

United States Geological Survey

Groundwater and Streamflow Information Program National Ground-Water Monitoring Network



Proposals for Cooperative Agreements – Fiscal Year 2020 Program Announcement/Funding Opportunity G20AS00009

Closing Date: January 17, 2020
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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PROGRAM ANNOUNCEMENT CHANGES

Multiple changes have been implemented in this Program Announcement. The primary changes include:

Front Pages

- Revised Points to Remember section to emphasize the most important items

Award Description

- Increased amount allowed for routine Objective 2 work to \$20,000 per year
- Removed \$135,000 per year limit on work under Objectives 1, 3, 4, and 5. Still must meet \$150,000 per year limit

National Ground-Water Monitoring Network

- Clarified that well-density should apply at the Principal/Major aquifer level
- Included link to spreadsheet of suggested densities

Eligibility Information

- Specified that funding cannot be used to purchase land or obtain easements for site access
- Added section on Proposal eligibility
- Moved notes in Section 9 on Unsuitable Proposals into this section

Objectives

- Increased limit for basic work under Objective 2 to \$20,000 per year
- Objective 1 now only applies to agencies becoming a new data provider
- Moved work to add many sites or new web services from Objective 1 to Objective 2
- Allows work under Objective 2 to keep agency Data Provider pages updated

Network Policies

- Added link to spreadsheet of well densities. Applicants should consult this before proposing adding new wells to the NGWMN

Multi-year proposals

- Clarified that annual funding cannot exceed \$150,000 and that the maximum funding for a project is \$300,000. The annual limits apply to both active work under existing awards and work included in a proposal submitted for this round of funding.

In-Kind Services Cost-Share Guidelines

- Revised match requirements for Objectives 1 and 2. Match is no longer required for work under Objectives 1 or 2
- Added statement that work used as match should be done at NGWMN sites or sites that will be added to the NGWMN

- Specified that well drilling used as match should be described in the same way as funded drilling activities and all wells drilled as match must be added to the NGWMN

Final Project Report

- Added a section describing the Final Project Report. This was previously included in Attachment C, 'National Ground-Water Monitoring Network Terms and Conditions'

Application Preparation Instructions

- Provided additional details on what is needed on maps
- Clarified use of links to address references for methods
- Added a request for a table showing funding for NGWMN agreements (past and current proposal) by objective
- Match is no longer required for Objectives 1 and 2
- Objective 1 is only to support new data providers
- Objective 2- Persistent Data Services
 - Added work to provide updates to Data Provider pages as a supported task
 - Moved work to add many sites or new web services by existing data providers into Objective 2
- Objective 4- Well Maintenance
 - Emphasized that wells need to be in the Well Registry
 - Added statement encouraging a quantitative approach for well integrity testing
 - For well repairs or redevelopment, added requirement for a paragraph for each well where work is proposed that includes the need for the work, the planned approach, and the benefit to the NGWMN
- Objective 5- Well Drilling
 - Added requirement to justify well drilling methods
 - Added statement encouraging construction diagrams for wells
 - Added requirement that the agency meet state drilling requirements
 - Clarified that all wells drilled must be added to the NGWMN
 - Added requirement for a paragraph that describes the need for each well, how it fills gaps in the NGWMN, and why a well needs to be drilled instead of reusing an existing well. Consider NGWMN well density guidelines when proposing new wells
 - Specified that wells drilled as in-kind services should be described in the same manner (summary paragraph) and added to the Well Registry
- Added statement that specifies the Data Management Plan should include all water-level or water-quality data collected by the agency for the NGWMN

Application Evaluation Procedure and Criteria

- Added new 'Technical Quality' criteria to quantify the quality of the work apart from the quality of the proposal
- Clarified text for 'Budget' criteria

Attachments

- Revised example budgets to account for changes to match requirements for Objectives 1 and 2
- Revised example budgets to include examples of detail needed for contract work

POINTS TO REMEMBER

Please **contact Daryll Pope** if you have any questions.

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 or 5 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) and include the Principal aquifers.

For Objectives 3-5, 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 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 3-5, make sure you include a **table of the sites** you will be working on. The table must include the NGWMN ID. All sites for which work is proposed (except new wells proposed for drilling) must be in the NGWMN Well Registry by January 17th, 2020.

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 planned, 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, or 5. Objectives that have less than 50% match will be scored lower during proposal evaluation.

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

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.

If your project involves a contract, you must provide details on the cost estimates for the work under the contract. Costs for contract work must be itemized. See the example budgets for objectives 1 and 5 for reference.

Allow enough time to hire contractors (drillers, well rehabilitation) so that the project is not delayed. This will help reduce the number of no-cost extensions. Please include this on the timeline for objectives that involve contractors.

Cooperative funding Agreements to Support National Ground-Water Monitoring Network Data Providers Fiscal Year 2020

CFDA 15.980

National Ground-Water Monitoring Network Cooperative Agreements

The Groundwater and Streamflow Information Program of the USGS is offering a two-year cooperative agreement 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 with the Federal Advisory Committee on Water Information (ACWI) and its Subcommittee on Ground Water (SOGW) 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

January 17, 2020, at 4 pm, Eastern Standard Time

2. Electronic Application Requirement

For the FY 2020 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:

January 17, 2020, 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 January 17, 2020 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

For National Ground-Water Monitoring Network Program issues contact:

Daryll Pope

(804) 261-2630

(609) 263-7119 (cell)

dpope@usgs.gov

3. Award Description

The funding available for this Program Announcement is expected to be up to \$1,800,000 for Federal FY2020. This estimate does not bind the USGS to a specific number of awards or to the amount of any individual award. Congress has not yet authorized FY2020 funds for the National Ground-Water Monitoring Network, so awards cannot be made until this funding is appropriated. 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 maximum annual funding level of \$150,000 and \$300,000 for the total project. Funding for routine work under Objective 2 to maintain persistent data services is limited to \$20,000 per year. However, additional work can also be supported under Objective 2 (as described under Objective 2 in section 6, Part B). 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 July 15th, 2020 and September 30th, 2020.

