5 x a6),
 8. Indirect cost (a7 x indirect rate),

9. Total cost (a7 + a8),
 10. Federal funds,
 11. Agency in-kind funds.
- b) Supplies: For each major type of supply, enter a description and the cost for supplies needed for the project:
1. Type,
 2. Cost per unit,
 3. Number,
 4. Cost of supplies (b2 x b3),
 5. Indirect cost (b4 x indirect rate),
 6. Total cost (b4 + b5),
 7. Federal funds,
 8. Agency in-kind funds.
- c) Equipment: Enter a description and the cost for each piece of equipment needed for the project. List any computer purchases separately. If possible, computer purchases should be as in-kind services to avoid property ownership issues. Equipment should be described in detail in work plan:
1. Description,
 2. Cost per unit,
 3. Number,
 4. Cost of equipment (c2 x c3),
 5. Indirect cost (c4 x indirect rate),
 6. Total cost (c4 + c5),
 7. Federal funds,
 8. Agency in-kind funds.
- d) Travel: Provide detailed information on proposed travel (i.e. where to, why, how many, how long, per diem and lodging rates, etc.):
1. Traveler name/reason for travel,
 2. Number of nights of lodging,
 3. Lodging cost per night,
 4. Number of days of meals,
 5. Meal cost per day,
 6. Meal and lodging cost ((d2 x d3) + (d4 x d5)),
 7. Miles traveled,
 8. Cost per mile,
 9. Mileage cost (d7 x d8),
 10. Travel cost (d6 + d9),
 11. Indirect cost (d10 x indirect rate),
 12. Total cost (d10 + d11),
 13. Federal funds,
 14. Agency in-kind funds.
- e) Contracts: Describe any contractual activity planned to accomplish the work:

Contracts- Salary

- (1) Description of work,
- (2) Hourly rate of compensation,
- (3) Hourly rate of fringe benefit,
- (4) Total hourly rate (col 2 + col 3),
- (5) Number of hours,
- (6) Salary cost (col 4 x col 5)
- (7) Federal funds,
- (8) Agency in-kind funds.

Contracts- Supplies

- (1) Type,
- (2) Unit Type (per foot or each),
- (3) Cost per unit,
- (4) Number,
- (5) Cost of supplies (col 3 x col 4),
- (6) Federal funds,
- (7) Agency in-kind funds.

Contracts- Equipment

- (1) Description,
- (2) Unit Type (each or per day, etc.)
- (3) Cost per unit,
- (4) Number,
- (5) Cost of equipment (col 3 x col 4),
- (6) Federal funds,
- (7) Agency in-kind funds.

Contracts- Travel

- (1) Traveler name/reason for travel,
- (2) Number of nights of lodging,
- (3) Lodging cost per night,
- (4) Number of days of meals,
- (5) Meal cost per day,
- (6) Meal and lodging cost ((col 2 x col 3) + (col 4 x col 5)),
- (7) Miles traveled,
- (8) Cost per mile,
- (9) Mileage cost (col 7 x col 8),
- (10) Travel cost (col 6 + col 9),
- (11) Federal Funds,
- (12) Agency in-kind funds.

Contracts- Well Drilling or Well Maintenance

- (1) Description,
- (2) Unit Type (per foot or each),
- (3) Cost per unit,
- (4) Number,
- (5) Cost (col 3 x col 4),
- (6) Federal funds,
- (7) Agency in-kind funds.

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 as an appendix** (this will not count towards the page limit on the proposal). 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), which should be applied to items a-d above (Salary, Supplies, Equipment, and Travel).

D. Timeline for each Objective

Provide a separate timeline for each objective showing the planned timing of all tasks. The example below shows an example timeline for a new data provider project. Objective 1 to become a new data provider is completed in the first year of the project. Objective 2 to provide persistent data service is planned for the second year of the project. Provide a timeline for each objective in a similar format. For multi-year projects, include the submission of the required progress report in your timeline.

Example timeline for Objective 1, Year 1

Task	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Select wells	X	X										
Classify wells			X	X	X							
Add sites to well registry						X	X					
Establish web services								X	X	X		
Progress Report											X	

Example timeline for Objective 2, Year 2

Task	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Review network sites	X	X										
Add sites to well registry			X									
Maintain web services	X	X	X	X	X	X	X	X	X	X	X	X
Final Report											X	X

E. Data Management Plan

Proposals submitted to USGS must include a supplementary document 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. Data Management Plans should include any water-level or water-quality data provided to the NGWMN. The Data Management Plan should include all water-level and water-quality data collected by the agency and supplied to the NGWMN.

The Data Management Plan should include the following elements:

Type of Data: Describe the types of data to be produced during the project. This should include any water-level or water-quality data that is provided to the NGWMN.

Data and Metadata Standards: Describe the standards to be used for data and metadata format and content (where existing standards are absent or deemed inadequate, this should be documented along with any proposed solutions or remedies).

Policies for Access and Sharing: Describe policies for access and sharing of data including provisions for appropriate protection of privacy, confidentiality, security, intellectual property, or other rights or requirements. Data collected should be available through the NGWMN Data Portal.

Provisions for Re-use, Re-distribution: Discuss how the data can be re-used or re-distributed. Note that NGWMN data must to be available to the public without restriction through the NGWMN Data Portal.

Plans for Archiving and Preservation of Access: Discuss plans to archive and preserve any data, samples, and other research products and provide free public access to them.

Additional guidance on data management plans is available from the USGS Data Management web site here: <http://www.usgs.gov/datamanagement/plan/dmplans.php>. An example Data Management Plan for a data provider with both water-level and water-quality data is available [here](#).

Data Management Plans should include details about specific data collected or entered into a database as part of the project.

Note: The Data Management Plan does not count toward the 20-page limit.

F. Staff Qualifications

Provide a short paragraph describing the qualifications of each staff member who will be working on the project. The qualifications should include brief background, education, and experience related to the tasks they will be working on. The staff qualifications should be no more than 300 words for each staff member listed.

