Joshua Valley Utility Company

Phase II: Upgrade 400 Meters to Advanced Meter Reading (AMR) Technology

WaterSMART Grants: Small-Scale Water Efficiency Projects

Funding Opportunity Announcement No. R24AS00059

Applicant
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1.1 EXECUTIVE SUMMARY

Submission Date: January 16, 2024
Applicant: Joshua Valley Utility Company
Applicant City, County, State: Meadview, Mohave County, Arizona
Project Location: JVUC CC&N
Funding Group: R24AS00059

Joshua Valley Utility Company (JVUC) is a Category A applicant. The purpose of JVUC's Advanced Meter Reading (AMR) Technology Upgrade is to replace outdated, under-registering, manual read meters with new AMR meters. This is a phased project where JVUC seeks funding assistance for Phase II. The scope of Phase II is to replace 400 of the 5/8" x 3/4" manual read meters in the water system (approximately 38% of all the meters in the system) with new, accurate meters with AMR technology. This will be done by removing the old meter and replacing it with a new meter with advanced technology.

Ninety percent of the JVUC 1,010, 5/8" x 3/4", customer water meters are substantially over ten years old. In Decision No. 78613, dated July 11, 2022, Arizona Corporation Commission (ACC) staff stated that JVUC is experiencing an average water loss of 17.2 percent over the past five years, which exceeds the ACC staff recommended water loss level of no greater than 10.0 percent. The ACC staff believes that much of the water loss relates to the age of the customer meters. With the replacement of the outdated, under-registering meters, JVUC will see the accuracy of water accounting increase significantly both for an increase in billed water and very likely a decrease in reported lost and unaccounted water. The goal is to leverage science and technology to increase the efficiency of the meter reading process, accurately account for metered water use, and reduce lost and unaccounted water; thereby improving water supply reliability and use our water resource more efficiently. The new meters will also help customers to better monitor their own water usage and allow JVUC to notify them if they have a significant increase in their water usage.

It is estimated that Phase II will take approximately six months to complete and will begin approximately 30 to 90 days after execution of the grant agreement between our two parties.

This project is not located in a federal facility.

1.2 Background Data

The Arizona Corporation Commission is the regulatory authority having jurisdiction over public service corporations operating in Arizona. A private water company is one form of public service corporation regulated by the ACC.

JVUC, a subsidiary of Community Water of America Inc. (CWA), is a private water company regulated by the ACC as a Class D water utility that provides potable water service to approximately 1,050 customer connections in Mohave County, Arizona. JVUC can only provide water service to customers located within an area included in or contiguous to an area defined as a Certificate of Convenience and Necessity (CC&N) and may only charge water rates that are approved by the ACC. A CC&N is an area with a well-defined legal description that could be compared to a city limit. The ACC reviews any requests for establishing or expanding a company's

CC&N, with the determining factor being the public interest. The ACC evaluates the company's capabilities and qualifications for providing water service to the requested service area before granting or denying the company's request to establish or expand its CC&N. JVUC's original CC&N was granted by the ACC in 1966 in Decision No. 38720 and in 1972 in Decision 41917. The ACC's scope of regulation of water companies does not end with rates or CC&N's, but also includes financing, reporting and the terms and conditions for the provision of water service.

JVUC's water system consists of five active wells, four storage tanks, one pressure tank, and a distribution system. The wells were drilled between 1966 and 2012, range in depth from 600 to 800 feet deep, and have a combined pumping capacity of 248 GPM. The storage tanks were installed in 1976 and 1978 and have a combined storage capacity of 510,000 gallons. The pressure tank has a capacity of 5,000 gallons and was installed in 1978. The JVUC water system is around 50 years old and consists of approximately 60 miles of water main ranging in size from 3 inches to 8 inches. Service valves are located throughout the system.

In 2022 JVUC had an average of 1,032 active metered customers, which consisted of 999 single family accounts., one multi-family account, 28 commercial accounts, and four other non-residential accounts.

In 2022, JVUC pumped a total of 38.9 million gallons of groundwater and delivered 34.2 million gallons of water to metered customers. Water loss (the difference between water pumped and recorded water sales) has been averaging approximately 15% over the past six years including the partial year of 2023 (See Table 1.).

