

Bureau of Reclamation
WaterSMART:
Small-Scale Water Efficiency Projects
Funding Opportunity Announcement No. BOR-DO-20-F006

Pleasant Valley Mutual Water Company
**AMI Water Use
Efficiency Project**

Pleasant Valley Mutual Water Company
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List of Acronyms

AFY	Acre-feet per year
AMI	Advanced Metering Infrastructure
Calleguas	Calleguas Municipal Water District
CEQA	California Environmental Quality Act
Delta	Sacramento-San Joaquin Delta
DWR	Department of Water Resources
FCGMA	Fox Canyon Groundwater Management Agency
FOA	Funding Area Opportunity
IRWM	Integrated Regional Water Management
NEPA	National Environmental Policy Act
PVMWC	Pleasant Valley Mutual Water Company
Reclamation	Bureau of Reclamation
SAM	System for Award Management
SWP	State Water Project
UWMP	Urban Water Management Plan
WCVC	Watersheds Coalition of Ventura County

Appendices

- A Resolution to Execute Cooperative Agreement with the United States Bureau of Reclamation
- B Vendor Quote

Section 1: Technical Proposal and Evaluation Criteria

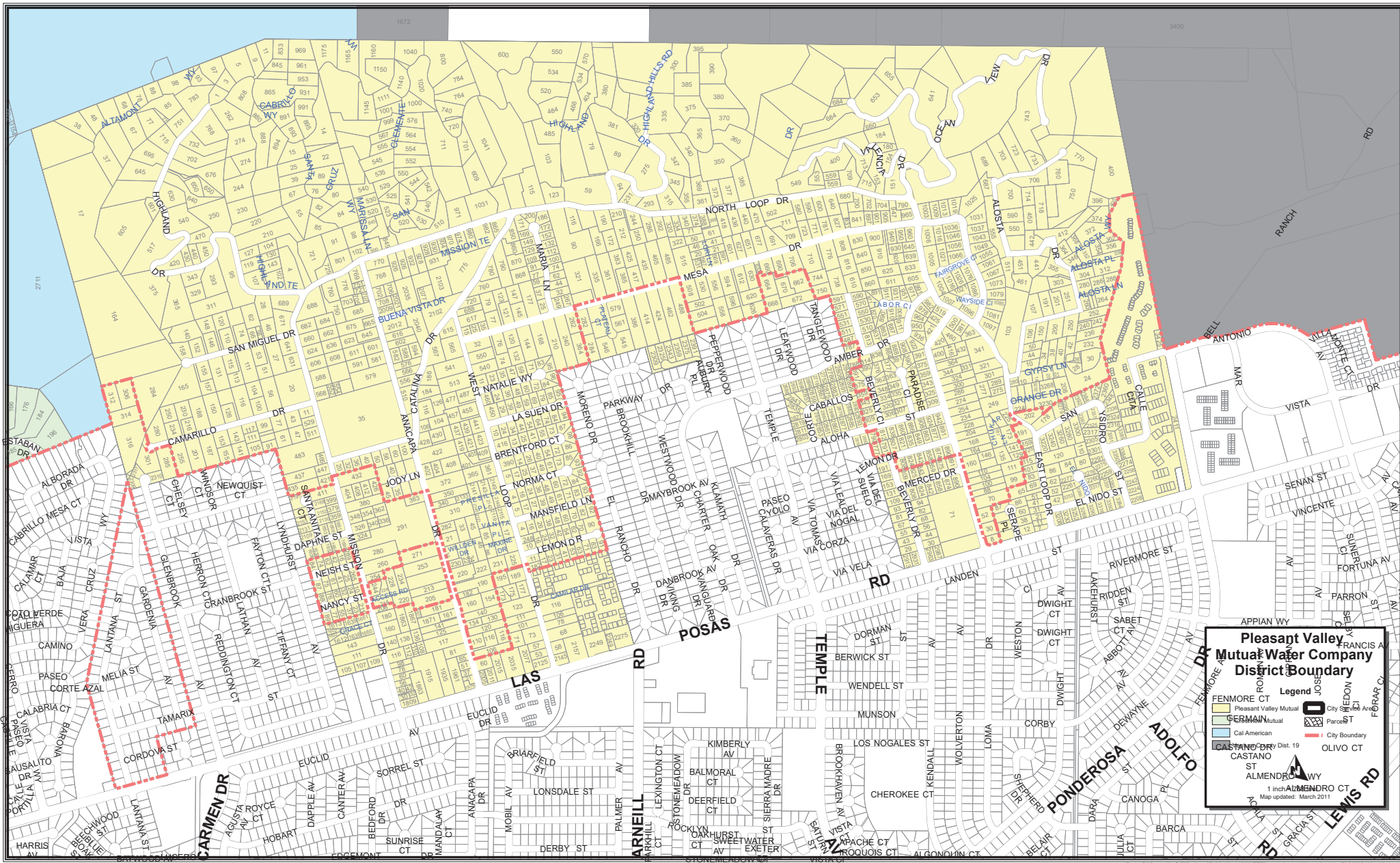
1.1 Executive Summary

Date: 25 February 2020
Applicant Name: Pleasant Valley Mutual Water Company
Applicant City, County, State: City of Camarillo, Ventura County, California
Project Title: AMI Water Use Efficiency Project

