Advanced Metering Infrastructure Implementation Project

WaterSMART: Water and Energy Efficiency Grants for Fiscal Year 2024 and Fiscal Year 2025

U.S. Department of the Interior – Bureau of Reclamation
Funding Opportunity Number R24AS00052

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February 22, 2024

TABLE OF CONTENTS

SECTION **PAGE NO.**

D.2.2.2 Technical Proposal 3

D.2.2.2.3 Executive Summary 3

D.2.2.2.4 Project Location 3

D.2.2.2.5 Project Description 4

D.2.2.2.6 Evaluation Criteria 7

E.1.1 Evaluation Criterion A—Quantifiable Water Savings 7
E.1.2 Evaluation Criterion B—Renewable Energy 14
E.1.3 Evaluation Criterion C—Other Project Benefits 19
E.1.4 Evaluation Criterion D—Disadvantaged Communities, Insular Areas, and Tribal Benefits 28
E.1.5 Evaluation Criterion E—Complementing On-Farm Irrigation 31
E.1.6 Evaluation Criterion F—Readiness to Proceed 31
E.1.7 Evaluation Criterion G—Collaboration 35
E.1.8 Evaluation Criterion H—Nexus to Reclamation 37

D.2.2.2.7 Performance Measures 38

D.2.2.3 Budget Narrative 41

D.2.2.4 Environmental and Cultural Resources Compliance 45

D.2.2.5 Required Permits or Approvals 47

D.2.2.6 Overlap or Duplication of Effort Statement 47

D.2.2.7 Conflict of Interest Disclosure Statement 47

D.2.2.8 Uniform Audit Reporting Statement 47

D.2.2.9 Certification regarding Lobbying 47

D.2.2.10 SF-LLL: Disclosure of Lobbying Activity 48

D.2.2.11 Letters of Support 48

D.2.2.12 Letter of Partnership (Not Applicable) 48

D.2.2.13 Official Resolution 48

D.2.2.14 Letters of Funding Commitment (Not Applicable) 48

Attachments 49

D.2.2.2 TECHNICAL PROPOSAL

D.2.2.2.3 Executive Summary

Date: February 22, 2024 **Applicant:** Jurupa Community Services District

City: Jurupa Valley **County:** Riverside **State:** California

Jurupa Community Services District (JCSD or District) is a **Category A** (water district) applicant located in the City of Jurupa Valley, County of Riverside, California. This application for funding ($5,000,000) is being requested through **Funding Group III**.

The **Advanced Metering Infrastructure (AMI) Implementation Project (AMI Project, or Project)** will install 33,447 AMI meters ranging from ¾-inch to 10-inch in size and associated network equipment across the entirety of the District's service area. Approximately 80 percent of the meter replacements will be ¾-inch in size and serving residential units. The Project will take place in the Cities of Jurupa Valley and Eastvale, and will encompass all of the identified disadvantaged communities in the JCSD service area. The Project builds on a significant AMI feasibility study completed in November 2023 and will be further defined with the completion of a Pilot Study in February 2025 that will help determine recommended technology, devices, and manufacturers. The Project is expected to result in annual water savings of 2,206.47 acre-feet per year (AFY)—25,361.55 AF over the lifetime of the project—as well as save 1,530,519.60 kilowatt-hours (kWh) per year. The water and energy savings will be realized through leak detection, consumer reductions in consumption, reduced pumping of groundwater, and decreased vehicle-miles driven.

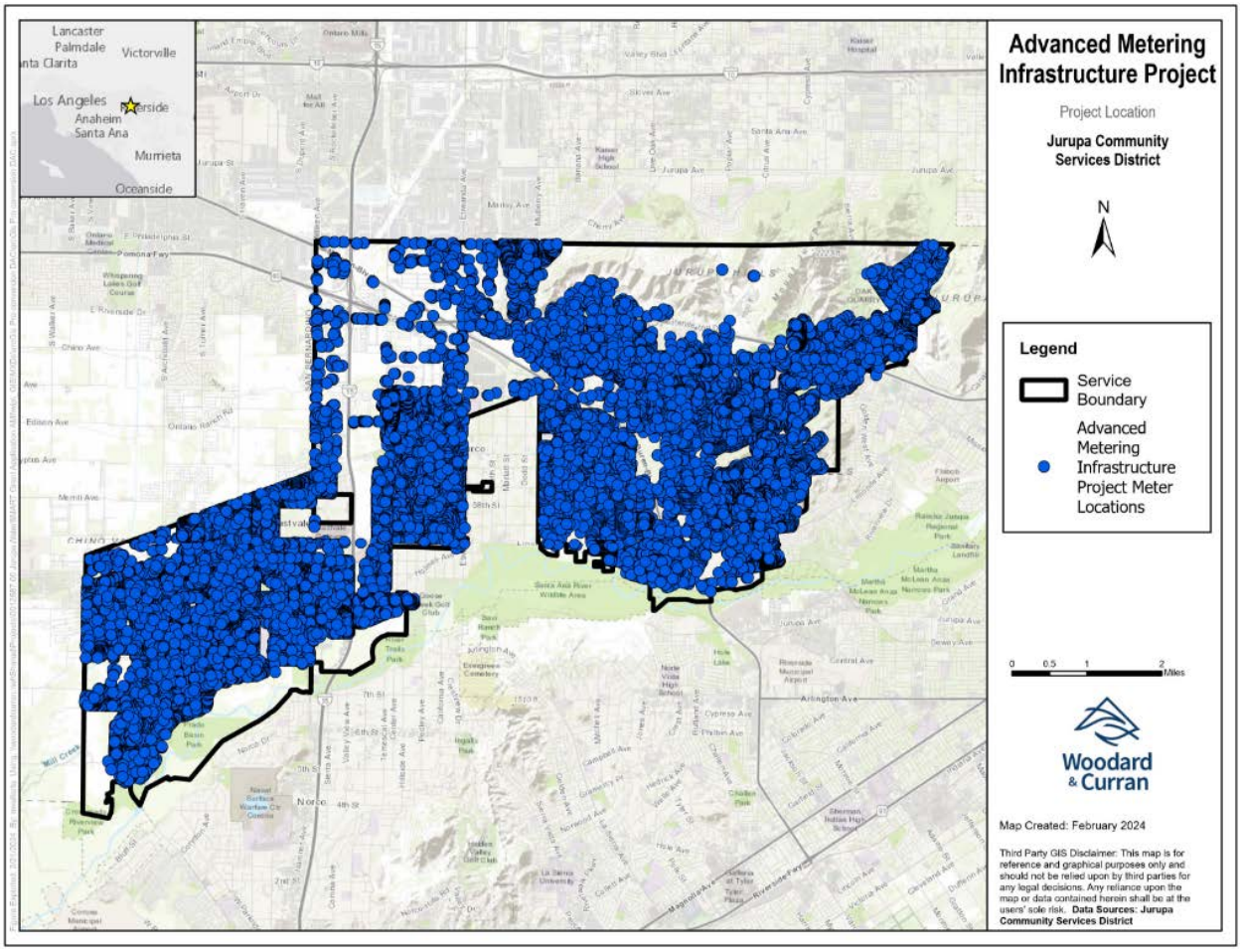
The AMI Project delivery length is estimated to be 36 months and be completed by December 2027.

The AMI Project is not located on a Federal facility.

D.2.2.2.4 Project Location

The AMI Project is located in the Cities of Jurupa Valley and Eastvale, and unincorporated areas of Riverside County, California. The AMI Project latitude is 34.000755 and longitude is -117.520330 (latitude and longitude located at a central point in the Project Area). **Figure 1** shows the Project Area within JCSD's service area.

FIGURE 1: PROJECT AREA WITHIN JCSD SERVICE AREA



D.2.2.2.5 Project Description

Background

The District services 130,546 retail customers within its 26,000 acres with groundwater from the Chino Groundwater Basin (Chino Basin). The District's service area includes all of the City of Eastvale, approximately 65 percent of the City of Jurupa Valley, and small areas of the City of Norco and unincorporated Riverside County. The District provides water service to the Jurupa Valley communities of Glen Avon, Jurupa Hills, Indian Hills, Mira Loma, Pedley, and Sunnyslope. The rest of the City of Jurupa Valley, roughly 35 percent, receives water service from the Rubidoux Community Services District (RCSD) and the Santa Ana River Water Company (SARWC), a mutual water company. The majority of the land serviced by JCSD within the City of Eastvale is developed, with residential being the largest land use type. The City of Jurupa Valley that is serviced by JCSD is larger in area but contains undeveloped land with lower density residential areas when compared to the City of Eastvale. As of 2022, the District supplied 25,023 AF of water to about 33,447 connections (potable meters) over a 40.8 square mile service area.