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 Network is 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:

http://acwi.gov/sogw/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 (as defined by the USGS). 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 3-5 to enhance the NGWMN. Discussion and coordination with the Subcommittee on Ground Water members and the USGS NGWMN staff is encouraged; however, USGS personnel are prohibited from helping an organization prepare its application for competitive funding.

Application announcement date: September 30, 2019

Applications must be submitted by the closing date of January 17, 2020

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. The next priority is 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, or drilling new wells for the NGWMN.

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

Agencies cannot propose work under Objectives 4 or 5 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. Software required for setup or maintenance of the web services for new data provider projects is allowed. Software required to analyze data collected under Objectives 3 or 4 is allowed
- Purchase or lease vehicles to be used to support routine data collection efforts
- Purchase equipment or supplies for water-level monitoring
- 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
 - Missing overall budget
 - Missing detailed budget for each objective
 - Missing details for contract costs in detailed budget for an 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 exceeds annual or award limits
- Proposals that contract with U.S. Government Agencies to provide funding to perform work on the project

However, the NGWMN Program Board may still review the proposal after the proposal closing period to provide the applicant feedback that could be useful to the applicant in future funding rounds.

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
- 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 the five objectives listed above and described below. 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 or 5 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 2-5 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 should 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.

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.

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 the 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
- Keep metadata for NGWMN sites in the Well Registry current
- Provide updates to the NGWMN Data Provider page for their agency

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 per year and \$300,000 per project). This additional work may include:

- Upgrade web services in conjunction 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
- Add a significant number of new sites to the Network. 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.

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

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. Selected sites should be entered in the Well Registry but not turned on to display until the required metadata is available.

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. Purchase of downhole cameras, geophysical logging equipment, or GPS equipment is not supported. Equipment rental and travel costs are allowed.

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.

Purchase of downhole cameras, geophysical logging equipment, or GPS equipment is not supported. Equipment rental and travel costs are allowed.

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 sties and installation of wells at new locations that fill spatial gaps in the NGWMN Trend Networks. **Projects with direct cost-sharing of the well drilling costs will be scored higher.**

Drilling can 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. Supplies needed for well drilling are allowed. Equipment rental and travel costs are allowed.

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

More information on the National Ground-Water Monitoring Network can be found on the web page for the Subcommittee on Ground-Water (SOGW) of the Advisory Committee on Water Information (ACWI) available at: <http://acwi.gov/sogw/index.html>

“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 to an agency for any year cannot exceed \$150,000 even if the funds come from different awards. The total funding for an individual award may not exceed \$300,000. 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. 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. Only work performed at NGWMN sites or potential new NGWMN sites (well drilling) can be used as in-kind services.

While no specific match rate is required, a match rate of 50-50 match of agency in-kind services to USGS funding is suggested (50% match). Agencies providing less than 50% match for work proposed on Objectives 3, 4, or 5 will be scored lower when the proposals are evaluated.

Since each objective is scored independently during review, in-kind services cost sharing should be provided separately for each objective. In-kind services cost sharing should be included in the detailed budget for each objective and have similar details like that required for work that is funded by the USGS. This should 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. Purchase of water-level monitoring equipment or water-quality supplies to be used at NGWMN sites can be used as match. 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 can also be used as in-kind services match. Drilling work used to match drilling at NGWMN sites 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. Please 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

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, and SF-424D (for proposals that include work under Objective 5) plus the items described below in items A through F. No additional documents or materials may be submitted. Failure to comply with the required application components listed below may result in the proposal being rejected.

Items A through F as described below shall be **combined in one document, in the order noted below**, and submitted through Grants.gov in either MS Word or Adobe PDF format. The application shall not exceed 20 single-spaced pages (including figures, references, etc.), and the type size shall not be smaller than 12 point. All pages of the application shall be numbered. All text, figures, and tables shall be sized to fit on 8½” by 11” paper with 1-inch margins. **The SF forms, negotiated rate agreement, required 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. 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. Please list the Technical Contact/Principal Investigator for the proposed work. Provide a start date for the proposed work sometime in the period from July 15th, 2020 through September 30th, 2020.

B. Proposal

Please prepare a proposal that 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).

Tables of sites at which field work is proposed must be included and should reference sites using the NGWMN site number. These tables should be included in an Appendix and do not count towards the page limit for the proposal.

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, please include an inset map. All maps should include a north arrow, scale bar, and explanation. 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 the proposed work.

Please 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. Before including links to these references, ensure that the links are functional.

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.

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.

Please 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. **Please 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. Also show the work proposed for this funding opportunity by year and objective in the same table.
- 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. Describe IT staff experience and availability. 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, please 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 and their expertise related to the objective. For each task, justify the need for the work and the methods that will be used to do the work. Please include either detailed descriptions of the methods that are proposed or provide references for the methods you will be using.

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 please 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, please 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 please 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 or 5 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

The following tasks should be included in the work plan for work under Part A for this objective. For each task, please indicate who will be doing the work and their qualifications. Also, indicate that the work is for Part A in the individual task lines in the detailed budget for this objective:

- 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.