The Pleasant Valley Mutual Water Company (PVMWC) is seeking grant funding to upgrade its analog meter system with Advanced Metering Infrastructure (AMI). The PVMWC system depends on local groundwater which is supplemented by imported water. With increasing strains on imported water supplies and the need to improve drought resiliency, PVMWC has been actively pursuing measures to improve its overall water supply reliability. Among those efforts, PVMWC has been seeking to improve demand management by upgrading its water distribution meter system with AMI. Since 2016, PVMWC has upgraded 587 connections, about 36 percent of its system. Despite clear water savings benefits, however, project implementation has been delayed due to lack of funding. With funding from this WaterSMART grant program, PVMWC would move forward with upgrading its remaining system to attain full AMI coverage and maximum water savings potential. Funding would be used for the purchase of cellular endpoint and encoder assemblies for installation at 1,022 connections. Implementation of this project is an important step to enhancing long-term water use efficiency, and in turn improving water supply reliability within the PVMWC service area and within the region. As such, this project contributes to the goals of this Small-Scale Water Efficiency Projects Funding Opportunity Announcement (FOA) to implement small-scale water efficiency projects that have been prioritized through applicant-led planning efforts and which conserve and use water more efficiently, and contribute to supply reliability in the western United States.

Installation activities will commence upon execution of a financial agreement with the Bureau of Reclamation (Reclamation), no earlier than April 2020, and the project is anticipated to be completed within 12 months thereof.

The project will not be located on a Federal facility.



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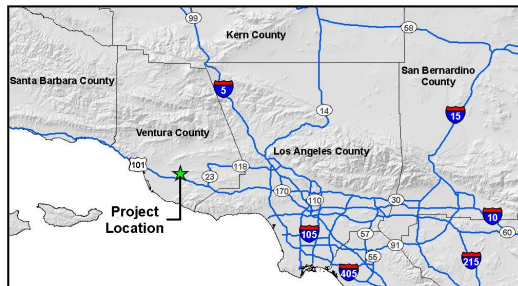


Figure 1
PVMWC Service Area and Project Location
February 2020

AMI Water Use Efficiency Project
 WaterSMART Grants: Water Efficiency Projects

1.2 Background Data

1.2.1 Description of Applicant and Project Location

PVMWC is a small water company serving 1,609 residential connections within unincorporated Ventura County and a small portion of the City of Camarillo. The PVMWC service area is located, about 50 miles East/Northeast of Los Angeles, California. The PVMWC service area boundary, within which the proposed meter upgrades will be implemented, is shown on Figure 1.

1.2.2 Water Supplies and Demands

PVMWC serves on average 1,032 acre-feet per year (AFY) of potable water supplies, which are obtained from two sources. Approximately 63 percent of supply is pumped from two PVMWC-owned groundwater wells and the remainder, approximately 37 percent, is imported water from the State Water Project (SWP), purchased from Calleguas Municipal Water District (Calleguas). Those supplies are sourced from the Sacramento-San Joaquin Delta (Delta). Groundwater supplies within Ventura County are regulated by the Fox Canyon Groundwater Management Agency (FCGMA), from which PVMWC has a current pumping allocation of 653 AFY for groundwater from the Pleasant Valley Groundwater Basin.

Between 2014 and 2019, actual demands averaged 1,032 AFY. PVMWC projects its water demands to increase to approximately 1,328 by 2040, which would be met with additional supplemental SWP supplies.

1.2.3 Water Delivery System

PVMWC was formed in 1924. Originally supplying water to avocado orchards, PVMWC now provides drinking water to residential customers. Groundwater is supplied from two PVMWC-owned wells filtered for iron and manganese. Groundwater is supplemented by imported water delivered via three interconnections with Calleguas.

PVMWC operates three pressure zones and has six steel potable water storage tanks, totaling 2.2 million gallons of capacity. The entire water supply enters the system in Zone 1 and is subsequently pumped into Zones 2 and 3 through two booster pump stations of 75 horsepower and 35 horsepower. Total approximate length of distribution lines is 21 miles.

PVMWC serves water to 1,609 connections, all of which are metered. Of those connections, 1,022 connections, about 64 percent, are analog meters averaging about 10 years in age. The remainder has been upgraded with AMI starting in 2016, as described in more detail below.

1.2.4 Past Working Relationship with Reclamation

PVMWC has not previously worked with Reclamation.

1.3 Technical Project Description and Milestones

1.3.1 Project Need and Background

It is PVMWC's mission to serve safe and reliable water supplies to its customers, at affordable rates. However, both of its water supply sources are becoming increasingly strained and have experienced major impacts during the recent multi-year drought and continued dry conditions, making them overall less reliable.

Groundwater supplies are limited and under recent drought conditions pumping restrictions enacted by FCGMA required up to 20 percent reductions in pumping. While this restriction has since been lifted, future restrictions and water shortages may reduce groundwater availability for meeting PVMWC customer demands. At the same time, imported SWP supplies are increasingly strained by more frequent and intense dry-weather conditions and overall hydrologic variability, increasing environmental water demands and strong competition for supplies among SWP contractors. The reliability assessment detailed in the Calleguas 2015 Urban Water Management Plan (UWMP), emphasizes the increasing uncertainties related to reliability of Delta supplies and future challenges for deliveries of reliable imported water supplies. Further, Calleguas planning efforts identify the need for increased water use efficiency and maximizing use of local water resources as a means of improving long-term water supply reliability within the Calleguas service area. As such, PVMWC has been proactively investigating and implementing opportunities to improve water use efficiency, increase drought resiliency and continue to reliably meet customer water demands.