Planning and Design

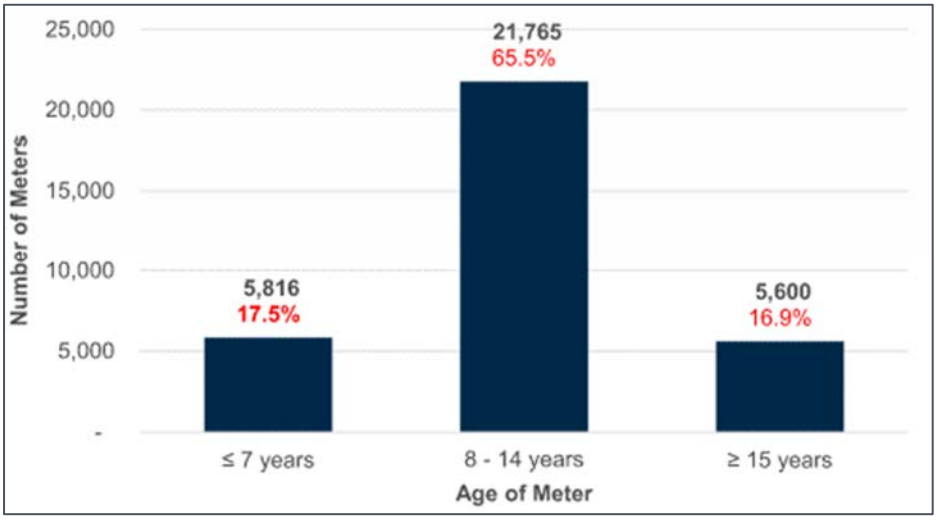
Currently, the District has an Automated Meter Reading (AMR) system that uses radio transmission to collect monthly meter reads via drive-by throughout our service area. Hourly consumption data is also available but can only be accessed by manually collecting a data profile from an individual meter, processing it through meter reading software, and then converting it to District standard units of measure. AMI systems eliminate the need for the drive-by collection of meter data while providing real-time data, leak detection notification, available remote access controls, and options for supervisory control and data acquisition (SCADA) integration. The last comprehensive meter replacement project for residential meters was completed in 2010. Due to the aging meter population, the District has been experiencing meter failures at an accelerating rate. In 2023, the District estimated replacing approximately 2,000 residential meters and/or registers at a cost of roughly $460,000. A majority of these replacements were a result of non-replaceable battery failure.

In 2023, the District retained a consultant to investigate the feasibility of changing out its meters and replacing them with new meters and also implementing an AMI meter reading program, resulting in the AMI Feasibility Study (Study).

AMI has been gaining momentum and has been recognized in the water industry as a transformational and important part of the future of water utility operations and management. Today's systems have survived several challenges associated with early versions of the AMI technology. The motivation for new systems has shifted from strictly considering labor savings associated with meter reading to emphasizing the benefits of the increased data availability and related meter data management (MDM) capabilities. The continuous stream of data from an AMI system would provide the District with critical information on customer usage patterns and overall system health that can be used for planning purposes, engineering designs, and improved customer engagement.

The District's existing meter population is aging, as shown in **Figure 2** below, and a scheduled meter replacement program is necessary to ensure continued accuracy and reliability. This presents a distinct opportunity for the District to maximize the value of this expenditure by dovetailing the meter replacement project with an AMI implementation. While the mechanical bodies of the current meters have an average useful lifespan of 15 years, the nonreplaceable batteries that power the AMR communications are failing after approximately 11 to 12 years.

FIGURE 2: METER DISTRIBUTION BY AGE



In November 2023, the JCSD Board of Directors approved a three-pronged action to:

1. Authorize staff to move forward with Alternative 3A (total meter replacement with system-wide fixed base AMI reading technology) with additional investigation of the economic viability of Alternative 3A-2 (remote shut off);
2. Authorize staff to initiate a limited deployment of AMI technology (Pilot Study); and
3. Authorize staff to issue an RFP for AMI metering equipment and associated software as part of the Pilot Study.

The District recently issued the request for proposals (RFP) for a vendor/contractor to conduct the Pilot Study that will be used to further investigation as to the functionality and cost of different meter brands. The results of the Pilot Study will assist in determining the specific equipment to be procured for the AMI Project.

Upon completion of the Pilot Study, recommendations on devices and equipment will be made by District staff, with the ultimate decision made by the JCSD Board of Directors, based on a balance of quality and cost. All meters, registers, nodes, etc., as well as the AMI network and host software will be installed and managed by the vendor/contractor.

The AMI Project has been included in the District's Capital Project budget.

Implementation

This funding request to the U.S. Bureau of Reclamation (Reclamation) WaterSMART Water and Energy Efficiency Grant Program will support the District's overall plan for replacing

all customer meters in its service area with AMI technology. The Project will be implemented to include meters in more urgent need of replacement, as well as to encompass all of the federally-designated disadvantaged communities in the District's service area.

The scope of work for the Project includes replacing 33,447 existing inefficient end-user water meters with AMI smart meters that will accurately measure water consumed. In addition, existing water meter box lids will be replaced with lids that include a Meter Interface Unit (MIU) that will transmit data to mobile or fixed data receivers, identify system leaks, and will notify JCSD staff of those leaks.

Data will be made available to all customers via an online portal with a built-in alert system. Portal customer and technical assistance will be provided by the District throughout the life of the meter (approximately 20 years). Customers will be made aware of the portal availability and changes in metering technology through a robust outreach effort.

The Project is expected to result in annual water savings of 2,206.47 AFY—25,361.55 AF over the lifetime of the project—as well as save 1,280,096.73 kWh per year. The water and energy savings will be realized through leak detection, consumer reductions in consumption, reduced pumping of groundwater, and decreased vehicle-miles driven.

D.2.2.2.6 Evaluation Criteria

E.1.1 Evaluation Criterion A—Quantifiable Water Savings

1. ***Describe the amount of estimated water savings (acre-feet per year). Include a specific quantifiable water savings estimate; do not include a range of potential water savings.***

The total annual Project water savings are estimated at **2,206.47 AFY**, comprised of recoverable water loss (955.28 AFY) and use of the Customer Portal (1,251.19 AFY). The meter infrastructure has a useful life of at least 20 years and savings from the Customer Portal are expected to extend for five (5) years. Therefore, total water savings over the life of the Project is 955.28 AFY x 20 years (19,105.62 AF) + 1,251.19 AFY x 5 years (6,255.93 AF) = 25,361.55 AF.

Additional calculations and methodology are included in **Table 1**.

2. ***Describe current losses. Explain where the water that will be conserved is currently going and how it is being used. Consider the following:***

- *Explain where current losses are going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?*

According to the District's 2022 Water Loss Audit and technician observations, current losses are due to leaks or broken meters, as well as leakage on mainlines, at storage tanks, and on service connections. Currently, the water loss seeps into the ground or runs off into storm drains and sewers.

- *If known, please explain how current losses are being used. For example, are current losses returning to the system for use by others? Are current losses entering an impaired groundwater table becoming unsuitable for future use?*

Current losses at home connections are likely entering the sanitary sewer, while system losses are entering the groundwater.

- *Are there any known benefits associated with where the current losses are going? For example, is seepage water providing additional habitat for fish or animal species?*

There are no known benefits associated with where the current losses are going. The District's service area is not directly connected to local surface waters and sits on bedrock. Seepage water does not provide additional habitat for fish or animals.

3. ***Describe the support/documentation of estimated water savings. Provide sufficient detail supporting how the estimate was determined, including all supporting calculations.***

The Project will produce water savings by allowing JCSD to monitor water consumption resulting in better management of its water resources. When the AMI Project is fully built out, customers will be able to view their water consumption in near real-time as well which would further increase conservation. The Project will produce water savings in three separate ways:

1. Timely identification and correction of leaks.
2. Improved monitoring of water consumption and respective improvement in management of JCSD's water resources.
3. Changes in customer's water consumption behavior in response to the availability of near-real time consumption data provided through the customer web portal.

Water savings estimates resulting from reductions in water losses is based on an U.S. Environmental Protection Agency (U.S. EPA) report on water loss control for public water systems that up to 75 percent of water loss in systems is recoverable (U.S. EPA, 2013). Another case study on the implementation of AMI in the City of Santa Maria, California found that AMI was able to reduce its non-revenue water loss by two-thirds (Godwin, 2011). In JCSD's water savings analysis, it is estimated that 75 percent of water losses were recoverable due to implementation of the AMI Project. Therefore, of JCSD's 5.09 percent of water losses, 3.82 percent is estimated to be recovered and therefore additional water savings. Please see **Table 1** for the detailed calculations.