The following tasks should be included in the work plan for work under part B for this objective. For each task please indicate who will be doing the work and their qualifications to do the work. Also, indicate that the work is for Part B in the individual task lines in the detailed budget for this objective.

The following tasks should be included in the work plan for this objective for a data provider who will be adding many 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.
- 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, please 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.

In the detailed budget for Objective 2, please specify for each task if the work applies to Part A or to Part B. If you have work proposed for both Part A and Part B in the same proposal, please provide a subtotal of the costs for Part A and B separately. Costs for Part A cannot exceed \$20,000 per year.

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. Please 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.** This table should be included as an appendix to the proposal and will not count against the page limit for the proposal.
- 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, please 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 please 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. Please 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 rehabilitation can be helpful.

A table of sites requiring well maintenance is required. Specific maintenance activities to be performed at each well must be listed. Please 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.
- Describe who will be doing the maintenance.
- 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. Please include references for any slug or aquifer test methods and any planned analysis techniques.
- For Well rehabilitation/repair or redevelopment activities please 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, please provide details on the current well construction and describe the proposed construction after the repair.
 - Cost of the proposed work.

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

- For each well maintenance activity, describe the tasks needed to complete the work.
- Provide plan 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. This table should be included as an appendix to the proposal and will not count against the page limit.

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 the staff that will be working on well drilling and their qualifications.

- 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.
- Include a signed copy of SF-424D (Assurances – Construction Programs) when submitting the proposal through Grants.gov.

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, please 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. A well construction diagram is beneficial. For proposals with multiple wells, a generic construction diagram is acceptable. Provide the estimated cost to drill the well.
- For any proposed replacement wells please 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.

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. We encourage obtaining access agreements for new wells.
- Well drilling
- Sealing of existing well when drilling a replacement NGWMN well
- 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.

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.

C. Overall Budget and Detailed Budget for each Objective

An overall summary budget for the entire project should be provided using the following format. An example budget summary is included in Attachment B. The example summarizes the budgets for Objectives 1 and 2.

Format for Budget Summary

Indirect cost rate: xx%

Category	Federal \$	Agency in-kind \$	Total \$
1. Salary (wages, fringe)			
2. Supplies			
3. Equipment			
4. Travel			
5. Contracts			
6. Total Direct Costs (items 1-5)			
7. Indirect cost			
8. Total Cost (items 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 NGWMN 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. Examples of a detailed budget for each objective are provided in Attachment B. Please provide a detailed budget for each objective in a similar format.

The budget for each objective should be the total work for the objective and does not need to include a separate budget for each year of the project.

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. Federal cost (if the task is paid with Federal funds, put the total cost (a7 + a8) in column 9),
10. Agency in-kind cost (if the task is covered by in-kind services, put the total cost (a7 + a8) in column 10).

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. Federal cost (if the supply is paid with Federal funds, put the total cost (b4 + b5) in column 6),
7. Agency in-kind cost (if the supply is covered by In-kind services, put the total cost (b4 + b5) in column 7).

- c) Equipment: Enter a description and the cost for each piece of equipment needed for the project. Please list any computer purchases separately. If possible, computer purchases should be as in-kind services to avoid property ownership issues. 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. Federal cost (if the equipment is paid with Federal funds, put the total cost (c4 + c5) in column 6),
 7. Agency in-kind cost (if the equipment is covered by in-kind services, put the total cost (c4 + c5) in column 7).
- 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 days,
 3. Lodging cost per day,
 4. Meal cost per day,
 5. Meal and lodging cost ((d2 x d3) + (d2 x d4)),
 6. Miles traveled,
 7. Cost per mile,
 8. Mileage cost (d6 x d7),
 9. Travel cost (d5 + d8),
 10. Indirect cost (d9 x indirect rate),
 11. Federal cost (if the travel is paid with Federal funds, put the total cost (d9 + d10) in column 11),
 12. Agency in-kind cost (if the travel is covered by in-kind services, put the total cost (d9 + d10) in column 12).

- e) Contracts: Describe any contractual activity planned to accomplish the work. This must include salary, travel, supplies or equipment included in the contract. The budget for each should follow the formats shown in items a-d above.

Salary for Contract:

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

Supplies for Contract:

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

Equipment for Contract:

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

Travel for Contract:

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

Drilling or Well Rehabilitation work for Contract

- (1) Description.
- (2) Unit type (per foot or each)
- (3) Cost per unit.
- (4) Number (unit or feet).
- (5) Cost (2 x 4).
- (6) Federal cost.
- (7) Agency in-kind cost.

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 should 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. Please provide a timeline for each objective in a similar format.