Currently, about 64 percent of the PVMWC system utilizes analog meters requiring direct readings at the meters. Numerous inefficiencies are common with aging analog meters, including an inability to automatically detect leaks, erroneous or inaccurate meter readings, and the use of substantial resources to conduct on-site meter readings and data analysis. PVMWC currently conducts meter readings every two months. This frequency and method of data collection is not conducive to detecting leaks or unusual water usage in a timely manner. Unless customers with analog meters personally monitor their water use and record their meter readings, leaks may go undetected until the next meter reading or until a customer receives an unusually high water bill. Many low flow leaks may still go undetected as they will not be apparent from water billing data. Further, it is difficult for customers to gauge whether or not their water conservation efforts have been effective until bi-monthly meter data has been collected and they receive their bill.

In its water resource management planning efforts, PVMWC identified improved leak detection, with improved metering technology, as an effective means for reducing water waste within the PVMWC system. AMI has substantial benefits for increasing water use efficiency, including more immediate leak detection, improved accuracy at high and low flows, and a user-friendly water use data platform. Therefore, PVMWC has chosen to upgrade its system with AMI to increase water use efficiency, as well

as to mitigate typical metering inefficiencies and help customers lower their water bills.

In March 2016, PVMWC began implementing an AMI upgrade program, including initial installations, AMI software training, and initiation of the new billing system based on the new smart meter software. Since initiation of the program, PVMWC staff has observed substantial water savings potential from AMI, detecting on average 24 individual leaks at any one time, with some leaks wasting hundreds of gallons per hour in multiple instances. When PVMWC staff is alerted of leaks with the current smart meter software, customers are notified and required to fix the leak within 5-7 days. As such, these improvements have already resulted in substantial water savings.

However, due to lack of funding to purchase necessary AMI equipment, rollout of the AMI program has been delayed. Only about 36 percent of the PVMWC system has been upgraded over the last four years. Whereas, over the last two years, upgrades have only focused on old meters that have failed. The remaining connections are still equipped with analog meters, resulting in continued inefficiencies. Funding under this Small-Scale Water Efficiency Projects opportunity would provide necessary financial leverage to implement the AMI upgrades across the rest of the PVMWC service area for full coverage and maximum savings potential. This project is a critical component for improving long-term water supply reliability in the PVMWC service area and across the region.

1.3.2 Project Description, Activities and Implementation Schedule

With this application, PVMWC proposes to upgrade 1,022 meters with AMI capabilities, which will result in full AMI coverage of the PVMWC service area. The proposed upgrades represent the remaining 64 percent of the service area that has not yet been upgraded. Existing meters will be equipped with an encoder and cellular endpoint assembly. The encoder converts flow data into an electronic format and the endpoint transmits the meter data via cellular transmittal. Cellular transmittal is already enabled.

PVMWC has chosen Badger meters with the Beacon ® Advanced Metering Analytics (AMA) mobile solution, which has shown to have extremely high accuracy in readings and provides an easy-to use database. This meter system was also found to produce the greatest benefits with respect to ease of use, meter reading accuracy and efficiency, compared to other options.

Project implementation will consist of the following activities.

Task 1 – Project Management, Administration and Reporting

Project management will be provided by PVMWC staff to ensure successful project implementation. Activities will include project administrative oversight, managing meter purchases, and ensuring the project advances according to schedule. In

addition, PVMWC will perform grant administration activities to execute the financial assistance agreement, ensure compliance with grant requirements, prepare and submit necessary supporting grant documents and coordinate with the Reclamation grant manager.

Grant-related activities will begin immediately upon notification of award, whereas the majority of project management activities and grant reporting will begin upon executing the financial assistance agreement.

Task 2: Vendor Procurement

PVMWC has been working with *Badger Meter* for its equipment purchases to date and will continue to work with this vendor to purchase remaining AMI equipment, under Task 3.

Task 3 – AMI Equipment Purchase and Installation

A total of 1,022 meters will be upgraded with AMI devices, as part of this proposed project. A total of 1,022 endpoints and 972 encoders will be purchased to accomplish those upgrades. PVMWC has 50 encoders in stock from previous purchases which will be used to implement the project. AMI equipment installations will be conducted by PVMWC staff, who is experienced in these installations.

Equipment purchases and installations will occur upon entering into a financial assistance agreement with Reclamation.

Task 4 – Environmental Compliance

Based on the nature of project activities, the project falls under a Categorical Exemption pursuant to CEQA and a Categorical Exclusion pursuant to NEPA and will therefore require minimal effort for filing applicable documentation.

PVMWC staff will complete the required filing upon notice of award and prior to project implementation.

Implementation Schedule

Based on the FOA, award notification is anticipated by spring 2020. For planning purposes, it is assumed that award notification will occur by May 1, 2020 and a financial agreement would be finalized by July 1, 2020. The project is anticipated to be completed by July 1, 2021, or within about 12 months of executing the agreement. The project implementation schedule by task is shown in Section 1.4.3.

1.4 Evaluation Criteria

Evaluation criteria of the FOA are presented in *italics*, followed by specific information on the proposed project in the following subsections.

1.4.1 Evaluation Criterion A: Project Benefits

Describe the expected benefits and outcomes of implementing the proposed project.