Year	Active Meters (Total EOY)	Water Pumped (Gallons/Yr.)	Water Sold (Gallons/Yr.)	Water Loss (Gallons/Yr.)	Water Loss (Annual %)
2018	959	40,405,517	33,562,641	6,842,870	16.94%
2019	977	40,347,500	32,056,516	8,290,984	20.55%
2020	993	43,461,424	36,549,300	6,912,124	15.90%
2021	1,018	38,024,619	35,441,636	2,582,983	6.79%
2022	1,047	38,974,970	34,263,630	4,711,340	12.09%
2023 (through Oct)		34,319,500	27,338,990	6,980,510	20.34%
6-Yr Avg					15.44%

Table 1: Annual Water usage, Water Sold and Water Losses for 2018 through Oct of 2023

Due to funding constraints and other current needs JVUC has been unable to focus its limited resources on replacing outdated meters which are likely not measuring water sold to customers accurately. Outdated meters are known to read slowly and can substantially under record customer use. Without an accurate accounting for actual customer water usage system wide, JVUC is unable to determine true water loss that is occurring in the water system. Ninety percent of the JVUC 1,010, 5/8" x 3/4", customer water meters are over ten years old. JVUC has not undergone a system wide meter replacement program other than for individual meters known to be inoperable since the company's inception in 1966. In ACC Decision No. 78613, dated July 11, 2022, Arizona Corporation Commission (ACC) staff stated that JVUC is experiencing an average water loss of 17.2 percent over the past five years, which exceeds the ACC staff recommended water loss level of no greater than 10 percent. ACC staff stated that they believe that much of the water loss relates

to the age of the customer meters and notes that this issue should be further addressed in JVUC's next rate case.

JVUC has not received any other State or Federal funding for the proposed Phase II work. In addition, JVUC has not received any funding from the Bureau of Reclamation in the past.

JVUC has applied for American Rescue Plan Act (ARPA) funding for Phase I and expects to use approximately $100,000 of APRA funding for replacing around 250 manual read meters with new, accurate meters with AMR technology, provisioning a field ready AMR laptop reading system, licensing and third-party fees, and field training, startup, and integration with an existing customer service portal. There is no overlap in the scopes of work for Phase I and Phase II. In Phase I and II, JVUC will be replacing approximately 62% of the water meters system wide. JVUC expects to complete the meter replacement program in Phase III either though company funded investment or through additional grant funding to the extent available.

1.3 Project Location

JVUC CC&N, as shown in Figure 1, serves Meadview, Arizona which is an unincorporated community and a census-designated place (CDP) in northern Mohave County, located near Lake Mead. It is at an elevation of 3,500 feet. It is 67 miles north of Kingman, the county seat. According to the United States Census Bureau, the Meadview CDP has an area of 31.0 square miles. As of the 2020 census, Meadview had 1,420 residents, up from 1,224 as of 2010. It was founded in the 1960's.