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		
Final Report												X	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. 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 be prepared to discuss 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 (Secretarial Priorities 1a and 3b). Other objectives improve the data being provided by a current data provider (Secretarial Priority 1a). The priority of the objectives in terms of NGWMN funding is as follows:

- Support persistent data service from existing data providers (Objective 2)
- Support to become a new data provider or expansion of services/sites by existing data providers (Objective 1)
- Filling gaps in site information at NGWMN sites (Objective 3)
- Well Maintenance (Objective 4)
- Well drilling (Objective 5)

All proposed objectives will be evaluated individually in accordance with the criteria below. The four criteria will be of equal weight:

1. **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
 - The proposed work enhances the data available to the NGWMN
 - The proposed work supports the long-term goals of the NGWMN
 - The work addresses Secretarial Priorities for Financial Assistance (Attachment D) by using science to manage water resources (Priority 1a) and expanding lines of communication with state or local water resource agencies (Priority 3b)
2. **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 for the objective follows the requirements of the Program Announcement and adequately describes the work needed
 - Includes consideration of requirements from the NGWMN Framework Document
3. **Proposal Quality.** This factor considers the overall quality of the proposal.
 - The proposal is well-written and adequately proofread
 - The proposal is complete but concise
 - Maps and figures meet guidelines of the Program Announcement

4. Budget. This factor considers whether the proposed budget reflects the level of effort required to accomplish the work.
 - The required budgets are complete and follow the format specified in the Program Announcement.
 - Costs are reasonable and justified
 - Work proposed under Objectives 3, 4, or 5 that provides less than 50% in-kind services match will be scored lower

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 July 15th, 2020 and September 30th, 2020)
6. Proposed Duration: (12 or 24 months)
7. Data Provider Status: Indicate status as 'New' or 'Existing' data provider. Existing data providers, please 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 a summary budget for a project and detailed budgets for each of the five objectives. The budgets are for the entire project and do not need to be split into year one and year two budgets for multi-year projects. These budgets for individual examples for each objective are not intended to be part of a single proposal. For example, the Objective 1 budget is for a new data provider project and the work proposed under the example Objective 4 and 5 budgets could not be part of a new data provider project.

For simplicity, all budgets are using the default overhead rate of 10% that is used if a negotiated rate agreement is not part of the proposal. A uniform cost of \$40/hour is used for simplicity. In an actual proposal, salaries would vary by employee and overhead rates can be larger than 10% if a negotiated rate agreement is included.

For work done under Objective 2, please specify for each task if the work applies to Part A or to Part B. If you have work proposed for both Part A and Part B in the same proposal, please provide a subtotal of the costs for Part A and B separately. Costs for Part A cannot exceed \$20,000 per year.

Overall Budget Example

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.

Indirect cost rate: 10%

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	\$2,560.00	\$0.00	\$2,560.00
8. Total Cost (sum of 6 and 7)	\$42,160.00	\$0.00	\$42,160.00

Objective 1. Become a new data provider for the NGWMN

Overhead/indirect rate: 10%

USGS funding Total:	\$32,920.00
In-kind services Total:	\$0.00
Objective Total:	\$32,920.00

a) Salary									
1)	2)	3)	4)	5)	6)	7)	8)	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)	9)	10)
								Federal	Agency in-kind
Employee 1	Select and Classify Wells	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$400.00	\$4,400.00	\$0.00
Employee 2	Setup Web Services	\$30.00	\$10.00	\$40.00	200	\$8,000.00	\$800.00	\$8,800.00	\$0.00
Employee 3	Add Sites to Well Registry	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$400.00	\$4,400.00	\$0.00
Employee 4	Document Work in Final Report	\$30.00	\$10.00	\$40.00	30	\$1,200.00	\$120.00	\$1,320.00	\$0.00
Totals						Direct cost total	Indirect cost total	Federal total	Agency total
						\$17,200.00	\$1,720.00	\$18,920.00	\$0.00

Objective 1, continued.

e) 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 (e2 + e3)	Number of hours	Salary cost (e4 x e5)	7)	8)
						Federal	Agency in-kind
Contract to 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					Salary total	Federal total	Agency total
					\$14,000.00	\$14,000.00	\$0.00

Objective 2. Persistent Data Services

Overhead/indirect rate: 10%

USGS funding Total: \$9,240.00

In-kind services Total: \$0.00

Objective Total: \$9,240.00

a) Salary									
1)	2)	3)	4)	5)	6)	7)	8)	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)	9)	10)
								Federal	Agency in-kind
Employee 1	Oversee Persistent Data Services Work (Part A)	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$160.00	\$1,760.00	\$0.00
Employee 2	Database Programming Support (Part A)	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$160.00	\$1,760.00	\$0.00
Employee 3	Update New Wells in Well Registry (Part A)	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$320.00	\$3,520.00	\$0.00
Employee 4	Assign Subnetworks (Part A)	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$160.00	\$1,760.00	\$0.00
Employee 4	Document Work in Final Report (Part A)	\$30.00	\$10.00	\$40.00	10	\$400.00	\$40.00	\$440.00	\$0.00
Totals						Direct cost total	Indirect cost total	Federal total	Agency total
						\$8,400.00	\$840.00	\$9,240.00	\$0.00

Objective 3. Site Information Gap Filling

Overhead/indirect rate: 10%

USGS funding Total: \$12,795.75

In-kind services Total: \$14,190.00

Objective Total: \$26,985.75

a) Salary									
1)	2)	3)	4)	5)	6)	7)	8)	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)	9)	10)
								Federal	Agency in-kind
Employee 1	GPS Survey of Wells	\$30.00	\$10.00	\$40.00	120	\$4,800.00	\$480.00	\$5,280.00	\$0.00
Employee 2	GPS Survey of Wells	\$30.00	\$10.00	\$40.00	100	\$4,000.00	\$400.00	\$4,400.00	\$0.00
Employee 3	Data Entry, QA/QC	\$30.00	\$10.00	\$40.00	60	\$2,400.00	\$240.00	\$0.00	\$2,640.00
Employee 4	Collect Water-Level Data For NGWMN	\$30.00	\$10.00	\$40.00	150	\$6,000.00	\$600.00	\$0.00	\$6,600.00
Employee 3	Document Work in Final Report	\$30.00	\$10.00	\$40.00	20	\$800.00	\$80.00	\$880.00	\$0.00
Totals						Direct cost total	Indirect cost total	Federal total	Agency total
						\$18,000.00	\$1,800.00	\$10,560.00	\$9,240.00