AMI Benefits

The proposed project will result in increased water use efficiency and improved water supply reliability within the PVMWC service area. Water savings will result by: (a) improving accuracy of water metering, and (b) facilitating leak detection and making water meter data more transparent and easier to access for customers and PVMWC staff.

Meter Reading Accuracy and Automation

The Badger meters proposed to be installed with this project have exceptional accuracy at low to high flow conditions. This accuracy is critical for detecting leaks, particularly low flow leaks, and for enabling PVMWC to bill customers more accurately according to use, thereby avoiding under- or overbilling.

Meter reading of older analog meters is a labor-intensive effort requiring PVMWC staff to physically read meters on-site across the service area. The AMI system will be equipped with mobile reading software allowing automatically collected water usage data to be read remotely, in real-time. The automation will reduce errors from manual readings, improve meter reading accuracy, and reduce use of resources, including staff time and fuel for staff vehicles, related to manual meter readings.

Data Transparency and Water Waste Detection

One of the primary benefits of the proposed project is the ability to more easily identify water leaks. With the AMI system, data is transmitted via cloud-based software and is accessible in real-time by PVMWC staff and customers. PVMWC staff will be alerted of potential leaks, over usage or other inefficiencies in the system. Real-time water consumption data will show sharp spikes in usage or alert to unusual continuous use indicating small leaks or possibly a catastrophic pipeline break. With this type of transparency, PVMWC can more easily locate and address leaks, alert customers of issues, and save both money and water. This can also prevent customers from receiving large water bills due to undiscovered leaks in their water system. The improved transparency is also anticipated to promote customer involvement and awareness of water usage to promote long-lasting water use efficiency.

Estimated Water Savings

Current water losses within the PVMWC service area are occurring, in large part, due to leaks within a customer's household. This is evidenced by actual AMI data that PVMWC staff has been reviewing since initiation of the upgrade program. With the existing AMI system, PVMWC has been able to more immediately address leaks

and reduce demands. Based on current water loss data, it is estimated that AMI implementation across the entire PVMWC system and resulting reduced water losses would result in total demand reductions by about 8 percent. Given that the project will upgrade the remaining 64 percent of the system's meters, it is estimated that the proposed project will reduce water losses by **5 percent**. Based on average demands of 1,032 AFY over the last 5 years, this percentages translates to about **52 AFY savings**.

The water conserved through avoided losses would remain in the distribution system and be available for meeting other PVMWC demands, thereby helping to extend available water supplies. As such, the project is essential in optimizing water use efficiency, reducing overall water demands, and improving PVMWC's water supply reliability. By reducing overall system water demands, the project also helps reduce PVMWC's reliance on imported water supplies which in turn reduces its vulnerability to potential imported water supply shortages. In addition, with high demands on imported water across the region and State, local reductions in imported water demands has far-reaching effects that can improve reliability of the supply for other beneficial uses.

The implementation of AMI within the PVMWC service area to date has provided various opportunities to share information with other agencies. Since initiation of its meter upgrades, PVMWC has been contacted and visited by other local and out-of-state agencies, including the nearby Channel Islands Beach Community Services District. These agencies inquired about AMI implementation using the Badger Meter system and were eager to learn firsthand about the benefits of this type of project. Water managers are more likely to implement technologies that have been previously implemented and have proven to be effective. With the proposed AMI upgrades to achieve full system coverage, this project could serve as a valuable case study for successful implementation, particularly for a smaller scale mutual water company. With its continued information sharing, PVMWC can contribute to promoting similar water use efficiency measures to other agencies, on a broader scale.

1.4.2 Evaluation Criterion B: Planning Efforts Supporting the Project

Describe how your project is supported by an existing planning effort.

PVMWC has worked for decades to manage water resources effectively to reliably meet its growing customer demands. With increasing reliability concerns of imported water supplies and limited local groundwater supplies, PVMWC has been pursuing various opportunities to improve water supply reliability in recent years with the understanding that this involves, both, supply-side and demand-side efforts. On the supply-side, PVMWC has been working to improve reliability of its local groundwater supply. In 2000, PVMWC installed an iron and manganese treatment system to treat water produced at its groundwater wells to ensure safe drinking water deliveries to

its customers. Currently, PVMWC is in the final planning stages of a desalter that will treat its groundwater in order to address exceedances of secondary drinking water standards for total dissolved solids and sulfates. This desalter will enable PVMWC to continue to use its groundwater supplies and reduce additional demands on imported water.

On the demand-side, PVMWC has observed innumerable instances of customer water leaks or unusual usage which, with analog meters, can go undetected for several weeks or, in the case of some low flow leaks, indefinitely. As such, PVMWC identified the need to improve water use efficiency, and particularly improve leak detection as a means of reducing water waste and overall water demands. The impetus for PVMWC to conduct initial meter upgrades was based on documented savings from smart meter upgrade projects conducted in other service areas. Case studies show that smart meter upgrades can result in substantial water savings, commonly between 7 to 10 percent of total demands and more. The nearby City of Ventura, which is in the process of implementing a large-scale smart meter program, also projected savings at the low end of that range. This water savings potential has since been substantiated for the PVMWC system by actual results from the current AMI system, as noted in Section 1.4.1.