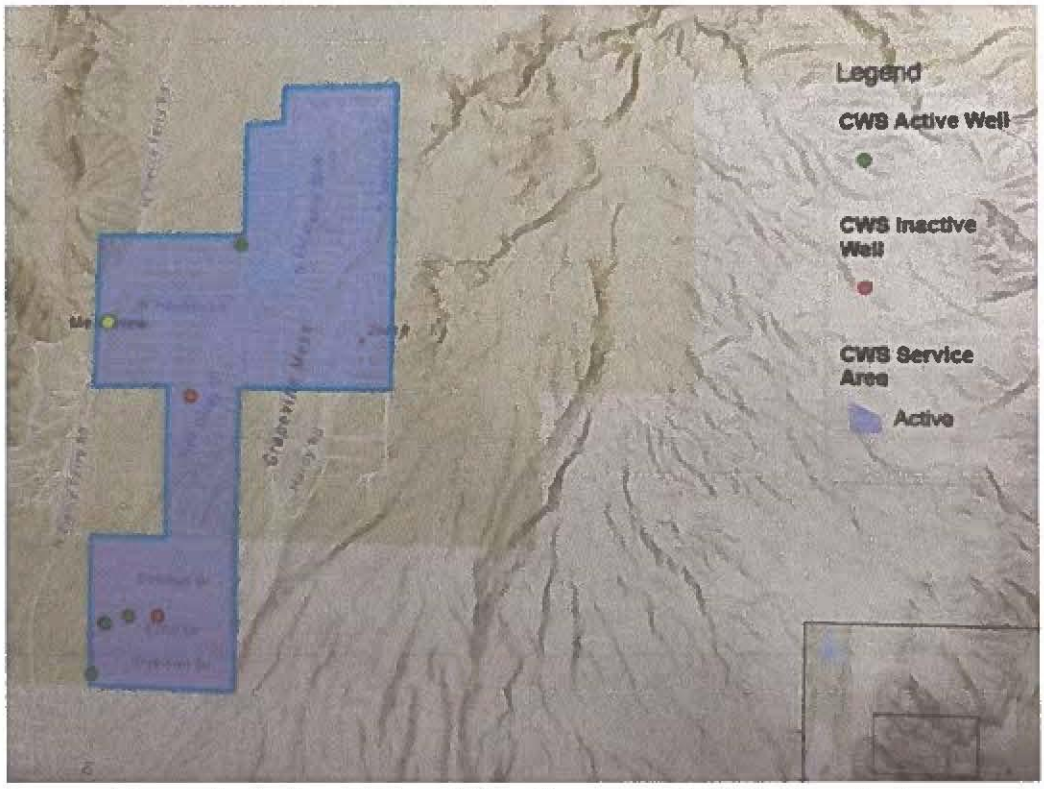

Figure 1: Joshua Valley Utility Company CC&N Boundaries

1.4 Technical project description and milestones

To accurately capture all water usage in the distribution system, meters are the primary tool for measuring water delivery to each property with water service. To accurately measure water usage for a property, meters should be replaced due to the amount of water flow through the meters and age. Meters in the JVUC service area are mostly 5/8" x 3/4" and substantially over ten years old.

As part of JVUC's monthly meter reading and billing routine, each meter must be manually read, and the reads then manually entered into our billing system. This is an incredibly time intensive process and can result in human errors. With the new technology being used since the 1990's, there is a proven track record that radio read and fixed base systems are more accurate and are a time-saving tool, hence reducing costs. AMR frees up limited operators' resources to work on the systems regular repairs and maintenance needs. With increased accuracy and efficient reading and recording technology, the system will see decreased water loss as water usage can be better measured. Further, with accurate water data loss operators can then develop a program to locate and address system leakage.

As part of the water system improvements and joining the 20th century with technology, moving JVUC to an automated meter reading and billing system is the next step. With radio read or fixed base meter reading systems being used nationwide, there is a track record for reducing the manual labor in physically reading each meter and sending the reads to a billing office. With radio read and fixed base systems, the reading is automated and system software can do the data entry into the billing system. The change requires replacing existing meters with meters incorporating radio technology, and a software purchase and annual license and configuration for communicating information between the meter reading and billing systems.

The reason for the water meter replacement program is three-fold: First, American Water Works Association (AWWA) best practices require meters be changed out every ten to twelve years or at a threshold of one to two million gallons of use. Second, ACC staff recommend that water loss not exceed 10 percent. Third, the Arizona Department of Water Resources (ADWR) requires water systems to report the amount of water which is either lost or unaccounted for throughout the system. Replacing the meters on a regular basis meets goals for JVUC, the ACC, and AWWA, and is fundamental to achieving improved efficiency and better overall water management and conservation goals. Replacing outdated meters which are likely under-reporting customer usage, JVUC will be able to measure water loss more accurately to determine how much water is lost due to potential system leakage. With more accurate and timelier meter read data and assessment of water loss due to system leakage, JVUC can then develop a program to make further distribution system improvements to reduce water loss to reduce water production and improve drought resiliency.

METER REPLACEMENT:

The scope of Phase II is to replace 400 of the 5/8" by 3/4" meters in the water system with new, accurate meters with advanced technology for reading through radio read, thereby reducing manual labor, increasing efficiencies, and providing accurate water loss data which is needed to develop a water loss reduction program. This will be done by removing the old meter and replacing it with a new radio read AMR meter. The total cost of Phase II is estimated to be $221,200 based on a preliminary quote from a third party.

Phase II AMR Technology Upgrade Cost Estimates

Meters, Registers, and Installation (400)	$167,200
Meter Installation (Contract Services)	$ 54,000
Total Cost	**$221,200**

1.5 Evaluation Criterion

Evaluation Criteria Scoring Summary	Points:
A. Project Benefits	35
B. Planning Efforts Supporting the Project	25
C. Implementation and Results	20
D. Nexus to Reclamation	5
E. Presidential and Department of the Interior Priorities	15
Total	***100***

Evaluation Criterion A – Project Benefits (35 points)

Up to 35 points may be awarded based upon evaluation of the benefits that are expected to result from implementing the proposed project. This criterion considers a variety of project benefits, including the significance of the anticipated water management benefits and the public benefits of the project. This criterion prioritizes projects that modernize existing infrastructure to address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflict in the region. If the work described in your application is a phase of a larger project, only discuss the benefits that will result directly from the work discussed in the technical project description and that is reflected in the budget, not the larger project. Benefits to the Category A Applicant's Water Delivery System: Describe the expected benefits to the Category A applicant's water delivery system. Address the following:

Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers. Consider:

•Will the project result in more efficient management of the water supply?
•Where any conserved water as a result of the project will go and how it will be used?

Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers. Consider:

•Are customers not currently getting their full water right at certain times of year?

•Does this project have the potential to prevent lawsuits or water calls?

•What are the consequences of not making the improvement?

•Are customer water restrictions currently required?

•Other significant concerns that support the need for the project.

Broader Benefits: Describe the broader benefits that are expected to occur as a result of the project. Consider:

•Will the project improve broader water supply reliability at sub-basin or basin scale?
•Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain.

•Is the project in an area that is experiencing, or recently experienced, drought or water scarcity? Will the project help address drought conditions at the sub-basin or basin scale? Please explain.
•Will the project benefit species (e.g., federally threatened or endangered, a federally recognized candidate species, a state listed species, or a species of particular recreational, or economic importance)? Please explain.

•Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.

•Will the project complement work be done in coordination with NRCS in the area (e.g., the area with a direct connection to the districts water supply)? Please explain.

Please note, on-farm improvements themselves are not eligible activities for funding under this NOFO. This criterion is intended to focus on how the WaterSMART Grant project will complement ongoing or future on-farm improvements. NRCS will have a separate application process for the on-farm components of selected projects that may be undertaken in the future, separate of the WaterSMART Grant project.

The AMR meters for this project use advanced technology and will serve to better manage the JVUC ground water supply, as well as provide more accurate readings for true accountability of customer water usage. The average age of meters in JVUC's system is estimated to be approximately 25 years old, with our oldest meters in place since water system inception around 1970. It is anticipated that by replacing JVUC's outdated and under-registering water meters JVUC will likely reduce reported water lost through simply recording and billing more accurately for customer's water usage. With accurate water loss information, JVUC will be able to develop a water loss reduction program to locate and address system leakage and reduce unnecessary water pumping lowering power cost, system wear and tear and importantly reduce stress on the ground water basin improving drought resiliency in the region. Finally, AMR meters incorporate alarms which notify the company of leaks on the customer side of the meter and data logging which records up to six months of customer usage which can be used to help identify and address unusually high customer usage and potential leaks. Any tool which allows us to better match pumping to usage and reduce groundwater pumping, not only benefits our customers but also other groundwater users in the basin.

The service area of the Joshua Valley Utility Company has been described by the Arizona Department of Water Resources (ADWR) as being located within the Meadview Basin that is a part of the Basin and Range physiographic province, which consists of northwest-trending alluvial basins separated by elongated fault-block mountain ranges (ADWR, 1994). The Meadview Basin is oriented north-south and is approximately 16 miles long by six to seven miles wide. It encompasses approximately 190 square miles and is bounded on the east by the Grand Wash Cliffs,

on the west by Wheeler Ridge, on the south by the Garnet Mountains, and on the north by Lake Mead.

Groundwater movement in the Meadview Basin is northward from the southern highlands towards Lake Mead. The depth to groundwater varies from 935 feet below land surface (bls) in the southern portion of the basin to 135 feet bls in the northern basin near Grapevine Wash (ADWR, 1981, Hydrologic Map Series Report 4). A 1985 Water Adequacy Study by the consulting firm Cella Barr Associates reported that groundwater levels near Meadview are declining about one foot per year due to increased pumping to meet increased water demands. ADWR estimates groundwater pumping to be approximately 100 acre-feet per year, of which Joshua Valley Utility Company supplied 71 acre-feet of water to customers in the Meadview area. No estimates of the annual average recharge of water into the basin are available, though the recharge rate is likely minor due to high evapotranspiration and low precipitation amounts.

Published hydrogeologic reports or maps were not available for the area, but JVUC's hydrogeologic consultant was able to access files from the ADWR Groundwater System Inventory (GWSI) database that are indicative of the physical conditions (water table depth) of the local aquifer system. The ADWR monitor well (55-610730) provided a detailed history of the depths-to-water in that well, which are indicative of other wells in the local area. Recorded water levels include yearly data from 1982 to 1990, and biannual data from 1990 to 2022. Static water levels in the wells with historic records have dropped from approximately one to two feet per year since about 1983. This drop in the water table may reflect the combination of influence from the declining levels in Lake Mead along with population growth in the area or other factors such as drought and climate change.