G. Supporting Letters

Proposals that include work done by another agency as part of the project or that require cooperation with another agency should include a letter of support/concurrence from the other agency. The letter does not need to be detailed but should indicate that the agency is aware of the project and the letter should briefly describe their part of the proposed work.

Agencies that are data providers through a Cooperative Matching Funds project with the local USGS Water Science Center must include a letter of concurrence from a Water Science Center representative (Specialist, Data Chief, or Center Director) that they are aware of the work. If part of the project is to enter data into the USGS NWIS database, the letter should indicate the Centers awareness and willingness to do the proposed work.

Letters of support do not count towards the page limit.

12. 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 NGWMN Program Office, the institution and principal investigator will be promptly notified that the proposal will not be reviewed and told the reason for its rejection.

13. Application Evaluation Procedure and Criteria

Applications will be reviewed by the USGS NGWMN staff and the NGWMN Program Board. The NGWMN Program Board will review all proposals prior to a Program Board meeting and will score each proposal according to the evaluation criteria. The NGWMN Program Board members consist of 6 NGWMN data providers and 4 representatives from organizations involved with the NGWMN.

The allowable objectives will be evaluated according to the following priorities which focus on first building the Network by bringing in data providers and maintaining the Network by supporting exiting data providers. The priority of the objectives in terms of NGWMN funding is as follows:

- Support persistent data service from existing data providers (Objective 2A)
- Support persistent data service from existing data providers (Objective 2B)
- Support to become a new data provider or expansion of services/sites by existing data providers (Objective 1)
- Work proposed under Objectives 3-6 are prioritized using the scores described below

All proposed objectives will be evaluated individually in accordance with the criteria below. Each criterion will be scored on a scale from 1 to 10.

1. **Proposal Quality.** This factor considers the overall quality of the proposal. This criterion will apply to the overall proposal. The same score will be applied to each objective in the proposal
 - The proposal is well-written and adequately proofread
 - The proposal is complete
 - Maps, figures, and tables meet guidelines of the Program Announcement
 - Required elements are present
 - Adequate background information
 - Staff qualifications
 - Timeline for each objective
 - Data Management Plan
 - Detailed budgets for each objective
 - The detailed budget follows the specified format
 - Overall budget for the entire project
2. **Relevance.** This factor considers the relevance and importance of the activity as it relates to the USGS NGWMN Program goals and can include the geographic area and Principal aquifers being proposed.
 - The proposed work helps fill gaps in the NGWMN or enhances the data available to the NGWMN
 - The proposed work supports the long-term goals of the NGWMN
 - The proposal states the benefits of the work to the NGWMN
3. **Technical Quality.** This factor considers the merit of the proposed approach, the chance of success, attention to NGWMN requirements, and completion of required products.
 - The work plan follows the requirements of the Program Announcement for the objective
 - The work plan adequately describes the need for the work.
 - The approach to complete the work is clearly defined and reasonable
 - Includes consideration of requirements from the NGWMN Framework Document and/or Tip Sheets
 - Techniques are adequately described and referenced
4. **Budget.** This factor considers whether the proposed budget reflects the level of effort required to accomplish the work.
 - Specific tasks in the work plan are included in the detailed budget
 - The detailed budget contains adequate detail on both Federally funded work and in-kind services
 - Costs and hours for the work are reasonable and justified
 - Work proposed under Objectives 3, 4,5, or 6 that provide at least 25% match will receive a bonus score. Match from 25-33% will receive a one-point bonus.

Match from 34-49% will receive a two-point bonus. Match of at least 50% will receive a three-point bonus.

- Because of the potential match bonus, the budget criterion can have a maximum value of 13.

14. 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. 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 cooperative agreement is in place.

15. Award Terms and Conditions

Award Recipient must comply with award Terms and Conditions (Attachment C). 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. New Data providers should have objectives involved in establishing connection to the Network in year 1 of a 2-year project.
- C. Project Report. A final technical report must be completed and submitted to the USGS with 90-days of the end date of the project.

Attachment A - Proposal Information Summary Template

USGS National Ground-Water Monitoring Network Cooperative Agreement Proposal Information Summary

Use the format below for the Proposal Information Summary

1. Project Title: The title of the proposal. Should be short title and should match that used in the title box of Form SF-424.
2. Principal Investigator: **List one Principal Investigator/Technical Contact Name and contact information here**
(Name)
(Institute/Organization Name)
(Street Address/P.O. Box)
(City, State, Zip Code)
(Telephone Number), (E-mail Address)
3. Authorized Institutional Representative: **Provide name of Institutional/Financial contact here**
(Name)
(Institute/Organization Name)
(Organizational Unit)
(Street Address/P.O. Box)
(City, State, Zip Code)
(Telephone Number), (E-mail Address)
4. Amount Requested: List total amount requested for project and the total for each year of the project.
5. Proposed Start Date: (The date you would like to start work; between November 1, 2021 and December 30, 2021)
6. Proposed Duration: (12 or 24 months)
7. Data Provider Status: Indicate status as 'New' or 'Existing' data provider. Existing data providers, provide the date you started working with the NGWMN as a data provider and the date and title of your last proposal.
8. Objectives included in proposal List each objective which is included in the proposal. **Provide the total USGS funding requested for each objective.**

Attachment B – Example budgets

Examples are presented here for two hypothetical projects. Example 1 is for a new data provider project and includes work under Objective 1 and Objective 2A. Example 2 is for a project with an existing data provider and includes work under Objectives 2A, 2B, 3, 4, 5, and 6. Each includes a summary budget for the project followed by the detailed budgets for each objective. The objective budgets are for the entire project and should not be split into year one and year two budgets for multi-year projects.

All budgets use an example overhead rate of 31.3%. The actual overhead rate for your agency should be that shown in your organizations Negotiated Rate Agreement. A uniform cost of \$40/hour is used for simplicity. In an actual proposal, salaries would vary by employee.

Example Budget 1

The example budget summary below summarizes the detailed budgets for Objectives 1 and 2 on the following pages. This simulates an overall budget for a two-year project for a new data provider. In this example, indirect costs are applied only to the Salary budget category.