For these reasons, the proposed project has been identified as a priority in PVMWC's planning efforts. Calleguas planning efforts also provide support for the proposed project, due to the need for increased water use efficiency within the Calleguas service area. The reliability assessment detailed in the Calleguas 2015 UWMP emphasizes the increasing uncertainties and future challenges related to imported water supply deliveries. As such, Calleguas has focused much of its planning efforts on water use efficiency and maximizing use of local water resources to ensure reliable supplies. In addition, the Calleguas strategic plan includes promoting and facilitating implementation of water use efficiency measures as a strategy to improve long-term water supply reliability.

The proposed project also directly aligns with, and contributes to, regional water resources planning goals for increased water use efficiency and improved long-term water supply reliability. The Ventura County community of water agencies, natural resource agencies and other regional and state-level stakeholders collaborate across the Ventura County region as part of the Watersheds Coalition of Ventura County (WCVC) Integrated Regional Water Management (IRWM) planning efforts. One of the primary goals of the WCVC is to protect, conserve, and augment local water-supply portfolio to increase local water resilience.

1.4.3 Evaluation Criterion C: Project Implementation

The project will consist of the following activities, which are detailed in Section 1.3.2.

Task 1 – Project Management, Administration and Reporting

Task 2 – Vendor Procurement (complete)

Task 3 – AMI Equipment Purchase and Installation

Task 4 – Environmental Compliance

Implementation Schedule

Based on the FOA, award notification is anticipated by spring 2020. For planning purposes, it is assumed that award notification will occur by May 1, 2020 and a financial agreement would be finalized by July 1, 2020. The project is anticipated to be completed by July 1, 2021, or within about 12 months of executing the agreement. The project implementation schedule by task is shown below.

TABLE 1. PROJECT SCHEDULE

	Task	Start Date	End Date
1	Project Management, Administration and Reporting	5/1/2020	7/31/2021
2	Vendor Procurement		Complete
3	AMI Equipment and Software Installation	7/1/2020	7/1/2021
4	Environmental Compliance	5/1/2020	5/31/2020

No permits or special approvals are needed for implementation of the project. Project work will be conducted at existing meter locations that are fully within PVMWC's authority.

The project consists of the purchase and installation of AMI equipment at meter locations within the PVMWC service area that have not yet been upgraded. No engineering or design work was required for this project. No new policies or administrative actions are required for implementation of the project.

The project is anticipated to fall within a Categorical Exemption pursuant to CEQA and a Categorical Exclusion pursuant to NEPA and will not require further compliance measures.

1.4.4 Evaluation Criterion D: Nexus to Reclamation

- *Is the proposed project connected to Reclamation project activities? If so, how? Please consider the following:*
 - *Does the applicant receive Reclamation project water?*

PVMWC does not receive Reclamation project water.

- *Is the project on Reclamation project lands or involving Reclamation facilities?*

The project is neither on Reclamation lands nor does it involve Reclamation facilities.

- *Is the project in the same basin as a Reclamation project or activity?*

The project is not located in the same basin as a Reclamation project or activity.

- *Will the proposed work contribute water to a basin where a Reclamation project is located?*

Due to its water use efficiency benefits, the project is anticipated to reduce demands on SWP water supplies which are drawn from the same basin as Reclamation's Central Valley Project. By reducing demands on SWP supplies, the conserved water would essentially remain at its source, in the Delta, thereby making more water available for other beneficial uses in the basin. As a result, the project would contribute water to a basin where a Reclamation project is located.

- *Will the project benefit any tribe(s)?*

The project may help Reclamation meet trust responsibilities to Indian tribes to the extent that by reducing demands on SWP imports the project will help improve conditions on water resources that could benefit Reclamation projects, as described above.

1.4.5 Evaluation Criterion E: Department of the Interior and Bureau of Reclamation Priorities

Department Priorities

1) Creating a conservation stewardship legacy second only to Teddy Roosevelt

The proposed project is the result of long-term, rigorous water resources planning using best available science to identify best practices for managing water resources. While PVMWC has worked for decades to manage water resources effectively to reliably meet its growing customer demands, it also depends highly on the effective management of local groundwater and imported SWP supplies. FCGMA and Calleguas, who manage and provide those supplies, respectively, continuously undertake rigorous planning efforts, including groundwater modeling, assessments of available and potential future supplies, and demand forecasting. Those planning efforts are highly dependent on best available science, which is developed on a local, regional and statewide level to identify best practices for managing water resources and adapting to changes in the environment.

FCGMA coordinates efforts with groundwater professionals, water districts and agencies that have spent decades studying the groundwater basins to assess sustainable yields, evaluate basin challenges and identify best practices to optimally balance groundwater supply and demand for long-term reliability. The 2007 Update

to the FCGMA Groundwater Management Plan documents these efforts and outlines groundwater management goals. Groundwater Sustainability Plans for FCGMA-managed basins, prepared as required under the California Sustainable Groundwater Management Act, will provide additional data analyses and strategies for best practices.

Among Calleguas' many planning efforts is the preparation of its UWMP. As required by the Urban Water Management Planning Act, California Water Code (CWC) Division 6, Part 2.6, urban water suppliers are required to prepare and adopt UWMPs at least once every five years in recognition that, among other factors, water resources are a limited resource subject to ever increasing demands, and conservation and efficient use of water is a high priority whose planning can be best accomplished at the local level. The UWMP outlines demand management measures common to the industry and those used or planned for implementation in the agency service areas. Metering programs are among the highly recognized demand management measures to achieve effective water conservation.