With a water loss reduction program, JVUC will be able to reduce unaccounted for water and thereby reduce groundwater pumping and reduce pressure on the Meadview Basin upon which local communities rely. This will have a positive impact on water management in the area and sustain water supplies to other potentially affected interests reliant on the Meadview Basin. By better managing the groundwater basin through accounting accuracy, reduced pumping will also reduce the amount of electricity and extend well and pump life. Additionally, water customers will be billed accurately for their water usage, encouraging conservation, and contributing to JVUC system's financial stability.

The project will be of great benefit to current and future water customers in the JVUC CC&N and to the neighboring communities in our geographic area relying on water drawn from the Meadview Basin.

Will the proposed project increase collaboration and information sharing among water managers in the region? Please explain.

If successful the JVUC plans on sharing this information any other small water systems statewide who are struggling with high non-revenue or lost and unaccounted water numbers, meter reading inefficiencies and wish to equip themselves with the information needed to apply for federal grant opportunities; as well as immediate information sharing with the community we serve and neighboring small water providers in Mohave County.

Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism)

In 2021 the median age of residents in Meadview is 68.4 and the median household income is $50,986. Residents are primarily fixed income, and the 2021 poverty rate is 21.1%. The JVUC is a private water company, funded by user water rates; the reliability and financial viability of the system is crucial to sustaining and growing the area. Rate increases represent a significant burden to many customers in JVUC's economically depressed area. Realizing savings in operational efficiencies and water production from meter conversion to radio read technology will positively benefit JVUC's customers by allowing savings to be redirected to other investments in JVUC's infrastructure to further improve system performance and reliability.

As noted in the Bureau of Reclamation's *Overview of Disadvantaged Communities and Native American Tribes in the Santa Ana River Watershed*, residents living in severely disadvantaged or disadvantaged communities are often disproportionally impacted by high infrastructure costs, poor water quality, and failing septic systems. JVUC wants to ensure that all community members, especially those with fewer resources, have access to technologies that save money and preserve precious water resources.

Extent to which the project will complement work done in coordination with NRCS in the area (e.g., with a direct connection to the district's water supply).

It is estimated that by replacing the remaining outdated water meters JVUC will likely reduce the lost and unaccounted or non-revenue water through improved efficiency and better water management.

Describe any on-farm efficiency work that is currently being completed or is anticipated to be completed in the future using NRCS assistance through EQIP or other programs.

No on-farm efficiency work is being completed using NRCS assistance.

Evaluation Criterion B – Planning Efforts Supporting the Project (25 Points)

Up to 25 points may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review, or identified as part of another planning effort led by the Category A applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs. Note: Project specific planning and design for the project or other phases of the project are considered in Criteria C – Implementation. Plan Description and Objectives: Is your project supported by a specific planning document or effort? If so, describe the existing plan. When was the plan developed? What is the purpose and objective of the plan? Plan Development: Who developed the planning effort? What is the geographic scope of the plan? If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort. Support for the Project: Describe to what extend the proposed project is supported by the identified plan. Consider:

- *Is the project identified specifically by name and location in the planning effort?*
- *Is this type of project identified in the planning effort?*

•Explain whether the proposed project implement a goal, objective, or address a need or problem identified in the existing planning effort?

•Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.

JVUC approved its current fiscal year 2024 budget with $14,000 allotted to system repairs and maintenance, and an additional $200,000 for improvement projects. The majority of the funds for improvement projects will be directed to needed upgrades to wells, water storage facilities and the distribution system to improve and maintain system reliability. Even with limited funds in a small system the importance of this project has been identified by the company management and the ACC as a priority. Without the grant, the meter replacement project will need to be funded over a period of up to five years. The receipt of this grant will allow Phase II to begin in 2024 and be completed within six months thus the benefits to the system, the users and the aquifer will be realized earlier. The JVUC is committed to meeting the objective of this BOR Funding Opportunity of leveraging funds and resources not only to complete the work, but also evaluate the results. This project will allow us to better engage our customers in actively managing their own use and quickly identify and address leaks.

Evaluation Criterion C – Implementation and Results (20 points)

Up to 20 points may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed plan (e.g., estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates) will receive the most points under this criterion.

•Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.

•Proposals with a budget and budget narrative that provide a reasonable explanation of project costs will be prioritized under this criterion.

•Describe any permits and agency approvals that will be required along with the process and timeframe for obtaining such permits or approvals.