Objective 3, continued.

b) Supplies						
1)	2)	3)	4)	5)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (b2 x b3)	Indirect cost (b4 x indirect rate)	6)	7)
					Federal	Agency in-kind
Survey Markers	\$10.00	32	\$320.00	\$32.00	\$352.00	\$0.00
Totals			Direct cost total	Indirect total	Federal total	Agency total
			\$320.00	\$32.00	\$352.00	\$0.00

c) Equipment						
1)	2)	3)	4)	5)	Source of funds	
Description	Cost per unit	Number	Cost of equipment (c2 x c3)	Indirect cost (c4 x indirect rate)	6)	7)
					Federal	Agency in-kind
Rental of GPS Equipment (10 days at \$450/day)	\$450.00	10	\$4,500.00	\$450.00	\$0.00	\$4,950.00
Totals			Direct cost total	Indirect total	Federal total	Agency total
			\$4,500.00	\$450.00	\$0.00	\$4,950.00

Objective 3, continued.

d) Travel											
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	Source of funds	
Traveler name / reason for travel	Number of days	Lodging cost per day	Meal cost per day	Meal and lodging ((d2 x d3) + (d2 x d4))	Miles traveled	Cost per mile	Mileage cost (d6 x d7)	Travel cost (d5 + d8)	Indirect cost (d9 x indirect rate)	11)	12)
										Federal	Agency in-kind
Employee 1/ Surveying Wells	10	\$93.00	51	\$1,440.00	500	\$0.545	\$272.50	\$1,712.50	\$171.25	\$1,883.75	\$0.00
Totals								Direct cost total	Indirect total	Federal total	Agency total
								\$1,712.50	\$171.25	\$1,883.75	\$0.00

Objective 4. Well Maintenance

Overhead/indirect rate: 10%

USGS funding Total: \$30,841.25

In-kind services Total: \$34,723.70

Objective Total: \$65,564.95

a) Salary									
1)	2)	3)	4)	5)	6)	7)	8)	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)	9)	10)
								Federal	Agency in-kind
Employee 1	Well Repairs	\$30.00	\$10.00	\$40.00	140	\$5,600.00	\$560.00	\$0.00	\$6,160.00
Employee 2	Well Repairs	\$30.00	\$10.00	\$40.00	120	\$4,800.00	\$480.00	\$5,280.00	\$0.00
Employee 1	Borehole Camera Survey and Well Depth Measurement	\$30.00	\$10.00	\$40.00	220	\$8,800.00	\$880.00	\$0.00	\$9,680.00
Employee 2	Borehole Camera Survey and Well Depth Measurement	\$30.00	\$10.00	\$40.00	220	\$8,800.00	\$880.00	\$9,680.00	\$0.00
Employee 1	Slug Testing	\$30.00	\$10.00	\$40.00	300	\$12,000.00	\$1,200.00	\$0.00	\$13,200.00
Employee 2	Slug Testing	\$30.00	\$10.00	\$40.00	300	\$12,000.00	\$1,200.00	\$13,200.00	\$0.00
Employee 3	Slug Testing Data Analysis	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$160.00	\$0.00	\$1,760.00
Employee 1	Document Work in Final Report	\$30.00	\$10.00	\$40.00	20	\$800.00	\$80.00	\$0.00	\$880.00
Totals						Direct cost total	Indirect cost total	Federal total	Agency total
						\$54,400.00	\$5,440.00	\$28,160.00	\$31,680.00

Objective 4, continued.

b) Supplies						
1)	2)	3)	4)	5)	Source of funds	
Type	Cost per unit	Number	Cost of supplies (b2 x b3)	Indirect cost (b4 x indirect rate)	6)	7)
					Federal	Agency in-kind
Padlocks for Well Caps	\$25.00	21	\$525.00	\$52.50	\$577.50	\$0.00
Totals			Direct cost total	Indirect total	Federal total	Agency total
			\$525.00	\$52.50	\$577.50	\$0.00

c) Equipment						
1)	2)	3)	4)	5)	Source of funds	
Description	Cost per unit	Number	Cost of equipment (c2 x c3)	Indirect cost (c4 x indirect rate)	6)	7)
					Federal	Agency in-kind
Tripod for Slug Tests	\$100.00	2	\$200.00	\$20.00	\$220.00	\$0.00
Software for Analyzing Slug Tests	\$1,000.00	1	\$1,000.00	\$100.00	\$0.00	\$1,100.00
Totals			Direct cost total	Indirect total	Federal total	Agency total
			\$1,200.00	\$120.00	\$220.00	\$1,100.00

Objective 4, continued.

d) Travel											
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	Source of funds	
Traveler Name / Reason for travel	Number of days	Lodging cost per day	Meal cost per day	Meal and lodging ((d2 x d3) + (d2 x d4))	Miles traveled	Cost per mile	Mileage cost (d6 x d7)	Travel cost (d5 + d8)	Indirect cost (d9 x indirect rate)	11)	12)
										Federal	Agency in-kind
Employee 1, Travel for well repair and well integrity testing	10	\$93.00	51	\$1,440.00	500	\$0.545	\$272.50	\$1,712.50	\$171.25	\$1,833.75	\$0.00
Employee 2, Travel for well repair and well integrity testing	10	\$93.00	51	\$1,440.00	600	\$0.545	\$327.00	\$1,767.00	\$176.70	\$0.00	\$1,943.70
Totals								Direct cost total	Indirect total	Federal total	Agency total
								\$3,459.50	\$347.95	\$1,883.75	\$1,943.70