The DWR SWP Delivery Capability Report (Report) is one of many important resources based on a vast amount of scientific data, utilized for Calleguas' water reliability planning efforts. The Report, prepared by DWR every 2 years, identifies estimated availability of SWP supplies under a range of hydrologic conditions based on robust modeling. Estimates also take into account all regulations governing SWP and Central Valley Project operations. These estimates form the basis of Calleguas' supply projections, which determine how much SWP water is available to PVMWC.

PVMWC and the Ventura County community of water agencies will continue to rely highly on science combined with the experience and knowledge of expert water resource managers to identify best practices for effectively managing water resources and adapting to changes in the environment.

2) Utilizing our natural resources

Water is the most essential natural resource available to us and the proposed project will help protect it. The project will increase water use efficiency, thereby reducing demands on limited and highly strained groundwater and SWP water supplies. By managing supplies more efficiently, this project contributes to reducing potential water-related conflicts and crises, promotes conservation of our natural resources, and helps ensure reliable drinking water to protect health and safety. These benefits are especially crucial in the face of changing climatic conditions. In addition, through the water-energy nexus, the long-term water savings resulting from this project will also contribute to energy savings and enhanced energy security.

3) Restoring trust with local communities

It is PVMWC's mission to serve safe and reliable water supplies to its customers. On a local level, the implementation of AMI across PVMWC's service area is providing

significant opportunities to assist its customers in reducing water bills and using water more efficiently, while increasing the reliability of continued supplies.

Communication and relationships across service area boundaries are critical for effective water resources management. These forms of collaboration are fostered in the region in large part through IRWM planning efforts of the WCVC. The WCVC is a consortium of local cities, wholesale and retail water agencies, special districts, the County of Ventura, and non-governmental agencies interested in promoting and implementing IRWM planning efforts in Ventura County. Stakeholders and collaborators have also included State and Federal agencies, such as Fish and Wildlife Service, Army Corps of Engineers, and Regional Water Quality Control Board. PVMWC is one of several entities that previously adopted the IRWM Plan for the WCVC region, which provides a comprehensive planning document to sustainably manage and protect the region's water resources and related natural resources. PVMWC will continue to coordinate with agencies in the region, helping to maintain and expand communication lines beyond its borders.

4) Striking a regulatory balance

This DOI priority is not applicable to the project.

5) Modernizing our infrastructure

PVMWC dates back to the early 1920s, when it supplied agricultural water to avocado orchards. By now, the service area has converted to residential uses and has several infrastructure modernization needs. Among those needs is the metering system, which consists primarily of aging analog meters that result in high levels of inefficiencies. The proposed project will help address infrastructure modernization needs by implementing the sophisticated AMI technology across its service area to improve water use efficiency and help reduce stresses on its distribution system.

Reclamation Priorities

1) Increase Water Supplies, Storage, and Reliability under WIIN and other Authorities

The proposed project will result in long-term water use efficiency which will help extend PVMWC's available water supplies and improve PVMWC's ability to reliably meet demands. This water demand management measure is a critical component for improving long-term water supply reliability, in the PVMWC service area and across the region given the dependence on local groundwater resources and imported water.

2) Leverage Science and Technology to Improve Water Supply Reliability to Communities

The proposed project is the result of long-term, rigorous water resources planning using best available science to identify best practices for managing water resources and implementation of advanced water metering technologies with the intent to

improve water supply reliability within the PVMWC service area and beyond. Additional details on leveraging science and technology is provided above, under Department of the Interior priority 1.

3) Address Ongoing Drought

With its water savings benefits, the project will help improve PVMWC's water supply reliability and reduce vulnerabilities to drought conditions that can result in imported water supply shortages and restrictions on local groundwater pumping. Data provided by the U.S. Drought Monitor for February 2020, showed nearly 60% of California, including the entire County of Ventura, under abnormally dry conditions. These conditions could likely develop into more severe drought conditions across the project area. And overall, severe drought conditions are anticipated to become more severe, longer lasting and more frequent in coming years. As such, the project is very important for addressing drought conditions and ensuring that PVMWC can continue to reliably meet customer demands under drought conditions.

Reclamation priorities 2, 5, 6, and 7 do not apply.

Section 2: Project Budget

2.1 Funding Plan and Letters of Commitment

- *Describe how the non-Federal share of project costs will be obtained.*

The non-Federal share of project costs will come from PVMWC funds. PVMWC's contributions will be in the form of monetary contributions for the purchase of AMI equipment.

No funding will be provided by funding partners. As such, no letters of commitment are being provided.

No funding has been requested or received from other Federal partners for the project.

There are no other pending funding requests.

2.2 Budget Proposal

Table 2, below, summarizes all funding sources (non-Federal and Federal) for the proposed project.

TABLE 2. TOTAL PROJECT COST TABLE

Funding Sources	Funding Amount
Costs to be reimbursed with the requested Federal funding	\$75,000
Costs to be paid by the applicant	\$123,806
Value of third-party contributions	\$0
Total Project Cost:	\$198,806

The budget proposal is provided in Table 3, which lists all budget categories of the FOA. The budget items consist of costs associated with the implementation of the proposed project and fall within the Equipment category, as described in detail below.