•Identify and describe any engineering or design work performed specifically in support of the proposed project. What level of engineering design is the project currently? If additional design is required, describe the planned process and timeline for completing the design.

•Does the applicant have access to the land or water source where the project is located? Has the applicant obtained any easements that are required for the project? If the applicant does not yet have permission to access the project location, describe the process sand timeframe for obtaining such permission.

•Identify whether the applicant has contacted the local Reclamation office to discuss the potential environmental and cultural resource compliance requirements for the project and the associated costs. Has a line item been included in the budget for costs associated with compliance? If a contractor will need to complete some of the compliance activities, separate line items should be included in the budget for Reclamation's costs and the contractor's costs.

As well as being a recognized priority of the ACC and company management, the company has approved system repairs, maintenance, and equipment improvement for 2023 and 2024. Funding is planned with a portion of the budget designated for the meter replacement project. Again, without grant funding this project would have an implementation timeline of up to five years. Receipt of grant funding would move the entire meter replacement project up for completion in 2025. JVUC does not anticipate that permits will be required as all meters will be installed in the place of existing system water meters. All project-related approvals will be managed by the JVUC management and operations or contract staff and executed in a timely and efficient manner. Capability of purchasing meters and equipment is established through the JVUC's company policies for procurement and contracts necessary to provide the equipment, software, hardware, programming, and installation services on the project. Procurement activity and site work will proceed according to the schedule below. No engineering work is necessary. There are no environmental compliance costs associated with this project.

PROJECT SCHEDULE / MILESTONES
(Milestones are based on days after Grant Award)

Meters Installed by Contractor

1.	Procure Radio Read meters & meter installation contracts:	60 Days
2.	Meter Installation by Contractor:	90 Days
3.	Completion of Phase II	30 Days

Evaluation Criterion D – Nexus to Reclamation (5 Points)

Up to 5 points may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity. Describe the nexus between the proposed project and a Reclamation project or activity, including: Is the proposed project connected to a Reclamation project or activity? If so, how? Please consider the following: •Does the applicant have a water service, repayment, or operations and maintenance(O&M) contract with Reclamation?

•If the applicant is not a Reclamation contractor, does the applicant receive Reclamation water through a Reclamation contractor or by any other contractual means?

•Will the proposed work benefit a Reclamation Project area or activity?

Reclamation and the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) have collaborated to align program resources in areas of the Western United States where our mission areas overlap (17 Western States), to improve the impact of the agencies' respective drought resiliency and water efficiency investments. This project aligns with those goals and will improve drought resiliency and water efficiency in an aquifer that intensely supports commercial and residential activities.

JVUC's meter replacement project supports the following Department and Reclamation priorities as detailed below and elsewhere in this application. This project is an innovative application of existing science/technology. With the installation of this technology, JVUC will be able to accurately account for metered water use. This technology enables JVUC to manage its water by aligning production with accurate metered use and directing lost and unaccounted for water efforts

to other areas of infrastructure and system management such as leaks, flushing, etc. JVUC sees this technology as a best management practice over the region's water resources.

JVUC knows that in times of drought that regional collaboration is extremely important. JVUC shares the aquifer with private well owners, and commercial users. Through the conversion of outdated meters to AMR, JVUC is demonstrating to any potentially affected interests that JVUC is collecting and reporting accurate data to be used to best manage the shared basin. JVUC reports its annual water use through ADWR and the ACC, and most major water providers look at what their neighbors report to the State. It is important that JVUC's neighbors, State and Local government, and customers feel confident that the company is being a good steward of our natural resources through the accurate reporting of our water use, billing data, and water loss.

As a small public water system relying heavily on user rates in an economically depressed area, JVUC would not be able to make necessary improvements as timely to infrastructure and advancements in technology for water management without collaboration and funding from public sources. As we continue to deal with drought conditions and funding restrictions, we are focusing our efforts on grant opportunities as a means of reaching water efficiency goals in a fiscal responsible and timely manner.

Evaluation Criterion E – Presidential and Department of the Interior Priorities (15 Points)

Up to 15 points may be awarded based on the extent that the project demonstrates support for the Biden-Harris Administration's priorities, including E.O. 14008: Tackling the Climate Crisis at Home and Abroad and E.O. 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, and the President's memorandum, Tribal Consultation and Strengthening Nation-to Nation Relationships. Points will be allocated based on the degree to which the project supports the priorities listed, and whether the connection to the priority(ies) is well supported in the application. Only address the sub-criterion that are relevant to your project.

Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to your project.