Two prominent vendors of customer portals (WaterSMART and Smart Water Energy) have documented water reductions ranging from 4-7 percent. Additionally, the East Bay Municipal Utilities District (EBMUD) released the results of an independent study conducted in 2014 which indicated that providing information to help households compare their water use to neighborhood averages reduces residential water use by 5 percent. The District based its assumptions on this study that customer access to and utilization of the customer portal would result in water savings of 5 percent, which is applied to 33,447 of JCSD's customers that will be connected to the portal as a result of the Project. Studies regarding the total number of years over which savings will accrue were not available, therefore a conservative five years is assumed to be the lifetime of accrued savings.

4. ***Municipal Metering. To receive credit for water savings for a municipal metering project, an applicant must provide a detailed description of the method used to estimate savings, including references to documented savings from similar previously implemented projects. Applicants proposing municipal metering projects should address the following:***

    a. *How has the estimated average annual water savings that will result from the project been determined? Please provide all relevant calculations, assumptions, and supporting data.*

As noted previously, the total annual Project water savings are estimated at **2,206.47 AFY**, comprised of recoverable water loss (955.28 AFY) and use of the Customer Portal (1,251.19 AFY). The meter infrastructure has a useful life of at least 20 years and savings from the Customer Portal are expected to extend for five (5) years. Therefore, total water savings over the life of the Project is 955.28 AFY x 20 years (19,105.62 AF) + 1,251.19 AFY x 5 years (6,255.93 AF) = 25,361.55 AF .

Additional calculations and methodology are included below in **Table 1**.

TABLE 1: WATER SAVINGS CALCULATIONS

Water Savings Calculation Variable	Value	Unit	Calculation	Source
Number of Active Service Connections	33,447	Meters		Water Loss Audit, 2022
AMI Meters Installed as Part of Project	33,447	Meters		JCSD
Percentage of Total Smart Meters Connected to AMI through Project	100.00%		=33,447	
Total Water Supplied (2022)	25,023.73	AFY		Water Loss Audit, 2022
Estimated Volume of Water Supplied by AMI Smart Meters within Project	25,023.73	AFY	=100% x 25,023.73	
Percentage of System Losses in 2022	5.09%			Water Loss Audit, 2022
Percentage of Recoverable Water Losses	3.82%		=3/4 x 5.09%	U.S. EPA, 2013
Annual Recoverable Water Losses	**955.28**	**AFY**	**=3.82% x 25,023.73**	
Water Savings from Reduced Water Loss (20 Years)	**19,105.62**	**AF**	**=955.28 x 20**	
Percentage Water Savings from Customer Web Portal	5.00%			EBMUD, 2014
Annual Water Savings from Customer Web Portal	**1,251.19**	**AFY**	**=25,023.73 x 5%**	
Total Water Savings from Customer Web Portal (5 Years)	**6,255.93**	**AF**	**=1,251.19 x 5**	
Total Annual Water Savings	**2,206.47**	**AFY**	**955.06 + 1,251.19**	
Total Project Lifetime Water Savings	**25,361.55**	**AF**	**19,105.62+ 6,255.93**	

b. How have current system losses and/or the potential for reductions in water use by individual users been determined?

In 2022, JCSD prepared a water loss audit consistent with the American Water Works Association (AWWA) Manual 36 methodology. This water audit provides JCSD with specifics on system water loss volumes and causes of such losses. Using the data provided by the 2022 Water Loss Audit, industry guidelines established by U.S. EPA and other reputable sources were incorporated to calculate the water usage based on the number of meters proposed in the Project, which would provide the equivalent water savings. The

2022 audit found that JCSD's total retail sector water losses amounted to approximately 5.09 percent of total retail water use, or over 1,273.71 AFY of water supplied in the District service area.

c. *For installing end-user water service meters, e.g., for a residential or commercial building unit, refer to studies in the region or in the applicant's service area that are relevant to water use patterns and the potential for reducing such use. In the absence of such studies, please explain in detail how expected water use reductions have been estimated and the basis for the estimations.*

The JCSD 2020 Urban Water Management Plan (UWMP) provides information that is specific to the District's water use and plan for conservation. This District assumes buildout of the City of Eastvale will occur by 2030, and buildout of the City of Jurupa Valley will occur by 2040 based on the remaining vacant and developable land. Because the District's 2020 potable water demand was 28,505 AF, the ultimate buildout potable water demand of 36,495 AF per year would be an increase of 7,990 AF, or 28 percent. As shown in **Table 2**, the rate of increase in projected water demand slows in 2030 with the buildout of Eastvale, and then becomes stable with the buildout of Jurupa Valley in 2040.

The District's potable demand projections in Table 2 have conservatively assumed no reductions in future water use from codes, ordinances, or other water conservation policies. Water demands across all customer sectors are projected to increase over the 20-year period. Further, the projections have accounted for decreasing water duty factors across all land use types (e.g., gallons per person or gallons per acre) during a non-drought time. Notably, this is occurring while overall water demand is increasing due to growth. The cost of water and tiered pricing, widespread public education on water conservation, and restrictions placed by the land use authorities on plant palettes and required water efficiency standards for new- and re-development are believed to all be factors as to why unit water use is decreasing in the District.

TABLE 2: USE FOR POTABLE AND NON-POTABLE WATER – PROJECTED

Use Type	Additional Description (as needed)	Projected Water Use* *Report To the Extent that Records are Available*				
Drop down list May select each use multiple times These are the only Use Types that will be recognized by the WUEdata online submittal tool		2025	2030	2035	2040	2045 (opt)
Add additional rows as needed						
Single Family		18,551	20,082	21,174	22,375	22,375
Multi-Family		1,606	1,731	1,821	1,919	1,919
Commercial	Includes Institutional & governmental	2,251	2,451	2,595	2,752	2,752
Industrial		722	782	825	872	872
Landscape	Includes ROW irrigation	3,007	3,258	3,437	3,634	3,634
Other Potable	Hydrant meters	210	228	241	254	254
Sales/Transfers/Exchanges to other Suppliers	Santa Ana River Water Company	1,200	1,200	1,200	1,200	1,200
Sales/Transfers/Exchanges to other Suppliers	Swan Lake Mobile Home Park	328	328	328	328	328
Sales/Transfers/Exchanges to other Suppliers	Other	96	231	328	434	434
Losses	Potable Losses (7.5%)	2,255	2,444	2,578	2,726	2,726
Other Non-Potable	Parks & school yard irrigation with Riverside South Basin groundwater.	500	500	500	500	500
Losses	Non-Potable Losses	140	140	140	140	140
	TOTAL	30,865	33,375	35,165	37,135	37,135

***Units of measure (AF, CCF, MG)** must remain consistent throughout the UWMP as reported in Table 2-3.*

NOTES: Units in acre-feet (AF). Assumes buildout by 2040. Ultimate potable water demand is 36,495 AF; equivalent to 2020 Water Master Plan estimate. Total non-potable water demand not including recycled water is 640 AF. "Other" sales/transfers could include sales to City of Norco and additional demand by Santa Ana River Water Company.

With regard to the potential to reduce water use, when a water supplier cannot meet the demands of its customers for whatever reason, the District's UWMP assumes two things can happen: the District can mandate customers to conserve water, thus reducing demand; and/or the District can augment or supplement its normal supplies with an emergency source of water.

District customers have shown to be responsive to water conservation mandates. For example, JCSD Resolution No. 2499 was approved by the Board of Directors on August 11, 2014, to elevate the District to Drought Response Level 2. Residential water use at that

time was 179.2 gallons per capita per day (R-GPCD). Nine months later, the Board of Directors approved Resolution No. 2542 on May 26, 2015, to elevate the District to Drought Response Level 3. From the time JCSD went from Level 2 to Level 3, residential water use decreased from 179.2 GPCD to 119.6 GPCD (a 33 percent reduction). From May 26, 2015, to April 2016, JCSD residential water use decreased another 14 percent from 119.6 GPCD to 103 GPCD.

d. What types (manufacturer and model) of devices will be installed and what quantity of each?

The AMI Project will install 33,447 AMI meters ranging from ¾-inch to 10-inch in size, with approximately 80 percent of the meter replacements ¾-inch in size.