Indirect cost rate: 31.3%

Category	Federal Funding	Agency In-Kind Funding	Total Funding
1. Salary	\$25,600.00	\$0.00	\$25,600.00
2. Supplies	\$0.00	\$0.00	\$0.00
3. Equipment	\$0.00	\$0.00	\$0.00
4. Travel	\$0.00	\$0.00	\$0.00
5. Contracts	\$14,000.00	\$0.00	\$14,000.00
6. Total Direct (sum of items 1-5)	\$39,600.00	\$0.00	\$39,600.00
7. Indirect cost	\$8,012.80	\$0.00	\$8,012.80
8. Total Cost (sum of 6 and 7)	\$47,612.80	\$0.00	\$47,612.80

Example Budget 1

Objective 1. Become a new data provider for the NGWMN Overhead/indirect rate: 31.3%

USGS funding Total: \$36,583.60

In-kind services Total: \$0.00

Objective Total: \$36,583.60

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Select and classify wells	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$1,252.00	\$5,252.00	\$5,252.00	\$0.00
Employee 2	Setup web services	\$30.00	\$10.00	\$40.00	200	\$8,000.00	\$2,504.00	\$10,504.00	\$10,504.00	\$0.00
Employee 3	Add sites to well registry	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$1,252.00	\$5,252.00	\$5,252.00	\$0.00
Employee 4	Document work in final report	\$30.00	\$10.00	\$40.00	30	\$1,200.00	\$375.60	\$1,575.60	\$1,575.60	\$0.00
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					430	\$17,200.00	\$5,383.60	\$22,583.60	\$22,583.60	\$0.00

Example Budget 1

Objective 1, continued.

Contracts- Salary							
1)	2)	3)	4)	5)	6)	Source of funds	
Description of work	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (col 2 + col 3)	Number of hours	Salary cost (col 4 x col 5)	7)	8)
						Federal	Agency in-kind
Establish web services for water-level data	\$30.00	\$10.00	\$40.00	250	\$10,000.00	\$10,000.00	\$0.00
Interagency agreement to provide web services for well construction and lithology	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$4,000.00	\$0.00
Totals				Total hours	Salary total	Federal total	Agency total
				350	\$14,000.00	\$14,000.00	\$0.00

Example Budget 1

Objective 2A. Persistent Data Services Overhead/indirect rate: 31.3%

USGS funding Total: \$11,029.20

In-kind services Total: \$0.00

Objective Total: \$11,029.20

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Oversee persistent data services work	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$2,100.80	\$0.00
Employee 2	Database programming support	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$2,100.80	\$0.00
Employee 3	Update new wells in well registry	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$1,001.60	\$4,201.60	\$4,201.60	\$0.00
Employee 4	Assign subnetworks	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$2,100.80	\$0.00
Employee 4	Document work in final report	\$30.00	\$10.00	\$40.00	10	\$400.00	\$125.20	\$525.20	\$525.20	\$0.00
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					210	\$8,400.00	\$2,629.20	\$11,029.20	\$11,029.20	\$0.00

Example Budget 2

The example budget summary below summarizes the detailed budgets for Objectives 2A, 2B, 3, 4, 5, and 6 on the following pages. This simulates an overall budget for a two-year project for an existing data provider. In this example, indirect costs are applied to the Salary, Supplies, Equipment, and Travel budget categories.

Indirect cost rate: 31.3%

Category	Federal Funding	Agency In-Kind Funding	Total Funding
1. Salary	\$39,200.00	\$26,040.00	\$65,240.00
2. Supplies	\$3,470.00	\$525.00	\$3,995.00
3. Equipment	\$12,800.00	\$5,340.00	\$18,140.00
4. Travel	\$4,914.75	\$10,990.50	\$15,905.25
5. Contracts	\$9,417.00	\$7,900.00	\$17,317.00
6. Total Direct (sum of items 1-5)	\$69,801.75	\$50,795.50	\$120,597.25
7. Indirect cost	\$18,900.43	\$13,426.29	\$32,326.72
8. Total Cost (sum of 6 and 7)	\$88,702.18	\$64,221.79	\$152,923.97

Example Budget 2

Objective 2A. Persistent Data Services Overhead/indirect rate: 31.3%

USGS funding Total: \$16,596.32

In-kind services Total: \$0.00

Objective Total: \$16,596.32

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Oversee persistent data services work	\$30.00	\$10.00	\$40.00	120	\$4,800.00	\$1,502.40	\$6,302.40	\$6,302.40	\$0.00
Employee 2	Database programming support	\$30.00	\$10.00	\$40.00	120	\$4,800.00	\$1,502.40	\$6,302.40	\$6,302.40	\$0.00
Employee 3	Keep sites in new wells in well registry current	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$2,100.80	\$0.00
Employee 4	Assign subnetworks to new sites	\$30.00	\$10.00	\$40.00	20	\$800.00	\$250.40	\$1,050.40	\$1,050.40	\$0.00
Employee 4	Document work in final report	\$30.00	\$10.00	\$40.00	16	\$640.00	\$200.32	\$840.32	\$840.32	\$0.00
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					316	\$12,640.00	\$3,956.32	\$16,596.32	\$16,596.32	\$0.00

Example Budget 2

Objective 2B. Persistent Data Services Overhead/indirect rate: 31.3%

USGS funding Total: \$10,504.00

In-kind services Total: \$0.00

Objective Total: \$10,504.00

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Revise web services to account for changes to database	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$2,100.80	\$0.00
Employee 2	Upgrade web services to serve data using new standards	\$30.00	\$10.00	\$40.00	120	\$4,800.00	\$1,502.40	\$6,302.40	\$6,302.40	\$0.00
Employee 2	Work with NGWMN Portal staff to map new services	\$30.00	\$10.00	\$40.00	24	\$960.00	\$300.48	\$1,260.48	\$1,260.48	\$0.00
Employee 2	Document work in final report	\$30.00	\$10.00	\$40.00	16	\$640.00	\$200.32	\$840.32	\$840.32	\$0.00
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					200	\$8,000.00	\$2,504.00	\$10,504.00	\$10,504.00	\$0.00