Combating the Climate Crisis: E.O. 14008: Tackling the Climate Crisis at Home and Abroad, focuses on increasing resilience to climate change and supporting climate- resilient development. For additional information on the impacts of climate change throughout the western United States, see: www.usbr.gov/climate/ secure/docs/2021secure/2021SECUREReport.pdf. Please describe how the project will address climate change, including the following:

- *Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.*
- *Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?*

JVUC spends approximately 30 hours each month driving through the system to manually read each meter, this also includes rereading misread meters and verifying high meter reads. When accounting for training, holidays, vacation and sick time, the time to manually read meters is more

than a full time equivalent (FTE) work week per month or approximately equivalent to three months of an FTE. With the drive by radio read AMR meters, JVUC will reduce driving time by 25 hours a month, 300 hours a year, thus both reducing carbon emissions and providing labor savings. By accurately calculating water at customer meters JVUC will be more precise in collecting water loss data and be able to pinpoint other areas where water loss is occurring and work towards making the necessary repairs and improvements within the distribution system to lower water loss. This technology also will allow JVUC customers to have the ability to analyze their own water usage to address customer related leakage and further conserve water.

E.O. 14008 and E.O. 13985 affirm the advancement of environmental justice and equity for all through the development and funding of programs to invest in disadvantaged or underserved communities. For the purpose of this criterion, Tribes and insular areas (Guam, American Samoa, the Northern Mariana Islands, and the Virgin Islands) are considered disadvantaged.
• Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool, available online at Explore the map – Climate & Economic Justice Screening Tool (https://screeningtool.geoplatform.gov) to identify any disadvantaged communities that will benefit from your project.

• If applicable, describe how the project benefits those disadvantaged or underserved communities identified using the tool. For example, does the project increase reliability of water supplies, improve water quality, provide economic growth opportunities, improve or expand public access to natural areas or recreation, or provide other benefits in a disadvantaged or underserved community?

JVUC has a large population of those on a fixed income, living at the poverty level, unemployed, underemployed, those in need of low-income housing and there is no access to public transportation. With the ever-increasing cost of energy, JVUC recognizes the need in the community for reasonable water rates. The ACC and JVUC Management takes into consideration the impact increasing customers water bills would have on the community while still trying to balance the needs of running a water distribution system. With the installation of AMR meters, customers will be able to analyze high water usage to assist in managing their water consumption and better able to keep their water bills low. As JVUC is an economically disadvantaged community this capability will benefit those who struggle each month to pay their water bill.

Points will be awarded based on the extent to which the Project will honor the Federal government's commitments to Tribal Nations. The Department of the Interior is committed to strengthening Tribal sovereignty and the fulfillment of Federal Tribal trust responsibilities. The President's memorandum, "Tribal Consultation and Strengthening Nation-to-Nation Relationships," asserts the importance of honoring the Federal government's commitments to Tribal Nations.

• Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?

• Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?

•Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?

JVUC does not directly serve or benefit a Tribe.

2.0 Project Budget

2.1 Funding Plan and Letters of Commitment

Phase II is fully funded from JVUC and has been approved as part of the fiscal year 2024 budget. The funding commitment was made by JVUC on January 12, 2024 as a formal resolution. JVUC has formally approved submission of the grant application and commitment of $121,200 in funds for Phase II.

2.2 Budget Proposal

Table 1. Summary of Non-Federal and Federal Funding Sources

FUNDING SOURCES	AMOUNT
Non-Federal Entities	$ 0.00
	-
Non-Federal Subtotal	$ 0.00
REQUESTED RECLAMATION FUNDING $100,000	

Table 2. Total Project Cost Table

SOURCE	AMOUNT
Cost to be reimbursed with the requested Federal funding	$ 100,000.00
Cost to be paid by the applicant	$ 121,200.00
Value of a third-party contributions	$ -
TOTAL PROJECT COST	$ 221,200.00

Table 3. Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION $/Unit	COMPUTATION Quantity	Quantity Type	TOTAL COST
Salaries and Wages				
Meter Installation	$ -	-	-	$ -
Management $ Administration	$ -	-	-	$ -
Fringe Benefits				
Travel				
Equipment				

Meters: Master Meter BLMJ with BB 3G DS register, 5/8" x 3/4"	$ 418.00	400	Each	$ 167,200.00
	$ -	-	-	$ -
	$ -	-	-	$ -
Supplies and Materials				$ 167,200.00
Contractual/Construction				$ 54,000.00
Other				$ -
TOTAL DIRECT COSTS				$ 221,200.00
Indirect Costs				$ -
N/A				
TOTAL ESTIMATED PROJECT COSTS				$ 221,200.00

2.3 Budget Narrative

The budget for the JVUC Phase II of Advanced Meter Reading (AMR) Technology Upgrade Project consists of the purchase of 400 new meters with Radio Read Technology. We have chosen the Master Meter BLMJ with BB 3G DS register, 5/8" x 3/4", for its ability to read low flows, durability in the field given its solid brass casing construction, lead free compliance, upgrade capabilities from manual to AMR and AMI, after market support and warranty, value, and compatibility with customer service interface at a cost of $418.00 each.