In 2023, the District retained a consultant to investigate the feasibility of changing out its meters and replacing them with new meters and also implementing an AMI meter reading program. In determining the answer to this question, the District was seeking a comparison of the "status quo" (AMR technology), and full AMI options. Related concerns to be addressed include integration with the current billing system, funding implications, and determining if JCSD should continue with their current meter vendor or move to a new vendor and technology. The feasibility study included a benefit-cost analysis (BCA) to address the above questions in addition to addressing the following items:

- A comparison of AMR/AMI reading options;
- A survey of the AMR/AMI technology landscape;
- Costs and benefits (both tangible and soft) of AMR and AMI and manual meter reading options;
- Anticipated equipment life cycle and costs, operating costs, operational savings, and revenue and cash flow impacts;
- The costs and benefits compared using net present values, payback, and/or internal rate of return; and
- Impact on the organization's business processes, staffing, and technology requirements.

The Study found as with any product, there tends to be a variety of options with a select few products distinguishing themselves as market leaders. For the purpose of the Study, the consultant included analysis of eight (8) leading vendors with a brief summary of each technology discussed briefly below along with a picture of a typical endpoint and collector for each. The vendors included Badger, Diehl Cellular SETflow, Kamstrup, Mueller fixed-base, Mueller LoRaWAN, Neptune cellular, Neptune fixed-base R900, and Sensus Fixed Base FlexNET.

The District is currently preparing to issue a RFP for a vendor/contractor to conduct a Pilot Study that will be used to test various types and manufacturers of equipment. The results of the Pilot Study will assist in determining the specific equipment to be procured for the AMI Project.

Upon completion of the Pilot Study, recommendations on devices and equipment will be made by District staff, with the ultimate decision made by the JCSD Board of Directors, based on a balance of quality and cost. All meters, registers, nodes, etc., as well as the AMI network and host software will be installed and managed by the vendor/contractor.

e. *How will actual water savings be verified upon completion of the project?*

Actual water savings as a result of the Project will be verified by a pre- vs. post-project comparison of the Water Loss Audit that is completed annually. Through this year-over-year comparison, the District will have data on verified water savings as the Project is completed. The Water Loss Audit reports real and apparent losses recorded as gallons per day per customer that can be compared annually to verify actual water savings.

The District's UWMP is updated every five years and provides information on water supply and demand in both historical and projected formats. The UWMP includes trend information on water produced and delivered, as well as losses. The UWMP will serve as an additional layer of tracking data on water savings that can be attributed to the Project.

Water savings will also be verified by the volume of leaks detected by the AMI technology system that otherwise would have resulted in a significant water loss. This information collected will be helpful in estimating water savings from early leak detection compared to the District's traditional leak detection procedures prior to the installation of AMI early detection technology.

E.1.2 Evaluation Criterion B—Renewable Energy

Subcriterion B.2—Increasing Energy Efficiency in Water Management. Describe any energy efficiencies that are expected to result from implementation of the water conservation or water efficiency project (e.g., reduced pumping).

Currently, JCSD collects metering data for meters by driving to each meter location on a monthly basis. By installing 33,447 new AMI meters to the network, JCSD will no longer have to complete the monthly driving routes associated with these meters. This will not only result in substantial water savings, but also reduce the vehicle miles driven, conserve energy and help reduce greenhouse gas (GHG) emissions.

By implementing AMI meters, JCSD will also conserve energy through reduced electrical usage in the District water system. Conserving water that is otherwise wasted through leakage results in substantial reduction in energy and GHG emissions required for delivery. The energy savings from reduction in groundwater pumping of potable water and vehicle miles driven to collect the meter information is estimated below.

Energy Savings by Reducing JCSD's Water System Electrical Usage

The District averaged the monthly kWh used in all of its facilities and dividing it by Total System Flow provided the average of 688.89 kWh used per AF of water (Table 5 below). The annual energy savings for JCSD system energy usage from the Project would be:

2,206.47 AFY x 688.89 kWh/AF = **1,520,005.12 kWh/year**

Energy Savings from Reduced Vehicle Miles Driven

The Project would create additional energy savings through reducing fossil fuel consumption. By installing AMI meters, JCSD staff will no longer need to drive to the 33,447 meter locations to record water usage data. It is conservatively assumed that 467.6 miles are driven for meter recording each month as follows:

467.6 miles x 12 (times meters read per year) = 5,611.20 miles/year

Using the U.S. EPA's average of 21.5 miles/gallon and adding 10 percent for the stop-and-go condition, JCSD estimates the following:

5,611.20 miles per year / 21.5 miles per gallon x 1.1 (stop-and-go) = 287.08 gallons/year

U.S. EPA parameters specify 1.25 therms/gallon of fuel and 29.3 kWh/therm. Using these values, there will be approximately **10,514.48 kWh/year** that will be saved.

Table 3 provides a summary of total energy savings from the AMI Project.

TABLE 3: SUMMARY OF TOTAL ENERGY SAVINGS FROM PROJECT IMPLEMENTATION

Total Energy Savings	
Source of Energy	**Energy Savings (kWh)**
System Usage	1,520,005.12
Reduced Vehicle Miles	10,514.48
Total	**1,530,519.60**

- *If quantifiable energy savings is expected to result from the project, please provide sufficient details and supporting calculations. If quantifying energy savings, please state the estimated amount in kilowatt hours per year.*

Table 4 depicts the calculations for energy savings which would be achieved by reduced water deliveries (due to less water loss to leaks and customer use reductions) and from reduced vehicle miles driven and the associated energy consumption.

TABLE 4: ENERGY SAVINGS CALCULATIONS

Energy Savings Calculation	Value	Unit	Calculation	Source
Energy Savings from Reduced Water Consumption				
Total Annual Water Savings	2,206.47	AFY	From Table 1	From Table 1
Energy Used per Water Unit Produced	688.89	kWh	=Total Energy Consumed (5,089,037.38 kWh) / Total Water Produced (7,387.34 AF)	UWMP, 2020
Total Energy Savings per Year from Reduced Water Consumption	**1,520,005.12**	**kWh / Year**	**=2,206.47 x 688.89**	
Energy Savings from Reduced Vehicle Miles Driven				
Number of Meters Connected to System	33,447	Meters		JCSD
Estimated Number of Miles Driven for Meters	467.6	Miles		JCSD
Number of Times Meters Read per Year	12	Months		JCSD
Number of Miles Driven per Year	5,611.20	Miles	=467.6 x 12	
Gallons of Gas Used per Mile	21.5	Miles / Gallons		EPA Parameters
Total Gallons per Year	287.08	Gallons / Year	=5,611.20 / 21.5 x 1.10	
Gallons of Fuel to Therms	1.25	Therm / Gallon		EPA Parameters
Therms to kWh	29.3	kWh / Therms		EPA Parameters
Total Energy Savings per Year from Reduced Vehicle Miles Traveled	**10,514.48**	**kWh / Year**	**=287.08 x 1.25 x 29.3**	
Total Energy Saved per Year	**1,530,519.60**	**kWh**	**1,520,005.12 + 10,514.48**	

- *How will the energy efficiency improvement combat/offset the impacts of climate change, including an expected reduction in greenhouse gas emissions.*

The Project is expected to reduce local pumping as water is conserved. The U.S. EPA Greenhouse Gas Equivalencies Calculator aids in the calculation of a 1,062 Metric Ton decrease in annual CO_2 equivalents (CO_2E) emissions from 1,520,005.12 kWh that would typically be required to pump 2,206.47 AFY of water.

In addition, the installation of AMI compatible meters will result in less gas emissions due to reduced miles driven each day to read water meters. The District's current service area includes a total of 33,447 meters and 467.6 miles driven by technicians driving five (5) vehicles for approximately 6 hours per day each. The Project will eliminate 30 hours of continuous gas emissions per day. The improved technology will allow JCSD technicians to meter, detect and notify customers of leaks without the need to drive to each meter, significantly reducing driving to address service calls. Using a calculation tool from U.S. EPA, it is estimated that by reducing vehicle usage for traditional metering, 7.3 metric tons of CO_2E will be reduced per year.

- *If the project will result in reduced pumping, please describe the current pumping requirements and the types of pumps (e.g., size) currently being used. How would the proposed project impact the current pumping requirements and energy usage?*

Currently, local groundwater is pumped from wells in the Chino Basin, consisting of 15 JCSD Active Production Wells and 21 JCSD Active Production Boosters that pump directly into the system or into storage tanks. The Project will result in reduced pumping and energy savings by decreasing water consumption by an estimated 2,606.47 AFY as discussed previously in Table 1. Pump Energy Efficiency Tests conducted in early 2023 provide the basis for the energy savings calculation and confirm that combined, the Active Production Well Pumps and Boosters require approximate average of 688.89 kWh per AF pumped. By reducing consumption by 2,606.47 AFY, less pumping will also be required and will amount to an energy savings of 1,520,005.12 kWh per year. These kWh savings translate to a 1,062 Metric Ton decrease in CO_2E emissions from reduced pumping.