Example Budget 2

Objective 3. Site Information Gap Filling

Overhead/indirect rate: 31.3%

USGS funding Total: \$17,883.06

In-kind services Total: \$18,287.46

Objective Total: \$36,170.52

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	GPS Survey of 16 wells	\$30.00	\$10.00	\$40.00	120	\$4,800.00	\$1,502.40	\$6,302.40	\$6,302.40	\$0.00
Employee 2	GPS Survey of 16 wells	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$1,252.00	\$5,252.00	\$5,252.00	\$0.00
Employee 3	Collect water-level data at 50 NGWMN sites	\$30.00	\$10.00	\$40.00	150	\$6,000.00	\$1,878.00	\$7,878.00	\$0.00	\$7,878.00
Employee 4	Data entry, QA/QC at 50 NGWMN sites	\$30.00	\$10.00	\$40.00	75	\$3,000.00	\$939.00	\$3,939.00	\$0.00	\$3,939.00
Employee 4	Document work in final report	\$30.00	\$10.00	\$40.00	20	\$800.00	\$250.40	\$1,050.40	\$0.00	\$1,050.40
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					465	\$18,600.00	\$5,821.80	\$24,421.80	\$11,554.40	\$12,867.40

Example Budget 2

Objective 3, continued.

b) Supplies							
1)	2)	3)	4)	5)	6)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (b2 x b3)	Indirect cost (b4 x indirect rate)	Total cost (b4 + b5)	7)	8)
						Federal	Agency in-kind
Survey markers	\$10.00	32	\$320.00	\$100.16	\$420.16	\$420.16	\$0.00
Totals			Direct cost total	Indirect total	Total cost	Federal total	Agency total
			\$320.00	\$100.16	\$420.16	\$420.16	\$0.00

c) Equipment							
1)	2)	3)	4)	5)	6)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (c2 x c3)	Indirect cost (c4 x indirect rate)	Total cost (c4 + c5)	7)	8)
						Federal	Agency in-kind
Rental of GPS equipment (10 days at \$450/day)	\$450.00	10	\$4,500.00	\$1,408.50	\$5,908.50	\$5,908.50	\$0.00
Totals			Direct cost total	Indirect total	Total cost	Federal total	Agency total
			\$4,500.00	\$1,408.50	\$5,908.50	\$5,908.50	\$0.00

Example Budget 2

Objective 3, continued.

d) Travel													
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)	12)	Source of funds	
												13)	14)
Traveler name / reason for travel	Number of nights of lodging	Lodging cost per day	Number of days of meals	Meal cost per day	Meal and lodging ((d2 x d3) + (d4 x d5))	Miles traveled	Cost per mile	Mileage cost (d7 x d8)	Travel cost (d6 + d9)	Indirect cost (d10 x indirect rate)	Total cost (d10 + d11)	Federal	Agency in- kind
Employee 1 (surveying wells)	4	\$93.00	5	\$51.00	\$627.00	250	\$0.545	\$136.25	\$763.25	\$238.90	\$1,002.15	\$0.00	\$1,002.15
Employee 2 (surveying wells)	4	\$93.00	5	\$51.00	\$627.00	250	\$0.545	\$136.25	\$763.25	\$238.90	\$1,002.15	\$0.00	\$1,002.15
Employee 3 (collect data at 50 NGWMN wells)	14	\$93.00	18	\$51.00	\$2,200.00	700	\$0.545	\$381.50	\$2,601.50	\$814.27	\$3,415.77	\$0.00	\$3,415.77
Totals									Direct cost total	Indirect total	Total cost	Federal total	Agency total
									\$4,128.00	\$1,292.06	\$5,420.06	\$0.00	\$5,420.06

Example Budget 2

Objective 4. Well Maintenance Overhead/indirect rate: 31.3%

USGS funding Total: \$22,679.27

In-kind services Total: \$22,087.94

Objective Total: \$43,767.21

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Well Repairs- Shelter replacement	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$2,100.80	\$0.00
Employee 2	Well Repairs- Shelter replacement	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$0.00	\$2,100.80
Employee 1	Borehole camera survey and well depth measurement	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$1,001.60	\$4,201.60	\$4,201.60	\$0.00
Employee 2	Borehole camera survey and well depth measurement	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$1,001.60	\$4,201.60	\$0.00	\$4,201.60
Employee 1	Slug testing	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$1,001.60	\$4,201.60	\$4,201.60	\$0.00
Employee 2	Slug testing	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$1,001.60	\$4,201.60	\$0.00	\$4,201.60
Employee 3	Slug testing data analysis	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$500.80	\$2,100.80	\$0.00	\$2,100.80
Employee 1	Document work in final report	\$30.00	\$10.00	\$40.00	50	\$2,000.00	\$626.00	\$2,626.00	\$0.00	\$2,626.00
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					490	\$19,600.00	\$6,134.80	\$25,734.80	\$10,504.00	\$15,230.80

Example Budget 2

Objective 4, continued.

b) Supplies							
1)	2)	3)	4)	5)	6)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (b2 x b3)	Indirect cost (b4 x indirect rate)	Total cost (b4 + b5)	7)	8)
						Federal	Agency in-kind
Padlocks for shelters	\$25.00	21	\$525.00	\$164.33	\$689.33	\$0.00	\$689.33
New shelters	\$150.00	21	\$3,150.00	\$985.95	\$4,135.95	\$4,135.95	\$0.00
Totals			Direct cost total	Indirect total	Total cost	Federal total	Agency total
			\$3,675.00	\$1,150.28	\$4,825.28	\$4,135.95	\$689.33

c) Equipment							
1)	2)	3)	4)	5)	6)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (c2 x c3)	Indirect cost (c4 x indirect rate)	Total cost (c4 + c5)	7)	8)
						Federal	Agency in-kind
Tripod for slug tests	\$100.00	2	\$200.00	\$62.60	\$262.60	\$0.00	\$262.60
Software for analyzing slug tests	\$1,000.00	1	\$1,000.00	\$313.00	\$1,313.00	\$1,313.00	\$0.00
Totals			Direct cost total	Indirect total	Total cost	Federal total	Agency total
			\$1,200.00	\$375.60	\$1,575.60	\$1,313.00	\$262.60