The installation costs for the meters are estimated to be $54,000, based on an estimate from a third party. The meter change out will occur over a six-month period. The project will begin once the funds have been released with the procurement of the meters. The installation will be completed as detailed above based on market conditions for contractor pricing.

3.0 Environmental and Cultural Resources Compliance

The application should include the answers to:

Will the proposed project impact the surrounding environment (e.g., soil [dust], air, water [quality and quantity], animal habitat)? Please briefly describe all earth-disturbing work and any work that will affect the air, water, or animal habitat in the project area. Please also explain the impacts of such work on the surrounding environment and any steps that could be taken to minimize the impacts.

The project will not require any earth-disturbing work or any work that will affect the air, water, or animal habitat in the project area nor any impacts on the surrounding environment.

Are you aware of any species listed or proposed to be listed as a Federal threatened or endangered species, or designated critical habitat in the project area? If so, would they be affected by any activities associated with the proposed project?

We are not aware of any endangered species in the project area.

Are there wetlands or other surface waters inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the United States?" If so, please describe and estimate any impacts the proposed project may have.

None of which we are aware.

When was the water delivery system constructed?

The water delivery system was constructed beginning in 1966.

Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., headgates, canals, or flumes)? If so, state when those features were constructed and describe the nature and timing of any extensive alterations or modifications to those features completed previously.

No, it will not.

Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places? A cultural resources specialist at your local Reclamation office or the State Historic Preservation Office can assist in answering this question.

No, this project does not include new construction, renovation of existing structures or moving of earth.

Are there any known archeological sites in the proposed project area?

No, there are not.

Will the proposed project have a disproportionately high and adverse effect on low income or minority populations?

No, it will not. Actually, it will benefit low-income populations.

Will the proposed project limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands?

No, it will not.

Will the proposed project contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area?

No, it will not.

4.0 Required Permits or Approvals

No permits are required for this project work.

5.0 Official Resolution

Resolution 2024-01-12 provided in Attachment A.

6.0 Unique Entity Identifier and System for Award Management

Joshua Valley Utility Company is registered in SAMS. See Attachment D.

- Registered Name: Joshua Valley Utility
- UEI: #RAA4LEAK1HZ2 | CAGE: # Pending
- MEADVIEW, AZ, USA

Attachments

A. JVUC Resolution 2024-01-12
B. JVUC 2022 ACC Annual Report
C. Budget Estimate from Southwestern Utility Management
D. SAM.GOV Verification of Active Registration Status
E. Mandatory Federal Forms
   - SF-424 Application for Federal Assistance
   - SF-424C Budget Information
   - SF-424D Assurances
   - Project Abstract Summary

Project Narrative on Page 6 of this application
Budget Narrative on Page 16 of this application

JOSHUA VALLEY UTILITY COMPANY
RESOLUTION NO.: 2024-01-12

WHEREAS, Joshua Valley Utility Company authorizes to submit a proposal to the US Bureau of Reclamation in response to FY24/25 WaterSMART Small-Scale Water Efficiency Program grant funding opportunity to conduct Phase II: Upgrade 400 Meters to Advanced Meter Reading (AMR) Technology within its distribution system. The project will reduce water losses and more effectively manage water demand.

NOW, THEREFORE, BE IT RESOLVED that the Joshua Valley Utility Company agrees to and authorize the following:

- The Joshua Valley Utility Company has reviewed and support the proposal submitted;
- The Joshua Valley Utility Company is capable of providing the amount of funding needed for the matching grant from the WaterSMART program; and
- If selected for a WaterSMART grant, Joshua Valley Utility Company will work with Reclamation to meet the established deadlines for entering into a cooperative agreement.

This resolution was adopted by

JOSHUA VALLEY WATER COMPANY

On January 12, 2024

Christopher Schilling
President

DocuSigned by:
Jesse Cuevas
18EBB6D8820C44B...
Jesse Cuevas
Secretary
Member of the Board