Objective 5. Well Drilling

Overhead/indirect rate: 10%

USGS funding Total: \$10,634.90

In-kind services Total: \$12,423.00

Objective Total: \$23,057.90

a) Agency- Salary									
1)	2)	3)	4)	5)	6)	7)	8)	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)	9)	10)
								Federal	Agency in-kind
Employee 1	Well Drilling Support	\$30.00	\$10.00	\$40.00	40	\$1,600.00	\$160.00	\$1,760.00	\$0.00
Employee 2	Drilling Contract, Site Scoping, and Access Agreements	\$30.00	\$10.00	\$40.00	80	\$3,200.00	\$320.00	\$3,520.00	\$0.00
Employee 2	Document Work in Final Report	\$30.00	\$10.00	\$40.00	20	\$800.00	\$80.00	\$880.00	\$0.00
Totals						Direct cost total	Indirect cost total	Federal total	Agency total
						\$5,600.00	\$560.00	\$6,160.00	\$0.00

Objective 5, continued.

d) Agency- Travel											
1)	2)	3)	4)	5)	6)	7)	8)	9)	10)	Source of funds	
Traveler name / reason for travel	Number of days	Lodging cost per day	Meal cost per day	Meal and lodging ((d2 x d3) + (d2 x d4))	Miles traveled	Cost per mile	Mileage cost (d6 x d7)	Travel cost (d5 + d8)	Indirect cost (d9 x indirect rate)	11)	12)
										Federal	Agency in-kind
Employee 1/ Travel to site to drill wells	3	\$93.00	51	\$432.00	600	\$0.545	\$327.00	\$759.00	\$75.90	\$834.90	\$0.00
Totals								Direct cost total	Indirect total	Federal total	Agency total
								\$759.00	\$75.90	\$834.00	\$0.00

e) 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 (e2 + e3)	Number of hours	Salary cost (e4 x e5)	7)	8)
						Federal	Agency in-kind
Driller- Permits	\$30.00	\$10.00	\$40.00	8	\$320.00	\$320.00	\$0.00
Driller- Planning and Preparation	\$30.00	\$10.00	\$40.00	16	\$640.00	\$0.00	\$640.00
Driller- Well Development	\$30.00	\$10.00	\$40.00	16	\$640.00	\$320.00	\$320.00
Driller Assistant- Well Development	\$30.00	\$10.00	\$40.00	16	\$640.00	\$0.00	\$640.00
Contracts- Salary Totals					Salary total	Federal total	Agency total
					\$2,240.00	\$640.00	\$1,600.00

e) Contract- Supplies						
1)	2)	3)	4)	5)	Source of funds	
Type	Unit Type (per foot or each)	Cost per unit	Number	Cost of supplies (b2 x b3)	6)	7)
					Federal	Agency in- kind
PVC Casing	Per foot	\$2.00	200	\$400.00	\$0.00	\$400.00
PVC Screen	Per foot	\$2.00	200	\$400.00	\$0.00	\$400.00
Grout	Each	\$50.00	2	\$100.00	\$0.00	\$100.00
Sand Pack	Each	\$50.00	2	\$100.00	\$0.00	\$100.00
Cap and Protective Top	Each	\$25.00	2	\$50.00	\$0.00	\$50.00
Contracts- Supplies Totals				Supplies Total	Federal total	Salary total
				\$1,050.00	\$0.00	\$1,050.00

e) Contract- Travel										
1)	2)	3)	4)	5)	6)	7)	8)	9)	Source of funds	
Traveler Name / Reason for travel	Number of days	Lodging cost per day	Meal cost per day	Meal and lodging ((d2 x d3) + (d2 x d4))	Miles traveled	Cost per mile	Mileage cost (d6 x d7)	Travel cost (d5 + d8)	10)	11)
									Federal	Agency in-kind
Driller	6	\$93.00	51	\$864.00	500	\$0.545	\$272.50	\$1,136.50	\$0.00	\$1,136.50
Driller Assistant	6	\$93.00	51	\$864.00	500	\$0.545	\$272.50	\$1,136.50	\$0.00	\$1,136.50
Contract- Travel Totals								Direct cost total	Federal total	Agency total
								\$2,273.00	\$0.00	\$2,273.00

e) Contract- Well Drilling						
1)	2)	3)	4)	5)	Source of funds	
Type	Unit Type (per foot or each)	Cost per unit	Number	Cost of supplies (b2 x b3)	6)	7)
					Federal	Agency in- kind
Well Drilling (cost per foot)- Well 1	Per foot	\$30.00	100	\$3,000.00	\$1,500.00	\$1,500.00
Well Drilling (cost per foot)- Well 2	Per foot	\$30.00	100	\$3,000.00	\$1,500.00	\$1,500.00
Mobilization (2 wells)	Each	\$1,000.00	2	\$2,000.00	\$0.00	\$2,000.00
Site Cleanup (2 wells)	Each	\$750.00	2	\$1,500.00	\$0.00	\$1,500.00
Well Development waste disposal (2 wells)	Each	\$500.00	2	\$1,000.00	\$0.00	\$1,000.00
Contracts- Well Drilling Totals				Supplies Total	Federal total	Salary total
				\$10,500.00	\$3,000.00	\$7,500.00

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.