Example Budget 2

Objective 4, continued.

d) Travel													
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)	12)	Source of funds	
												13)	14)
Traveler name / reason for travel	Number of nights of lodging	Lodging cost per day	Number of days of meals	Meal cost per day	Meal and lodging ((d2 x d3) + (d4 x d5))	Miles traveled	Cost per mile	Mileage cost (d7 x d8)	Travel cost (d6 + d9)	Indirect cost (d10 x indirect rate)	Total cost (d10 + d11)	Federal	Agency in- kind
Employee 1, Replace shelters at 10 wells	4	\$93.00	5	\$51.00	\$627.00	500	\$0.545	\$272.50	\$899.50	\$281.54	\$1,181.04	\$1,181.04	\$0.00
Employee 2, Replace shelters at 11 wells	4	\$93.00	5	\$51.00	\$627.00	500	\$0.545	\$272.50	\$899.50	\$281.54	\$1,181.04	\$0.00	\$1,181.04
Employee 1, Borehole camera survey and well depth measurement	8	\$93.00	10	\$51.00	\$1,254.00	1000	\$0.545	\$545.00	\$1,799.00	\$563.09	\$2,362.09	\$2,362.09	\$0.00
Employee 2, Borehole camera survey and well depth measurement	8	\$93.00	10	\$51.00	\$1,254.00	1000	\$0.545	\$545.00	\$1,799.00	\$563.09	\$2,362.09	\$0.00	\$2,362.09
Employee 1, Slug testing	8	\$93.00	10	\$51.00	\$1,254.00	750	\$0.545	\$408.75	\$1662.75	\$520.44	\$2,183.19	\$2,183.19	\$0.00
Employee 2, Slug testing	8	\$93.00	10	\$51.00	\$1,254.00	1000	\$0.545	\$545.00	\$1,799.00	\$563.09	\$2,362.09	\$0.00	\$2,362.09
Totals									Direct cost total	Indirect total	Total cost	Federal total	Agency total
									\$8,858.75	\$2,772.79	\$11,631.54	\$5,726.32	\$5,905.22

Example Budget 2

Objective 5. Well Drilling Overhead/indirect rate: 31.3%

USGS funding Total: \$12,034.47

In-kind services Total: \$12,160.69

Objective Total: \$24,195.15

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Well drilling support-Well 1	\$30.00	\$10.00	\$40.00	16	\$640.00	\$200.32	\$840.32	\$840.32	\$0.00
Employee 2	Drilling contract, site scoping and access agreements- Well 1	\$30.00	\$10.00	\$40.00	20	\$800.00	\$250.40	\$1,050.40	\$1,050.40	\$0.00
Employee 1	Well drilling support-Well 2	\$30.00	\$10.00	\$40.00	16	\$640.00	\$200.32	\$840.32	\$0.00	\$840.32
Employee 2	Drilling contract, site reconnaissance and access agreements-Well 2	\$30.00	\$10.00	\$40.00	20	\$800.00	\$250.40	\$1,050.40	\$0.00	\$1,050.40
Employee 2	Document work in final report	\$30.00	\$10.00	\$40.00	20	\$800.00	\$250.40	\$1,050.40	\$0.00	\$1,050.40
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					92	\$3,680.00	\$1,151.84	\$4,831.84	\$1,890.72	\$2,941.12

Example Budget 2

Objective 5, continued.

d) Travel													
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)	12)	Source of funds	
												13)	14)
Traveler name / reason for travel	Number of nights of lodging	Lodging cost per day	Number of days of meals	Meal cost per day	Meal and lodging ((d2 x d3) + (d4 x d5))	Miles traveled	Cost per mile	Mileage cost (d7 x d8)	Travel cost (d6 + d9)	Indirect cost (d10 x indirect rate)	Total cost (d10 + d11)	Federal	Agency in- kind
Employee 1/ well support- Well 1	2	\$93.00	3	\$51.00	\$339.00	300	\$0.545	\$163.50	\$502.50	\$157.28	\$659.78	\$0.00	\$659.78
Employee 2/ well support- Well 1	1	\$93.00	2	\$51.00	\$195.00	150	\$0.545	\$81.75	\$276.75	\$86.62	\$363.37	\$363.37	\$0.00
Employee 1/ well support- Well 2	2	\$93.00	3	\$51.00	\$339.00	300	\$0.545	\$163.50	\$502.50	\$157.28	\$659.78	\$0.00	\$659.78
Employee 2/ well support- Well 2	1	\$93.00	2	\$51.00	\$195.00	150	\$0.545	\$81.75	\$276.75	\$86.62	\$363.37	\$363.37	\$0.00
Totals									Direct cost total	Indirect total	Total cost	Federal total	Agency total
									\$1,558.50	\$487.81	\$2,046.31	\$726.75	\$1,319.57

Example Budget 2

Objective 5, continued.

Contracts- Salary							
1)	2)	3)	4)	5)	6)	Source of funds	
Description of work	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (col 2 + col 3)	Number of hours	Salary cost (col 4 x col 5)	7)	8)
						Federal	Agency in-kind
Well 1– Driller, Permits	\$30.00	\$10.00	\$40.00	4	\$160.00	\$160.00	\$0.00
Well 1- Driller, planning and prep	\$30.00	\$10.00	\$40.00	8	\$320.00	\$0.00	\$320.00
Well 1- Driller, Well development	\$30.00	\$10.00	\$40.00	8	\$320.00	\$160.00	\$160.00
Well 1- Driller Assistant, Well development	\$30.00	\$10.00	\$40.00	8	\$320.00	\$0.00	\$320.00
Well 2– Driller, Permits	\$30.00	\$10.00	\$40.00	4	\$160.00	\$160.00	\$0.00
Well 2- Driller, planning and prep	\$30.00	\$10.00	\$40.00	8	\$320.00	\$0.00	\$320.00
Well 2- Driller, Well development	\$30.00	\$10.00	\$40.00	8	\$320.00	\$160.00	\$160.00
Well 2- Driller Assistant, Well development	\$30.00	\$10.00	\$40.00	8	\$320.00	\$0.00	\$320.00
Totals				Total hours	Salary total	Federal total	Agency total
				56	\$2,240.00	\$640.00	\$1,600.00

Example Budget 2

Objective 5, continued.