Table 5 describes the current pumping requirements and pumps being used. It should be noted that the District's purchased water has a higher kWh demand per AF with energy-intensive treatment, thus these savings estimates are relatively conservative to savings that may ultimately be achieved through implementation of the Project.

TABLE 5: CURRENT PUMPING REQUIREMENTS AND PUMPS BEING USED

Active Production Well Pump No.	Size in Horsepower	kWh per AF	kWh per Year	AFY
6	300	596.5	-	-
8	100	666.7	134,860.08	202.28
11	150	838.9	-	-
12	200	607.4	-	-
13	400	671.2	910,757.99	1,356.91
14	300	500.5	3,068.07	6.13
15	150	551.8	84,999.27	154.04
16	300	591.4	281,666.08	476.27
17	500	746.1	739,437.33	991.07
18	250	898.1	-	-
19	200	818.2	486,739.00	594.89
22	500	537.4	279.45	0.52
23	500	512	-	-
25	600	678.8	2,447,230.12	3,605.23
27	800	594	-	-
6	300	596.5	-	-
Totals for Active Production Well Pumps		**9,809.00**	**5,089,037.38**	**7,387.34**
		Average kWh	**688.89**	
		Saved AF	**1,858.35**	
		Total kWh Saved	**1,280,191.87**	

- *Please indicate whether your energy savings estimate originates from the point of diversion, or whether the estimate is based upon an alternate site of origin.*

The Project's energy savings estimate originates from District-owned facilities.

- *Does the calculation include any energy required to treat the water, if applicable?*

The Project's energy calculations do not include energy required to treat the water.

- *Will the project result in reduced vehicle miles driven, in turn reducing greenhouse gas emissions? Please provide supporting details and calculations.*

As previously mentioned, the Project will result in significantly reduced vehicle miles driven of approximately 5,611.20 miles. Using the U.S. EPA's Greenhouse Gas Equivalencies Calculator the five vehicles emit approximately 7.3 metric tons of CO_2E each year. After the Project has been fully implemented, travel to meter sites will be limited to repair calls or to address customer concerns that may only be resolved via a site visit.

- *Describe any renewable energy components that will result in minimal energy savings/production (e.g., installing small-scale solar as part of a SCADA system).*

There are no renewable energy components of the Project.

E.1.3 Evaluation Criterion C—Other Project Benefits

Resilience and Sustainability Benefits. Will the project address a specific water and/or energy sustainability concern? Please address the following:

- *Explain and provide detail of the specific issue(s) in the area that is impacting water resilience and sustainability. Consider the following:*
  - *Describe recent, existing, or potential drought or water scarcity conditions in the project area.*

Water supply shortages

The District relies on groundwater production from the Chino Groundwater Basin in Riverside and San Bernadino Counties and the Arlington Groundwater Basin in Riverside County. Water quality issues, climate change, and declining groundwater levels have caused a water supply shortage in the region. The proposed Project will help conserve water and reduce water losses to address the following water supply shortage concerns:

1. The District supplements its purchased potable groundwater through two connections with RCSD for up to 10,424 AFY. However, as of December 31, 2017, JCSD has ceased purchasing water from RCSD due to water quality issues.
2. Based upon Geoscience's *Updated Geohydrologic Analysis of Future Groundwater Production* dated April 21, 2020, JCSD can rely upon an annual groundwater production of 14,000 AFY. Geoscience's report anticipates that nearly all the groundwater that JCSD pumps from wells in their area of the Chino Basin will eventually have to be treated to lower total dissolved solids (TDS) and nitrate concentrations to meet drinking water standards. Groundwater contamination has currently inactivated 43 percent of JCSD's well production capacity. The contamination also caused another 44 percent of wells to rely on blending or

expensive treatment to meet water quality standards. The Project is a key part of that strategy that will help reduce JCSD's potable water supply needs.

3. Faster-than-normal population growth rates and increasing water demands intensify the current water supply shortage scarcity. JCSD's service area consists of two new cities, the City of Eastvale and the City of Jurupa Valley. Both were incorporated after 2010 and have had a rapid population growth rate from 2010 to 2019. Development within the two cities is continuous, and the Project will further help address the continued increased need for water supplies.

Water supply reliability

1. Based upon Geoscience's report, JCSD can rely upon an annual groundwater production of 14,000 AFY. Geoscience's report anticipates that nearly all the groundwater that JCSD pumps from wells in their area of the Chino Basin will eventually have to be treated to lower TDS and nitrates to meet drinking water standards and to address PFAS contamination in many of its wells.
2. JCSD is entitled to 11,733 AFY of treated groundwater from the Chino Basin Desalter Authority (CDA). However, the CDA water supplies are dependent on plant production which is interruptible and not always guaranteed to be available.
3. With imported water rates increasing and long-term imported supply reliability in decline, especially in times of prolonged drought and climate change impacts to the Chino Basin, JCSD has committed to effective management of local water supply and demand providing long-term water supply reliability improvements.

Groundwater depletion

The water levels in the Chino Basin are declining. Treatment for cancer-causing trichloroethylene (TCE) plumes in the Chino Basin are currently being carried out by four local water agencies [JCSD, IEUA, the City of Ontario, and Western Municipal Water District (WMWD)]. Extracting and sending the contaminated groundwater to CDA for treatment will take about 30 years to clean up that portion of the basin. During this process, a large amount of water is needed for groundwater replenishment and recharge to maintain a safe groundwater level. Groundwater depletion will cause drying up of wells, reduction of water in streams and lakes, deterioration of water quality, increased pumping costs and land subsidence.

Heightened competition for water supplies

The ongoing drought cycle of emergencies in California impacts the SWP water supplies. The water quality issues in the Chino Basin will also heighten the competition for water supplies.

Availability of alternative supplies

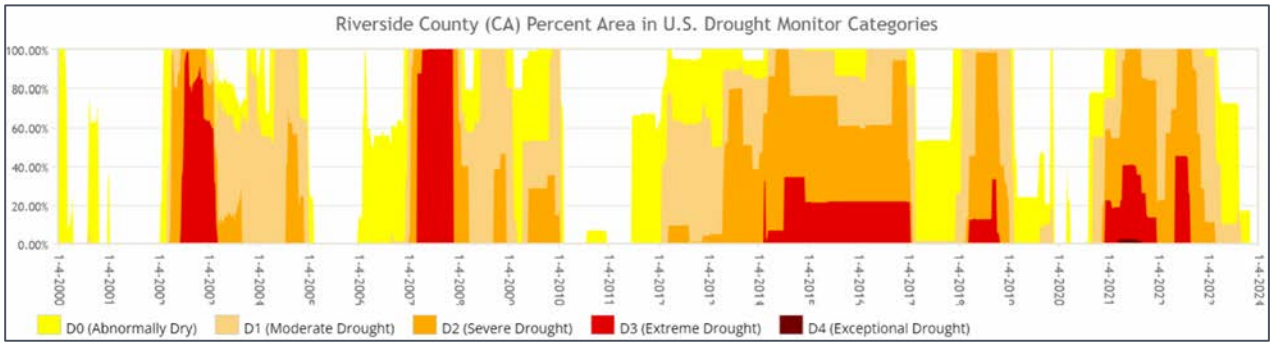
JCSD supplements its groundwater supplies with imported SWP water. With the persistent drought conditions in Northern California, SWP water has become less available as the result of drought and water quality impacts.

- *Is the project in an area that is experiencing, or recently experienced, drought or water scarcity?*

While JCSD is fortunate not to be in a current drought condition, it is expected the ongoing cycle of droughts to continue in the near future. As an example, on October 19, 2021, Governor Newsom announced an expanded drought Proclamation of Emergency that extended the statewide emergency to all Southern California counties including Riverside where the Project is located. According to the U.S. Drought Monitor, the Project's service area experienced severe to exceptionally dry drought impacts.

Riverside County has historically experienced droughts ranging from abnormally dry to extreme and severe drought. The last four years were no exception. As shown in **Figure 2**, data from the U.S. Drought Monitor show that 80% of Riverside County experienced severe drought and around 20 percent of the county experienced extreme drought in 2021.