TABLE 3. BUDGET PROPOSAL

Budget Item Description	Computation		Quantity Type	Total Cost
	\$/Unit	Quantity		
Salaries and Wages				
Not applicable	-	-	-	\$0
Fringe Benefits				
Not applicable	-	-	-	\$0
Travel				
Not applicable	-	-	-	\$0
Equipment				
Badger Encoders	\$71.00	972	Each	\$69,012
Orion Endpoints	\$127.00	1,022	Each	\$129,794
<i>Subtotal Equipment</i>				\$198,806
Supplies and Materials				
N/A	N/A			\$0
<i>Subtotal Supplies and Materials</i>				\$0
Contractual/Construction				
N/A	N/A			\$0
<i>Subtotal Contractual/Implementation</i>				\$0
Other/Environmental and Regulatory Compliance				
N/A	N/A			\$0
<i>Subtotal Other/Environmental and Regulatory</i>				\$0
Total Direct Costs				\$198,806
Indirect Costs				
N/A	N/A			\$0
Total Estimated Project Costs				\$198,806

2.2.1 Budget Narrative

Salaries, Wages, and Fringe Benefits

Installations will be conducted by PVMWC staff that is trained in installation and maintenance of AMI equipment. PVMWC will not be seeking reimbursement for staff time spent on the project.

Travel

District staff anticipate visiting the project site periodically during project implementation, but this travel would be part of normal staff activity and no reimbursement or match for staff travel is being sought.

Equipment

A total of 1,022 endpoints and 972 encoders will be purchased from Badger Meter. As noted previously, PVMWC already has 50 encoders in stock which will be used in combination with the purchased equipment to implement the project. The cost estimate is based on the vendor quote included in Appendix B.

Materials and Supplies

No additional materials or supplies are required to be purchased for implementation of this project.

Contractual/Construction

No contractual or construction work will be performed as part of this project.

Third-Party In-Kind Contributions

There are no third-party in-kind contributions related to proposed project.

Environmental and Regulatory Compliance Costs

The proposed project is anticipated to fall within a Categorical Exemption pursuant to CEQA and Categorical Exclusion pursuant to NEPA that will require minimal effort for filing applicable documentation. PVMWC will not be seeking reimbursement for staff time related to this effort. Therefore, no budget is included for this category.

Other Expenses

Reporting and grant administration will be conducted by PVMWC. PVMWC will not be seeking reimbursement for related staff time.

Indirect Costs

No indirect costs are included in the proposed budget.

Total Cost

The total cost of the proposed project is \$198,806. Funding sources for the project currently include funding from PVMWC and requested funding from Reclamation. PVMWC is requesting the maximum amount of \$75,000, or about 38% of total project costs, in funding from Reclamation to fund the proposed project. No other Federal funding has been requested or received for the proposed project.

Section 3: Environmental and Cultural Resource Compliance

1) Will the 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 consist of upgrading existing water service meters with automated meter devices, which will not result in ground-disturbing work. As a result, the project will not impact the surrounding environment.

2) 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?

Project activities do not include ground-disturbance and will not impact sensitive species or their habitat. Further, work will be performed within already developed, urbanized and residential areas where there is limited potential for critical habitat or otherwise suitable for sensitive species.

3) 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 project may have.

There are no “waters of the United States” located within the project boundaries and the project will not have any impacts on any nearby wetlands or surface waters.

4) When was the water delivery system constructed?

The formation of PVMWC dates back to the early 1920s. The water meters targeted for upgrades are on average 10 years old.

5) Will the proposed project result in any modification of or effects to, individual features of an irrigation system (e.g., head gates, 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, the proposed project will not result in any modification of or effects to individual features of an irrigation system. The project will involve upgrades to residential water meters and will not involve irrigation systems.

6) Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?

No buildings, structures or features associated with the proposed project are listed or eligible for listing on the National Register for Historic Places.

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

There are no known archaeological sites within the project area. Additionally, the project will consist of meter upgrades within already developed areas and would not affect potential archeological sites.

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

The project will not have a disproportionately high or adverse effect on low income or minority populations. The project would equally benefit all PVMWC water customers and could actually provide financial benefits to customers through timely leak detection and water conservation that could reduce water bills.

9) Will the proposed project limit access or ceremonial use of Indian sacred sites or result in other impacts on Tribal lands?

No, the project will not limit access to or ceremonial use of Indian sacred sites or result in other impacts on tribal lands. The project will involve meter upgrades which would not result in adverse impacts on tribal lands.

10) 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?

The proposed project is not anticipated to contribute to the introduction, continued existence, or spread of, noxious weeds or non-native invasive species. No ground-disturbing work will occur as part of the project, which could contribute to spreading invasive species.

Section 4: Required Permits or Approvals

No permits or special approvals are needed for implementation of the project. Project work will be conducted at existing meter locations that are fully within PVMWC's authority.

Section 5: Official Resolution

The PVMWC Board of Directors adopted a resolution on February 18, 2020 authorizing PVMWC to apply for a WaterSMART grant, to execute a cooperative agreement with Reclamation for implementation of the project and verifying PVMWC's funding capability. A copy of the resolution is provided in Appendix A.

Section 6: SAM Registration

PVMWC is registered in the System for Award Management (SAM) and its unique entity identifier (DUN) is: 091420646. PVMWC will maintain an active SAM registration with current information during the period of its federal assistance agreement.