Contract- Supplies						
1)	2)	3)	4)	5)	Source of funds	
Type	Unit Type (per foot or each)	Cost per unit	Number	Cost of supplies (col 3 x col 4)	6)	7)
					Federal	Agency in- kind
Well 1- PVC casing	per foot	\$2.00	200	\$400.00	\$0.00	\$400.00
Well 1- PVC screen	per foot	\$2.00	200	\$400.00	\$0.00	\$400.00
Well 1- grout	each	\$100.00	1	\$100.00	\$0.00	\$100.00
Well 1- sand pack	each	\$100.00	1	\$100.00	\$0.00	\$100.00
Well 1- Cap and protective top	each	\$50.00	1	\$50.00	\$0.00	\$50.00
Well 2- PVC casing	per foot	\$2.00	200	\$400.00	\$400.00	\$0.00
Well 2- PVC screen	per foot	\$2.00	200	\$400.00	\$400.00	\$0.00
Well 2- Grout	each	\$100.00	1	\$100.00	\$100.00	\$0.00
Well 2- Sand pack	each	\$100.00	1	\$100.00	\$100.00	\$0.00
Well 2- Cap and protective top	each	\$50.00	1	\$50.00	\$50.00	\$0.00
Totals				Supplies total	Federal total	Agency total
				\$2,100.00	\$1,050.00	\$1,050.00

Example Budget 2

Objective 5, continued.

Contract- Travel											
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	Source of funds	
										13)	14)
Traveler name / reason for travel	Number of nights of lodging	Lodging cost per day	Number of days of meals	Meal cost per day	Meal and lodging ((col 2 x col 3) + (col 4 x col 5))	Miles traveled	Cost per mile	Mileage cost (col 7 x col 8)	Travel cost (col 6 + col 9)	Federal	Agency in-kind
Driller	6	\$93.00	8	\$51.00	\$966.00	500	\$0.545	\$272.50	\$1,238.50	\$1,238.50	\$0.00
Driller assistant	6	\$93.00	8	\$51.00	\$966.00	500	\$0.545	\$272.50	\$1,238.50	\$1,238.50	\$0.00
Totals									Travel total	Federal total	Agency total
									\$2,477.00	\$2,477.00	\$0.00

Contract- Well Drilling						
1)	2)	3)	4)	5)	Source of funds	
					6)	7)
Type	Unit Type (per foot or each)	Cost per unit	Number	Cost of supplies (col 3 x col 4)	Federal	Agency in-kind
Well Drilling- Well 1	per foot	\$30.00	75	\$2,250.00	\$1,125.00	\$1,125.00
Well Drilling- Well 2	per foot	\$30.00	125	\$3,750.00	\$1,875.00	\$1,875.00
Mobilization	each	\$1,000.00	2	\$2,000.00	\$1,000.00	\$1,000.00
Site Cleanup	each	\$750.00	2	\$1,500.00	\$750.00	\$750.00
Well development waste disposal	each	\$500.00	2	\$1,000.00	\$500.00	\$500.00
Totals				Supplies total	Federal total	Agency total
				\$10,500.00	\$5,250.00	\$5,250.00

Example Budget 2

Objective 6. Purchase equipment to support continuous water-level data collection

Overhead/indirect rate: 31.3%

USGS funding Total: \$10,005.06

In-kind services Total: \$11,685.70

Objective Total: \$21,690.76

a) Salary										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Employee name	Task	Hourly rate of compensation	Hourly rate of fringe benefit	Total hourly rate (a3 + a4)	Number of hours	Salary cost (a5 x a6)	Indirect cost (a7 x indirect rate)	Total cost (a7 + a8)	10)	11)
									Federal	Agency in-kind
Employee 1	Install equipment on well HCOVA-1234	\$30.00	\$10.00	\$40.00	12	\$480.00	\$150.24	\$630.24	\$0.00	\$630.24
Employee 1	Install equipment on well HCOVA-5678	\$30.00	\$10.00	\$40.00	12	\$480.00	\$150.24	\$630.24	\$0.00	\$630.24
Employee 2	Install equipment on well HCOVA-2685	\$30.00	\$10.00	\$40.00	12	\$480.00	\$150.24	\$630.24	\$0.00	\$630.24
Employee 3	Install equipment on well HCOVA-9101	\$30.00	\$10.00	\$40.00	24	\$960.00	\$300.48	\$1,260.48	\$0.00	\$1,260.48
Employee 4	Document equipment purchases in final report	\$30.00	\$10.00	\$40.00	8	\$320.00	\$100.16	\$420.16	\$420.16	\$0.00
Totals					Total hours	Direct cost total	Indirect cost total	Total cost	Federal total	Agency total
					68	\$2,720.00	\$851.36	\$3,571.36	\$420.16	\$3,151.20

Example Budget 2

Objective 6, continued.