FIGURE 2: RIVERSIDE COUNTY DROUGHT MONITOR



- *Describe any projected increases to the severity or duration of drought or water scarcity in the project area. Provide support for your response (e.g., reference a recent climate informed analysis, if available).*

Recent studies related to California's variable precipitation also indicate multi-year wet or dry periods using climate model projections along with observational data and suggest that a prolonged "mega-drought" has an increasing likelihood of occurring in the

Southwest United States during the 21st century. Warming air temperatures throughout the 21st century will increase moisture loss from soils, which will lead to drier seasonal conditions even if precipitation increases. Warming air temperatures also amplify dryness caused by decreases in precipitation. These changes affect both seasonal dryness and drought events. Climate projections show that seasonal summer dryness in California may become prolonged due to earlier spring soil drying that lasts longer into the fall and winter rainy season. The extreme warmth during the drought years of 2014 and 2015 intensified some aspects of the 2012-2016 drought and may be analogous for future drought events. (*State of California, California's Fourth Climate Change Assessment, 2019*)

The region recently experienced an exceptional drought during 2011-2015, with anthropogenic warming contributing to historically warm temperatures, dry soils, precipitation deficits, and low snowpack. Anthropogenic warming has increased the probability that low-precipitation years coincide with warm years, increasing the current risk and severity of droughts and low snowpack in California. Atmospheric conditions conducive to California droughts, such as a persistent region of high pressure in the northeastern Pacific Ocean, may have also become more frequent in recent decades. Studies project significantly drier soils in the future over the Southwest (including California), with more than an 80 percent chance of a multidecadal drought during 2050–2099. Additional research is needed to better understand the prevalence and characteristics of future droughts on local scales in southern California. (*State of California, California's Fourth Climate Change Assessment – Los Angeles Region Report, 2019*)

Western Municipal Water District prepared a Technical Memorandum dated April 22, 2021, regarding their Drought Contingency Plan and Climate Change Vulnerability Assessment and made it available for use by JCSD and all other retail agencies to use in their UWMPs. The Technical Memorandum also describes an analysis performed that developed factors that its retail agencies can apply to water demand and supply projections to account for the potential effects of climate change to surface water and groundwater within Western's service area, which includes JCSD. The factors reflect the following trends and findings from the Technical Memorandum analysis:

- Projected decreases in water supplies from Santa Ana and Santa Margarita River basins under normal and drought conditions relative to baseline conditions in 2020, due to projected decreases in precipitation and projected increases in surface water evaporation caused by increasing temperatures.
- Smaller decreases in projected precipitation and natural recharge under normal and multi-year drought years. However, the single dry year was slightly wetter under future conditions compared to the baseline. Precipitation will occur during shorter rainy seasons with higher intensity.

- Outdoor water uses are projected to increase under normal, single dry, and multi-year drought conditions, caused by projected temperature increases, which lead to higher evapotranspiration rates for landscaping, irrigated crops, and native vegetation.

    - *Explain and provide detail of the specific issue(s) in the area that is impacting energy sustainability, such as reliance on fossil fuels, pollution, or interruptions in service.*

The District cites WMWD's *Risk and Resilience* report which identified earthquakes and wildfires as high-risk, frequent hazards in California, putting the region's water conveyance infrastructures at high-risk of damage. With climate change, the probability of wildfires will likely increase. With earthquakes and wildfires being hazards in California, water conveyance infrastructures and power utilities are at high-risk of damage. With most of JCSD's water supplied by WMWD travelling a long distance—over hundreds of miles—the probability of an earthquake or damaging wildfire increases because we are not just looking at the probability of those events occurring in Riverside County, but throughout the state. The risk of a natural hazard increases the more distance water supply travels. The higher probability of these natural events may cause greater interruptions to JCSD's service.

- *Describe how the project will directly address the concerns stated above.*

<u>Water Supply Sustainability</u>

The Project is estimated to conserve 2,206.47 AFY of water by installing 33,447 existing meters throughout JCSD's service area with AMI. This will allow JCSD to pinpoint system leaks and address them promptly to minimize water loss. In addition, the installation of smart meter registers, corresponding network, and online customer web portal will provide JCSD customers with access to near-real time water consumption data, which would encourage customers to be more conscious of and ultimately reduce their water use, whether it be for financial or environmental incentives. Over the Project lifetime, it is anticipated that 25,361.55 AFY of potable water, that would otherwise be lost from the system, will be conserved in response to Project implementation. Please refer to Table 1 for detailed water savings calculations. In the face of persistent and frequent droughts, water conservation is the most effective way in which to minimize shortages and the need for drastic measures that impact the daily lives and wellbeing of the community and economy. Importantly, by increasing efficient use of available water supplies, the Project will contribute to improved water supply reliability, by making saved water available to meet other demands.

Energy Sustainability

By decreasing imported supply, the risk of infrastructure damage due to earthquakes and wildfire becomes more locally centered, therefore system reliability increases, and hazard risk reduces. By reducing the amount of pumping needed to provide water, JCSD will save energy used in that process. Similarly, by reducing the number of vehicle miles travelled through the use of AMI technology, significant energy is saved.

- *Will the project directly result in more efficient management of the water supply? For example, will the project provide greater flexibility to water managers, resulting in a more efficient use of water supplies?*

Yes. The primary goal of the Project is to increase water use efficiency and improve water management by reducing water losses associated with leaks, breaks, and inefficient water use at the agency and customer levels. Upgrading the existing meters to be AMI compatible will allow JCSD to promptly detect and repair water leaks to reduce the amount of water lost from the system.

The Project will also encourage customers to reduce their water consumption by providing customers with real-time water use data through the customer web portal. The District will also be able to improve its outreach program and customer-targeted messaging.

AMI also facilitates much easier billing though automation and accuracy. The water saved by the Project, combined with reduced labor needs for manual meter readings, will give JCSD more operational flexibility in allocating its resources.

- *Please address where any conserved water as a result of the project will go and how it will be used, including whether the conserved water will be used to offset groundwater pumping, used to reduce diversions, used to address shortages that impact diversions or reduce deliveries, made available for transfer, left in the river system, or used to meet another intended use.*
    - *Indicate the quantity of conserved water that will be used for the intended purpose(s).*

The AMI Project is expected to save 2,206.47 AFY and 25,361.55 AF over the course of the Project life. Any conserved water as a result of the Project will remain in the groundwater basin to help maintain a sustainable water supply. The Project conserved water will not only offset groundwater pumping, but will reduce deliveries and free up water supplies

for transfer in the region. Conserved water also results in reduced costs to customers through billing and future water supply infrastructure development needs.

- *Provide a description of the mechanism that will be used, if necessary, to put the conserved water to the intended use.*

There is no mechanism required to put the conserved water to its intended use. The conserved water would be from reduced system leaks and more conscious and efficient customer use, and therefore stay at the source.

- *Will the project assist States and water users in complying with interstate compacts?*

The Project provides a region-wide benefit for water sustainability. It does not involve interstate compacts.

- *Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?*

Although not directly preventing a water-related crisis or conflict, JCSD, through the Project, is doing everything it can to be proactive in understanding its water use, getting customers to conserve, and minimizing water loss, thus enhancing local water supply reliability.

While the current conditions are good for water in California, climate change points to less snowpack and more statewide droughts becoming the norm. The current water supply, where Sierra Nevada Mountain snowpack was below average and the SWP allocation was much reduced, is likely to occur again. Showing the Bay Area Delta stakeholders that Southern Californian agencies are doing as much as they can to take less imported water and not waste water will help alleviate tensions over water supply.

By improving water supply reliability and drought resiliency, the project partners can reduce the likelihood of water-related conflicts and the need for implementing strict water use reduction measures.

Ecological Benefits. Provide information regarding how the project will provide ecosystem benefits, including the following:

- *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 describe the relationship of the species to the water supply, and whether the species is adversely affected by a Reclamation project or is subject to a recovery plan or conservation plan under the Endangered Species Act (ESA).

In general, the region in which the proposed Project would be located is a developed area consisting primarily of residential development, with some commercial, industrial, and agricultural uses, and with little to no remaining natural plant communities, no native habitat remaining, and few habitat resources for wildlife.

There are several trees and suburban habitats that could provide suitable nesting for migratory birds and raptor species. Flood control channels, including the Cucamonga Creek Channel and Day Creek Channel and Southern California Edison corridors could serve as local corridors for wildlife movement between the San Gabriel Mountains to the north and Prado Basin to the south. However, the Project is not affecting these facilities. Due to the developed nature of the Project area, the Project does not entail habitat restoration or enhancement; the Project would not degrade habitat or affect any local migratory corridor for any listed or non-listed species.

- *Will water remain in the system for longer periods of time? If so, provide details on current/future durations and any expected resulting benefits (e.g., maintaining water temperatures or water levels, recreational benefits, etc.).*

No. By installing the AMI Project, JCSD will be able to reduce water demands by approximately 2,206.47 AFY. The conserved water would essentially remain in the groundwater basin. As a result of the Project, JCSD will be able to put water supplies to better use, increasing water reliability for its customers.