3. Funding

- (a) The total estimated cost of the USGS share for the performance of this Agreement is (insert total amount of the agreement) inclusive of any renewal years.
- (b) If applicable, funding for Budget Year 2 is dependent on (1) availability of funds, (2) submission of the annual progress report; (3) a recommendation by the USGS Program Office to continue the project; and (4) adherence to the published terms and conditions of the award.
- (c) The amount obligated under this Assistance Award Modification, hereinafter referred to as “obligated funds,” presently the sum of (insert current obligated amount) shall be available for payment of costs incurred by the recipient in performance of this award as follows:

Budget Year	Period of Funding Availability	Obligated Amount
1	To be determined	To be determined
2	To be determined	To be determined

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. In the case of multi-year Agreements, failure to submit timely reports may delay processing of funding increments. For Agreements with a total anticipated performance period of twelve months (12) months or less, only 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:

(8) 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

(9) 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 electronically through the FedConnect Message Center (www.fedconnect.net) or, if FedConnect is not available, by e-mail to SF425@usgs.gov with a cc to the Grant Specialist. Recipient must include the USGS award number in the subject line of all correspondence. If, after 90 days, Recipient has not submitted a report, the Recipient's account in ASAP will be placed in a manual review status until the report is submitted.

(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) Publication

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

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

(d) Copies for USGS

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

(e) Department of the Interior Requirements

Two copies of each publication produced under a 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.

1. General Provisions

(a) Cost Principles, Audit, And Administrative Requirements

The Recipient shall be subject to the following regulations, which are incorporated herein by reference. Copies of these regulations can be obtained from the Internet at:

http://www.whitehouse.gov/omb/grants_docs

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

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

(b) Additional Regulations

This award is subject to the following additional Governmentwide regulations:

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

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

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

(c) Additional Articles Required For Compliance with Statute or Regulation

(i) The Seat Belt Provision (Executive Order 13043)

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

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

Recipients are encouraged to adopt and enforce policies that ban text messaging while driving, including conducting initiatives of the type described in section 3(a) of the order.

(http://www.whitehouse.gov/the_press_office/Executive-Order-Federal-Leadership-on-Reducing-Text-Messaging-while-Driving/)

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

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

(iv) Trafficking in Persons (2 CFR Part 175)

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

1. You as the recipient, your employees, subrecipients under this award, and subrecipients' employees may not—
 - i. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;
 - ii. Procure a commercial sex act during the period of time that the award is in effect; or
 - iii. Use forced labor in the performance of the award or subawards under the award.
2. We as the Federal awarding agency may unilaterally terminate this award, without penalty, if you or a subrecipient that is a private entity —
 - i. Is determined to have violated a prohibition in paragraph a.1 of this award term; or
 - ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either—
 - A. Associated with performance under this award; or
 - B. Imputed to you or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, “OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement),” as implemented by our agency at 2 CFR part 1400.

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

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

1. Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or
2. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either—
 - i. Associated with performance under this award; or
 - ii. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, “OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement),” as implemented by our agency at 2 CFR part 1400.

c. Provisions applicable to any recipient.

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

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

d. *Definitions.*

For purposes of this award term:

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

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

a. *Reporting of first-tier subawards.*

- 1. *Applicability.* Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e. of this award term).
- 2. *Where and when to report.*
 - i. You must report each obligating action described in paragraph a.1. of this award term to <http://www.fsrs.gov>.
 - ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)
- 3. *What to report.* You must report the information about each obligating action that the submission instructions posted at <http://www.fsrs.gov> specify.

b. *Reporting Total Compensation of Recipient Executives.*

1. *Applicability and what to report.* You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if—
 - i. the total Federal funding authorized to date under this award is \$25,000 or more;
 - ii. in the preceding fiscal year, you received—
 - (A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - (B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)
2. *Where and when to report.* You must report executive total compensation described in paragraph b.1. of this award term:
 - i. As part of your registration profile at <https://www.sam.gov>.
 - ii. By the end of the month following the month in which this award is made, and annually thereafter.

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

1. *Applicability and what to report.* Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if—
 - i. in the subrecipient's preceding fiscal year, the subrecipient received—
 - (A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and
 - (B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and
 - ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/execomp.htm>.)

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

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

d. *Exemptions*

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

- i. Subawards,
and
- ii. The total compensation of the five most highly compensated executives of any subrecipient.

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

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

- i. A Governmental organization, which is a State, local government, or Indian tribe;
- ii. A foreign public entity;
- iii. A domestic or foreign nonprofit organization;
- iv. A domestic or foreign for-profit organization;
- v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

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

3. *Subaward*:

- i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
- ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. __ .210 of the attachment to OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations").
- iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. *Subrecipient* means an entity that:

- i. Receives a subaward from you (the recipient) under this award; and
- ii. Is accountable to you for the use of the Federal funds provided by the subaward.

5. *Total compensation* means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

- i. *Salary and bonus.*

- ii. *Awards of stock, stock options, and stock appreciation rights.* Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.
- iii. *Earnings for services under non-equity incentive plans.* This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
- iv. *Change in pension value.* This is the change in present value of defined benefit and actuarial pension plans.
- v. *Above-market earnings on deferred compensation which is not tax-qualified.*
- vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

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

a. *Requirement for System of Award Management*

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

b. *Requirement for Unique Entity identifier Numbers*

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

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

c. *Definitions*

For purposes of this award term:

- 1. *System of Award Management (SAM)* means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the SAM Internet site (currently at <http://www.sam.gov>).
- 2. *Unique entity identifier* means the identifier required for SAM registration to uniquely identify business entities.
- 3. *Entity*, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:
 - i. A Governmental organization, which is a State, local government, or Indian Tribe;
 - ii. A foreign public entity;

- iii. A domestic or foreign nonprofit organization;
- iv. A domestic or foreign for-profit organization; and
- v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. *Subaward*:

- i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
- ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200.330).
- iii. A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. *Subrecipient* means an entity that:

- i. Receives a subaward from you under this award; and
- ii. Is accountable to you for the use of the Federal funds provided by the subaward.