c) Equipment							
1)	2)	3)	4)	5)	6)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (c2 x c3)	Indirect cost (c4 x indirect rate)	Total cost (c4 + c5)	7)	8)
						Federal	Agency in-kind
HCOVA-1234 Pressure Transducer	\$2,425.00	1	\$2,425.00	\$759.03	\$3,184.03	\$3,184.03	\$0.00
HCOVA-5678 Pressure Transducer	\$1,775.00	1	\$1,775.00	\$555.58	\$2,330.58	\$2,330.58	\$0.00
HCOVA-2685 Pressure Transducer	\$1,775.00	1	\$1,775.00	\$555.58	\$2,330.58	\$2,330.58	\$0.00
HCOVA-2685 cell telemetry	\$1,000.00	1	\$1,000.00	\$313.00	\$1,313.00	\$0.00	\$1,313.00
HCOVA-9101 Pressure Transducer	\$1,325.00	1	\$1,325.00	\$414.73	\$1,739.73	\$1,739.73	\$0.00
HCOVA-9101 satellite telemetry	\$4,140.00	1	\$4,140.00	\$1,295.82	\$5,435.82	\$0.00	\$5,435.82
Totals			Direct cost total	Indirect total	Total cost	Federal total	Agency total
			\$12,440.00	\$3,893.72	\$16,333.72	\$9,584.90	\$6,748.82

Example Budget 2

Objective 6, continued.

d) Travel													
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	11)	12)	Source of funds	
												13)	14)
Traveler name / reason for travel	Number of nights of lodging	Lodging cost per day	Number of days of meals	Meal cost per day	Meal and lodging ((d2 x d3) + (d4 x d5))	Miles traveled	Cost per mile	Mileage cost (d7 x d8)	Travel cost (d6 + d9)	Indirect cost (d10 x indirect rate)	Total cost (d10 + d11)	Federal	Agency in- kind
Employee 1/ travel for well HCOVA-1234	1	\$93.00	2	\$51.00	\$195.00	200	\$0.545	\$109.00	\$304.00	\$95.15	\$399.15	\$0.00	\$399.15
Employee 1/ travel for well HCOVA-5678	1	\$93.00	2	\$51.00	\$195.00	200	\$0.545	\$109.00	\$304.00	\$95.15	\$399.15	\$0.00	\$399.15
Employee 1/ travel for well HCOVA-2685	1	\$93.00	2	\$51.00	\$195.00	200	\$0.545	\$109.00	\$304.00	\$95.15	\$399.15	\$0.00	\$399.15
Employee 1/ travel for well HCOVA-9101	2	\$93.00	3	\$51.00	\$339.00	200	\$0.545	\$109.00	\$448.00	\$140.22	\$588.22	\$0.00	\$588.22
Totals									Direct cost total	Indirect total	Total cost	Federal total	Agency total
									\$1,360.00	\$425.68	\$1,785.68	\$0.00	\$1,785.68

Attachment C - National Ground-Water Monitoring Network 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:

(For work under Objective 1: Applicable to awards to new data providers or data providers expanding sites/services) The USGS NGWMN staff will work closely with the data providers on well selection and classification to ensure that the process is carried out in a similar and consistent manner with other data providers to the NGWMN. The USGS NGWMN staff will also be involved by providing guidance in setting up web services to provide the data providers data to the NGWMN portal. The USGS NGWMN staff will coordinate with the data provider to map the data in the web services to the NGWMN portal.

(For work under Objective 2: Applicable to awards to support persistent data service for existing data providers) In projects funded for persistent data service support, interaction between the data provider and the NGWMN staff will be needed to keep data flowing from the web services maintained by the provider to the NGWMN Portal. USGS staff will monitor data from each data provider and inform the data provider when problems are encountered. The NGWMN staff will work with the data providers to resolve any issues. Any updates to the web services required for the Portal will be communicated to the data providers.

(For work under Objective 3: Applicable to awards to fill gaps in information at NGWMN sites) The USGS staff will provide guidance to data providers on methods to collect site information to fill metadata gaps at existing NGWMN sites. The goal of this interaction is to have site information data collected in a similar manner at all NGWMN sites. USGS staff will also work with data providers to make sure the new data are available to the NGWMN through web services or the NGWMN Data Portal.

(For work under Objective 4: Applicable to awards for well maintenance) The USGS staff will provide guidance to data providers on techniques for well maintenance activities at existing NGWMN sites. The goal of this interaction is to have well maintenance activities performed in a similar manner at all NGWMN sites. USGS staff will also work with data providers to make sure the new data are available to the NGWMN through web services or the NGWMN Data Portal.

(For work under Objective 5: Applicable to awards for well drilling) The USGS staff will provide guidance on well drilling methods so that consistent methods are used across the NGWMN. The USGS will also be available to identify gaps in NGWMN coverage to ensure that new wells are filling NGWMN gaps.

(For work under Objective 6: Applicable to awards for equipment purchases for continuous water-level monitoring) The USGS staff will provide guidance on continuous monitoring and help identify gaps in the water-level Trend network.

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 or Director, Sponsored Research Office 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	USGS NGWMN staff See Section 5.(b)(2)(i)	At least 60 calendar days prior to the end of budget year 1. See details of formatting in section 5.(b)(1) below.
(2) Final Technical Report	Send PDF file as an email attachment; Maximum size: 10 MB	USGS NGWMN staff See Section 5.(b)(2)(i)	Within 90 calendar days after the end of the award. See details of formatting in section 5.(b)(2) below.
(3) SF 425 Federal Financial Report	See Section 5.(b)(3)	See Section 5.(b)(3)	See Section 5.(b)(3)
(4) Final SF 425 Federal Financial Report	See Section 5.(b)(4)	See Section 5.(b)(4)	See Section 5.(b)(4)

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

(1) Progress Reports. The Recipient shall submit two copies of each Progress Report to the USGS NGWMN staff (dpope@usgs.gov) and one copy of the transmittal letter to the USGS Grant Specialist (sroser@usgs.gov). Unless otherwise specified in this Agreement, annual progress reports should be submitted at least sixty (60) days prior to the end of the current budget period to allow adequate time for the designated office to review the report. For Agreements with a total anticipated performance period of twelve months (12) months or less, only a Final Technical Report will be required. A progress report is not required in the final budget year, unless the Recipient requests an extension to the project period.

The progress reports shall include the following information:

- (i) A comparison of actual accomplishments to the objectives of the Agreement established for the budget period and overall progress in response to the performance metrics.
- (ii) The reasons why established goals were not met, if appropriate.

- (iii) Additional pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.
- (iv) An outline of anticipated activities and adjustments to the program during the next budget period.