- *Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?*

The Project will neither reduce nor increase the likelihood of a species listing or otherwise improve the species status.

- *Please describe any other ecosystem benefits as a direct result of the project.*

Other than water conservation allowing for groundwater to remain in the ground and available in the future for multiple uses, there are no additional ecosystem benefits.

Climate Change:

- *Describe how the project addresses climate change and increases resiliency. For example, does the project help communities adapt to bolster drought resilience?*

As a participant in the collected effort of the region's water conservation efforts, the JCSD seeks to improve the ecological resiliency to climate change through implementation of the Project. The quantifiable water savings realized from the conversion of inefficient meters to AMI meters is anticipated to result in reduced water consumption from customers as actual water use is reported and reflected on their usage bill, in addition to significant water saved from early detection of leaks. The decreased local demand as a partner in the regional collective conservation effort will improve ecological resiliency to climate change as not only the District, but the region, work together toward efficiently managing water resources during ongoing drought events.

The Project directly addresses a heightened competition for finite water supplies and over-allocation (e.g., population growth) by using smarter technology and more advanced infrastructure to better manage the water supply. By saving 23,616.50 AF of the District's water demand through this Project, JCSD is making a more resilient water system and giving a beneficial use back to the lost water supply.

- *Does the project seek to improve ecological resiliency to climate change?*

The Project provides resiliency to climate change because not only does it provide immediate water conservation but long-term savings as well. As discussed above, all of JCSD's water supply comes from the Chino Basin. Reducing the demand for water during droughts allows JCSD and its regional partners in the basin to better manage the water resources.

- *Does the proposed project seek to reduce or mitigate climate pollutions such as air or water pollution?*

As previously mentioned, the Project will result in significantly reduced vehicle miles driven. Using the EPA's Greenhouse Gas Equivalencies Calculator it is estimated that the five vehicles emit approximately 7.3 metric tons of CO_2E each year. After the Project has been fully implemented, travel to meter sites will be limited to repair calls or to address customer concerns that may only be resolved via a site visit.

- *Does the proposed project include green or sustainable infrastructure to improve community climate resilience?*

No. The Project will procure and install AMI meters and network equipment.

- *Does the proposed project contribute to climate change resiliency in other ways not described above?*

No. The Project's contributions to climate change resiliency have been discussed.

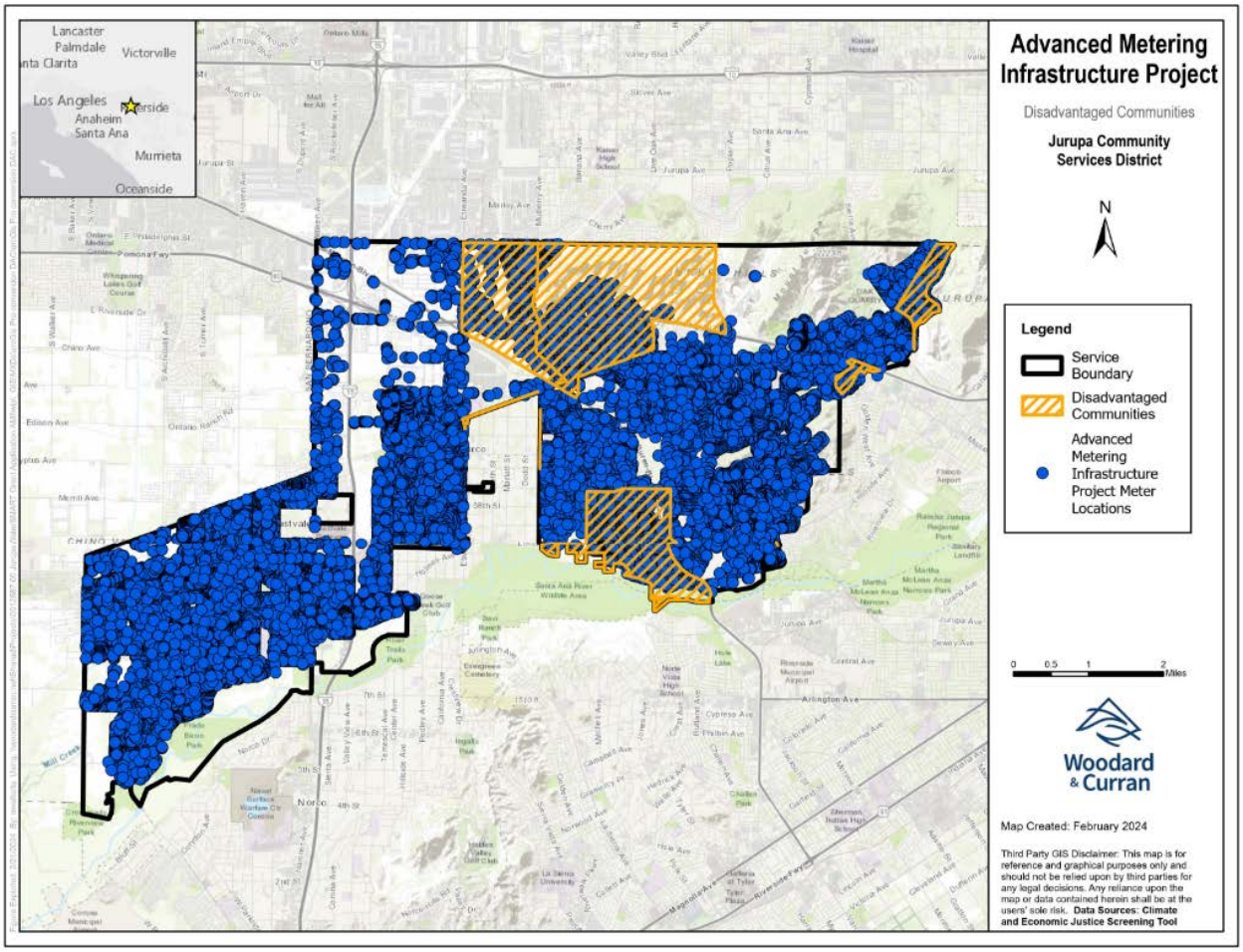
E.1.4 Evaluation Criterion D—Disadvantaged Communities, Insular Areas, and Tribal Benefits

Subcriterion D.1. Disadvantaged Communities.

- *Please use the White House Council on Environmental Quality's interactive Climate and Economic Justice Screening Tool (CEJST), to identify any disadvantaged communities that will benefit from your project.*

Figure 3 identifies the Project location in relation to disadvantaged communities (DAC) based on data from the CJEST.

FIGURE 3: PROJECT LOCATION AND DISADVANTAGED COMMUNITIES



- *If applicable, describe how the proposed project will serve or benefit a disadvantaged community, identified using the tool. For example, will the project improve public health and safety by addressing water quality, add new water supplies, provide economic growth opportunities, or provide other benefits in a disadvantaged community?*

The Council on Environmental Quality's CEJST was used to identify disadvantaged or underserved communities in JCSD's service area. The CEJST uses categories of burden to identify disadvantaged communities, determining a census tract as disadvantaged if it is at or above the threshold for one or more environmental, climate, at or above the threshold for an associated socioeconomic burden, or a census tract that is completely surrounded by disadvantaged communities and is at or above the 50th percentile for low income. The burden categories are climate change, energy, health, housing, housing, legacy pollution, transportation, water and wastewater, and workforce development.

The goal for JCSD with the AMI Project is the inclusion of the CEJST disadvantaged communities with the District's service area. Communities identified as disadvantaged by the CEJST comprise approximately 10 percent of the Project and includes all the disadvantaged communities in the JCSD service area.

It should be noted that given the benefits of conservation and better water management on groundwater basin supplies, Project activities will benefit the entire region, including disadvantaged communities in and out of the District's service area.

The AMI Project will replace all of the 33,447 aging and outdated water meters in the JCSD service area with AMI, which will save water, energy and monetary resources throughout JCSD's service territory. These benefits will be realized through leak detection and real-time water use reporting. The reduced water consumption will result in lower water bills which will financially benefit JCSD water customers, particularly those in disadvantaged communities.

The region is often in drought conditions again and water supply can be unpredictable. Also, the groundwater table will be severely diminished if dry years persist. When the water is in short supply, the following public health and social concerns can occur:

- Impacts to sanitation and hygiene.
- Reduced water usage for the irrigation of landscaping can result in higher dust and related particles, which may exacerbate respiratory conditions such as asthma.
- Reduced fire suppression capabilities

Implementation of this Project will allow the region to have access to meet the water demand when it is most needed, including in disadvantaged communities.