APPENDIX A

Resolution to Execute Cooperative Agreement with the United States Bureau of
Reclamation

RESOLUTION NO. 2182020

RESOLUTION OF THE BOARD OF DIRECTORS OF THE PLEASANT VALLEY MUTUAL WATER COMPANY, AUTHORIZING THE COMPANY'S APPLICATION, AND APPROVING NEGOTIATION AND EXECUTION OF A COOPERATIVE AGREEMENT WITH THE UNITED STATES BUREAU OF RECLAMATION FOR A WATERSMART GRANTS: SMALL-SCALE WATER EFFICIENCY PROJECTS GRANT (FUNDING OPPORTUNITY NO. BOR-DO-20-F006)

WHEREAS, the United States Department of the Interior, Bureau of Reclamation under the WaterSMART Grants: Small-Scale Water Efficiency Projects for Fiscal Year 2020 program will make funding available to qualifying applicants for small-scale water efficiency projects have been prioritized through planning efforts led by the applicant and contribute to water supply reliability in the western United States; and

WHEREAS, the Board of Directors of the Pleasant Valley Mutual Water Company has identified a project that exemplifies the objectives of the WaterSMART Grants: Small-Scale Water Efficiency Projects program in its Advanced Metering Infrastructure Water Use Efficiency Project; and

WHEREAS, Pleasant Valley Mutual Water Company agrees to the administration and cost sharing requirements of the WaterSMART Grant criteria.

NOW, THEREFORE, be it resolved by the Board of Directors of the Pleasant Valley Mutual Water Company as follows:

Section 1. The Pleasant Valley Mutual Water Company is hereby authorized to receive, if awarded, the WaterSMART Grants: Small-Scale Water Efficiency Projects grant funding and to enter into an agreement with the Bureau of Reclamation for the receipt and administration of said grant funds.

Section 2. If awarded, the above-referenced grant, the President, Warren Manzer, or his designee, is hereby authorized to take any and all action which may be necessary for the completion and execution of the project agreement within established deadlines and to take any and all other action which may be necessary for the receipt and administration of the grant funding in accordance with the requirements of the Bureau of Reclamation.

Section 3. This resolution officially becomes a component part of Pleasant Valley Mutual Water Company's grant application submitted to the Bureau of Reclamation.

Section 4. The Board of Directors of Pleasant Valley Mutual Water Company has reviewed and supports the application submitted.

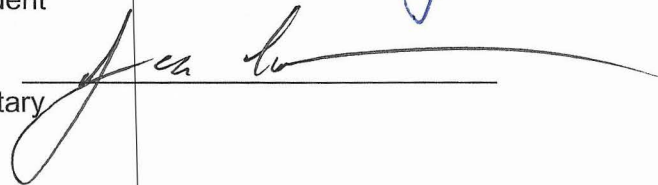
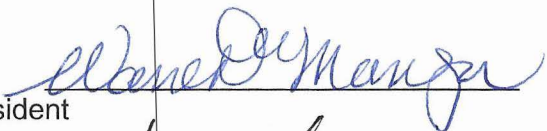
Section 5. Pleasant Valley Mutual Water Company is capable of providing the amount of funding and/or in-kind contributions specified in the grant application funding plan.

PASSED AND ADOPTED at a regular meeting of the Board of Directors of the Pleasant Valley Mutual Water Company held on February 18, 2020.

ATTEST:

President

Secretary



APPENDIX B

Vendor Quote



QUOTATION

940 Riverside Pkwy. Ste. 30
 West Sacramento, CA. 95605
 PHONE: 707-575-0700
 FAX: 707-575-3786

CREATED DATE: February 18, 2020
 QUOTED BY: Rob Sears
 REQUESTED BY: Jerry Doran
 PHONE: 805-482-5061
 EMAIL: pywater@live.com

BILL TO:
Pleasant Valley Mutual Water Company
 1863 Las Posas Rd.
 Camarillo, Ca 93010

SHIP TO:
 Same

EFFECTIVE DATES: 01/18/2020 - 04/18/2020

SALESPERSON	PROPOSAL SUBJECT	SHIPPING TERMS	PAYMENT TERMS
Rob Sears	M-35 HRE 8 Encoders-LTE-M	Prepay/No Charge For Shipments > \$25,000 FCA Factory/Warehouse	Net 30 Days

QTY	PRODUCT DESCRIPTION	UNIT PRICE	AMOUNT
972	Badger M-35 HRE-8 Encoder Cu.Ft., w/Nicor Connector 6' Lead	\$ 71.00	\$ 69,012.00
1022	ORION Cellular LTE-M Endpoint w/Nicor Connector	\$ 127.00	\$ 129,794.00

Sales Tax: To be quoted at time of order.
Est. Lead Time: To be provided at time of order.

SUBTOTAL	\$ 198,806.00
SALES TAX	
FREIGHT	
TOTAL	\$ 198,806.00

Notes and Assumptions:

Badger Meter continues to improve and redesign our products to provide our customers with state-of-the-art technology solutions. Therefore, Badger Meter reserves the right to provide our newest product solutions as an alternative to the proposed products, provided the replacement products meet the following requirements: are substantially similar to and are at least of equal quality and performance to, are in conformance with the requirements in the applicable specifications, meet the actual needs or are otherwise suitable for the intended use, and are priced at an amount that does not exceed the price of the quoted products.

THANK YOU FOR YOUR BUSINESS!!

This quotation is an offer, made subject to the terms & conditions found on our website:

www.badgermeter.com/Company/Legal/Sales-terms.aspx