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

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

(viii) Pilot Program for Enhancement of Recipient and Subrecipient Employee Whistleblower Protection (41 USC Section 4712)

- a. This award, related subawards, and related contracts over the simplified acquisition threshold and all employees working on this award, related subawards, and related contracts over the simplified acquisition threshold are subject to the whistleblower rights and remedies established at 41 USC 4712.
- b. Recipients, their subrecipients, and their contractors awarded contracts over the simplified acquisition threshold related to this award, shall inform their employees in writing, in the predominant language of the workforce, of the employee whistleblower rights and protections under 41 USC 4712.
- c. The recipient shall insert this clause, including this paragraph (c), in all subawards and in contracts over the simplified acquisition threshold related to this award.

(ix) Prohibition on Issuing Financial Assistance Awards to Entities that Require Certain Internal Confidentiality Agreements (P.L. 113-235)

Section 743 of Division E, Title VII of the Consolidated and Further Continuing Resolution Appropriations Act of 2015 (Pub. L. 113-235) prohibits the use of funds appropriated or

otherwise made available under that or any other Act for grants or cooperative agreements to an entity that requires employees or contractors of such entity seeking to report fraud, waste, or abuse to sign internal confidentiality agreements or statements prohibiting or otherwise restricting such employees or contractors from lawfully reporting such waste, fraud, or abuse to a designated investigative or law enforcement representative of a federal department or agency authorized to receive such information.

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

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

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.

(xi) 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.

l. *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.

(d) Additional General Terms and Conditions

(i) Research Integrity

- 1) USGS requires that all grant or cooperative agreement Recipient organizations adhere to the Federal Policy on Research Misconduct, Office of Science and Technology Policy, December 6, 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.

- 2) The Recipient must promptly notify the USGS Project Office when research misconduct that warrants an investigation pursuant to the Federal Policy on Research Misconduct is alleged.

(ii) Access To Research Data

- 1) Recipients that are institutions of higher education, hospitals, or non-profit organizations are required to release research data first produced in a project supported in whole or in part with Federal funds that are cited publicly and officially by a Federal agency in support of an action that has the force and effect of law (e.g., regulations and administrative orders). “Research data” is defined as the recorded factual material commonly accepted in the scientific community as necessary to validate research findings. It does not include preliminary analyses; drafts of scientific papers; plans for future research; peer reviews; communications with colleagues; physical objects (e.g., laboratory samples, audio or video tapes); trade secrets; commercial information; materials necessary to be held confidential by a researcher until publication in a peer-reviewed journal; information that is protected under the law (e.g., intellectual property); personnel and medical files and similar files, the disclosure of which would constitute an unwarranted invasion of personal privacy; or information that could be used to identify a particular person in a research study.
- 2) These requirements do not apply to commercial organizations or to research data produced by State or local governments. However, if a State or local governmental grantee contracts with an educational institution, hospital, or non-profit organization, and the contract results in covered research data, those data are subject to these disclosure requirements.
- 3) Requests for the release of research data subject to this policy are required to be made to USGS, which will handle them as FOIA requests under 43 CFR 2.25. If the data are publicly available, the requestor will be directed to the public source. Otherwise, the USGS Contract Officer, in consultation with the affected Recipient and the PI, will handle the request. This policy also provides for assessment of a reasonable fee to cover Recipient costs as well as (separately) the USGS costs of responding.
- 4) Rights to research data and other intangible property shall be distributed in accordance with 2 CFR 200.315.

(iii) Conflict of Interest

The Recipient must establish safeguards to prohibit its employees and Subrecipients from using their positions for purposes that constitute or present the appearance of a personal or organizational conflict of interest. The Recipient is responsible for notifying the USGS Contracting Officer in writing of any actual or potential conflicts of interest that may arise during the life of this award. Conflicts of interest include any relationship or matter which might place the Recipient or its employees in a position of conflict, real or apparent, between their responsibilities under the agreement and any other outside interests. Conflicts of interest may also include, but are not limited to, direct or indirect financial interests, close personal

relationships, positions of trust in outside organizations, consideration of future employment arrangements with a different organization, or decision-making affecting the award that would cause a reasonable person with knowledge of the relevant facts to question the impartiality of the Recipient and/or Recipient's employees and Sub-recipients in the matter.

The USGS Contracting Officer and the servicing Ethics Counselor will determine if a conflict of interest exists. If a conflict of interest exists, the USGS Contracting Officer will determine whether a mitigation plan is feasible. Mitigation plans must be approved by the USGS Contracting Officer in writing. Failure to resolve conflicts of interest in a manner that satisfies the government may be cause for termination of the award.

Failure to make required disclosures may result in any of the remedies described in 2 CFR § 200.338, Remedies for Noncompliance, including suspension or debarment (see also 2 CFR Part 180).

(iv) 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).

(v) 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)

2. Special Provisions

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

3. 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*)
- 3) *Add as necessary*

(b) Order of Precedence

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

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

– END OF ASSISTANCE AWARD DOCUMENT –

Attachment 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