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 90 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:

Daryll Pope dpope@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

The main body of the report should include:

- Overview of work planned and accomplished during the project
- Detailed description of work accomplished under each objective

For new data providers

- Description of existing water-level and/or water-quality networks including the objectives of the networks
- Description of site selection criteria and process
- Description of process used to assign Subnetworks and Monitoring Categories for both water-level and water-quality networks (as appropriate for your Network)
- Description or link to Field techniques for water-level measurement and water-quality sample collection (as appropriate for your network)
- Description of data management procedures in place. Describe data quality and quality assurance processes
- List of Minimum Data elements and how they are provided to the Data Portal (via the Well Registry or web services)
- Notes on any sites that have missing required data elements
- Note any sites that do not meet requirements in Table 4.5.1.1 and/or 4.5.2.1 of the Framework Document.
- A description of the web services used or installed for this project
- Analyte list used for water-quality sampling networks
- List of laboratories and their accreditation for analyzing properties and constituents included in the monitoring program if water-quality data are served
- Describe any work done under Objectives 2 or 3 as part of the initial project

For existing data providers

- Description of work done to support the NGWMN as a data provider for each objective
- Describe any data-collection, well-maintenance, or well-drilling activities completed during the project.
- Describe any methods used for data collection.
- Describe the procedures used to quality assure any data collected before it was entered into agency databases or the NGWMN Well Registry
- Table listing any new or replacement wells added to the NGWMN. Include the Principal Aquifer, well depth, and the NGWMN site number. If the well is a replacement well, list the site number for the previous well
- Description of any updates made to web services during period of award
- Description of any problems encountered in serving data to the NGWMN data portal
- Well construction diagrams for any new wells

(3) Annual 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 in accordance with the following schedule. USGS acknowledges that this annual reporting schedule may not always correspond with a specific budget period.

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

- (ii) The SF 425 must be submitted by e-mail to SF425@usgs.gov with a cc to the Grant Specialist (sroser@usgs.gov). Recipient must include the USGS award number in the subject line of all correspondence. If, after 90 days, Recipient has not submitted a report, the Recipient's account in ASAP will be placed in a manual review status until the report is submitted.

(4) Final 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 Section 5(b)(3)(ii) no later than 90 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 SF425.
- (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 Contracting Officer with an explanation. If approved, the USGS will either request and pay a final invoice or reestablish the ASAP subaccount to permit the Recipient to make a revised final draw. Any revised final report representing additional reimbursable amounts must be submitted no later than 1 year from the due date of the original report, i.e., 15 months following the Agreement completion date. USGS will not accept any revised SF 425 covering additional expenditures after that date and will return any late request for additional payment to the Recipient.

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

(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 USGS point of contact on the award cover sheet 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.

(c) Conflict of Interest

(1) Applicability.

- (i) 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.
- (ii) In the procurement of supplies, equipment, construction, and services by recipients and by subrecipients, the conflict of interest provisions in 2 CFR 200.318 apply.

(2) Requirements.

- (i) 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.
- (ii) 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.
- (iii) No actual or prospective recipient or subrecipient may solicit, obtain, or use non-public information regarding the evaluation, award, or administration of an award to that recipient or subrecipient or the development of a Federal financial assistance opportunity that may be of competitive interest to that recipient or subrecipient.

(3) Notification.

- (i) 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.
- (ii) Recipients must establish internal controls that include, at a minimum, procedures to identify, disclose, and mitigate or eliminate identified conflicts of interest. The recipient is responsible for notifying the USGS Contracting Officer in writing of any conflicts of interest that may arise during the life of the award, including those that have been reported by subrecipients.

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

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

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

d) Program Income

1) If the Recipient is an educational institution or nonprofit research organization, any other program income will be added to funds committed to the project by the Federal awarding agency and Recipient and be used to further eligible project or program objectives, as described in 2 CFR 200.307(e)(2).

2) For all other types of Recipients, any other program income will be deducted from total allowable costs to determine the net allowable costs before calculating the Government's share of reimbursable costs, as provided in 2 CFR 200.307(e)(1).

e) Government Furnished 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.

f) Patent Rights (37 CFR § 401.14)

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

a. *Definitions*

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

b. Allocation of Principal Rights

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

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

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

If a known CRADA exists between the USGS and the recipient, include the CRADA as an attachment and include the following paragraph following b.2.:

USGS has determined that use of alternate paragraph (b) in the preceding clause is required to meet USGS' obligations under (identify CRADA). This determination may be appealed in accordance with 37 CFR 401.4. Recipient agrees that the work performed under this Agreement is directed by USGS to meet the obligations under the CRADA. Recipient further agrees to grant licenses to the government and (insert additional CRADA partner names, if applicable) as necessary to meet USGS' obligations under the CRADA.

c. Invention Disclosure, Election of Title and Filing of Patent Applications by Recipient

1. 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.
2. 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.
3. 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.
4. Requests for extension of the time for disclosure to USGS, election, and filing under subparagraphs 1., 2., and 3. may, at the discretion of USGS, be granted.

d. Conditions When the Government May Obtain Title

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

1. 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;
2. 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.

e. Minimum Rights to Recipient

1. 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.
2. 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.
3. 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.

f. Recipient Action to Protect Government's Interest

1. 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.
2. 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.

3. 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.
4. 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.”
5. 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.

g. Subcontracts

1. 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.
2. 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.

h. 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.

i. 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.

j. 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:

1. 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;
2. such action is necessary to alleviate health or safety needs which are not reasonably satisfied by the recipient, assignee, or their licensees;
3. 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
4. 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.

k. Special Provisions for Agreements with Non-profit Organizations

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

1. 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;
2. 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;
3. 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
4. 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 k.4.

1. 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 (insert title and date)
- 2) The Recipient's application for financial assistance (SF424, SF424A, SF424B), dated (insert 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 A through F of this Agreement.
- 3) Documents incorporated by reference (see 11.a) in the order in which they are incorporated.

– END OF ASSISTANCE AWARD DOCUMENT –

Attachment D – Secretarial 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