Subcriterion D.1. Tribal Benefits

- *Does the proposed project directly serve and/or benefit a Tribe? Will the project increase water supply sustainability for an Indian Tribe? Will the project provide renewable energy for an Indian Tribe?*

No. The Project does not directly serve and/or benefit, increase water supply sustainability, or provide renewable energy for a Tribe.

- *Does the proposed project support Tribal led conservation and restoration priorities, and/or incorporate or benefit indigenous traditional knowledge and practices?*

No. The Project does not support Tribal led conservation and restoration priorities or incorporate or benefit indigenous traditional knowledge and practices.

- *Does the proposed project directly support tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety through water quality improvements, new water supplies, increased renewable energy, or economic growth opportunities? Does the proposed project support Reclamation's Tribal trust responsibilities or a Reclamation activity with a Tribe?*

No. The Project does not directly support Tribal resilience to climate change and drought impacts or provide other Tribal benefits.

E.1.5 Evaluation Criterion E—Complementing On-Farm Irrigation

Not applicable to the Project.

E.1.6 Evaluation Criterion F—Readiness to Proceed

Applications that include a detailed project implementation 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.

- *Identify and provide a summary description of the major tasks necessary to complete the project. Note: Do not repeat the more detailed technical project description provided in Section D.2.2.2 Application Content. This section should focus on a summary of the major tasks to be accomplished as part of the project.*

The District has identified a number of key tasks necessary for the successful implementation of the AMI Project and use and accountability of federal grant funding from Reclamation, including the following:

- **Task 1: Funding Agreement**—This task includes activities associated with entering into a final funding agreement with Reclamation.

- **Task 2: Vendor Procurement**—This task includes activities associated with development of a vendor RFP, advertisement of the Project, selection of a bidder, and approval of the contract by the JCSD Board of Directors.
- **Task 3: Environmental Documents**—This task includes the filing of an expected Categorical Exemption for the Project.
- **Task 4: Outreach and Planning**—The task includes activities associated with outreach to customers, final planning of Project activities with successful vendor, a field survey, and determination of installation routes with the successful vendor.
- **Task 5: Installation**—This task includes activities associated with the replacement of meters with AMI (33,447 meters), installation of network and other equipment, and development of the customer portal.
- **Task 6: Progress Reporting**—This task includes activities associated with reporting requirements to Reclamation over the grant period.
- **Task 7: Closeout**—This task includes activities associated with filing notice of substantial completion and closing out the grant.

The District will be ready to start the Project upon notification of funding award and will prepare the technical specifications that will be used to evaluate the proposed systems by bidders. Due to the current delays in delivery of equipment, JCSD would like the option to procure equipment as soon as possible to ensure that installation begins by September 2025. Currently, the District understands there is a delay in receiving equipment and the below schedule has allowed an extended time for this task. Meter replacements will start immediately upon receipt of the necessary equipment.

- *Describe any permits that will be required, along with the process for obtaining such permits.*

There are no required permits anticipated for the Project. All of the Project work will be conducted at current meter locations and JCSD property. All Project-related approvals will be handled by JCSD and will be executed in a timely and efficient manner. Final approval of the Contractor/Vendor contract from the JCSD Board of Directors will be required prior to proceeding with the Project.

- *Identify and describe any engineering or design work performed specifically in support of the proposed project.*

The AMI Project will be ready for implementation upon notice of award of funding by Reclamation. The District will be ready to advertise the Project and award a vendor contract for procurement and installation in June 2025. The District identified the need for AMI technology in 2022 and began the process of feasibility planning.

The District is currently in the procurement process for a vendor to conduct a Pilot Study that will assist in the analysis of various brands of meters and equipment, as well as integration of billing systems. As a result of this Pilot Study, a wide range of data collection, controls, and analytics capabilities will be examined to take advantage of the added meters to reduce water loss through improved leak detection, reduce operating costs through streamlined billing.

- *Describe any new policies or administrative actions required to implement the project.*

There are no new policies or administrative actions required to implement the Project.

- *Describe the current design status of the project. If additional design work is required prior to construction, describe the planned process and timeline for completing the design work.*

The District is currently in the RFP development process for the Pilot Study. The Pilot Study will assist in the analysis and determination of the preferred equipment and meters that will be utilized in the AMI Project. The Pilot Study will be completed by February 2025 and the results and recommendations will be incorporated into the RFP for the AMI Project scheduled to begin in January 2025 after notification of funding award.

Once vendor selection and contract approval has been achieved, procurement of equipment and meters will begin (July 2025). This will also mark the start of other planning activities, including final installation route determinations.

- *Please also include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates. Milestones may include, but are not limited to, the following: complete environmental and cultural compliance; mobilization; begin construction/installation; construction/installation (50% complete); and construction/installation (100% complete). Was the expected timeline for environmental and cultural compliance discussed with the local Reclamation regional or area office?*

Implementation of the Project is expected to take approximately 36 months to complete from the date of award (December 31, 2024). A schedule summary of the Project tasks and significant milestones is included below in **Table 6**.

TABLE 6: ESTIMATED AMI PROJECT TASKS, MILESTONES, AND SCHEDULE

Tasks *Milestones*	**Estimated Start Date**	**Estimated Completion Date**
Task 1: Funding Agreement	**January 2025**	**June 2025**
Milestone: *Finalize and Sign Funding Agreement with Reclamation*		
Task 2: Vendor Procurement	**January 2025**	**June 2025**
Milestone: *Develop RFP for Project Activities*	January 2025	March 2025
Milestone: *Conduct Procurement Process for Bids*	March 2025	April 2025
Milestone: *Select Bidder and Secure Board Approval of Contract*	May 2025	June 2025
Task 3: Environmental Documents	**June 2025**	**June 2025**
Milestone: *File Environmental Documentation (Categorical Exemption)*		
Task 4: Outreach and Planning	**July 2025**	**November 2025**
Milestone: *Customer Outreach*	July 2025	November 2025
Milestone: *Planning with Vendor*	July 2025	August 2025
Milestone: *Field Survey*	July 2025	August 2025
Milestone: *Installation Route Determination*	August 2025	September 2025
Task 5: Installation	**September 2025**	**October 2027**
Milestone: *Equipment Installation*	September 2025	September 2026
Milestone: *Meter Replacement (33,447 Meters)*	September 2025	October 2027
Milestone: *Development of Customer Portal*	September 2025	January 2026
Milestone: *Substantial Completion Achieved*	September 2027	October 2027
Task 6: Progress Reporting	**July 2025**	**December 2027**
Milestone: *Quarterly Reporting to Reclamation*		
Task 7: Closeout	**November 2027**	**December 2027**
Milestone: *Notice of Substantial Completion*	November 2027	November 2027
Milestone: *Funding Closeout*	December 2027	December 2027

E.1.7 Evaluation Criterion G—Collaboration

Please describe how the project promotes and encourages collaboration. Consider the following:

- *Is there widespread support for the project? Please provide specific details regarding any support and/or partners involved in the project. What is the extent of their involvement in the process?*

The AMI Project will improve the reliability of water supplies from the local groundwater basin and, indirectly, the State Water Project, which will ultimately benefit people, agriculture, and the environment associated with both of these water supply sources. The District is committed to the collaboration and maintenance of regional and local partnerships to enhance water supply reliability by promoting a regional common goal and adding flexibility to water portfolios and distribution systems. The AMI Project will advance this goal.

Support for the AMI Project is indicated below:

State Support. Through the State of California's approval of the JCSD 2020 UWMP, the State supports the District's plans and activities toward increased water conservation and better management of water supplies. Support for the District's measurement of water losses as a means to address and correct those losses is indicated through the State's validation of JCSD's regular Water Loss Audits.

Regional Support. The District's AMI Project is supported by regional partner agencies, including RCSD, WMWD, SARWC, San Gabriel Valley Water Company (SGVWC), and Fontana Water Company (FWC). These partners have also started or completed AMI installations and are supportive of JCSD's efforts as a way to demonstrate regional actions to address limited water supplies and conservation.

Local Support. The 2020 UWMP process included a robust community engagement component to actively involve communities with diverse social, cultural, and economic elements throughout the JCSD service area. Community support was notable for the District's plans for conservation and water management and is documented in Section 8 of the UWMP

The Cities of Jurupa Valley and Eastvale are also in support of the Project and remain strong partners in the planning and implementation of activities.

Congressional and State Legislative Delegation Support. The AMI Project enjoys broad support from JCSD's elected officials, including U.S. Senator Butler, State Senator Roth, and State Assembly Member Essayli.

Water conservation through the availability of advanced water service meters and daily water usage will continue to generate widespread support among JCSD's customers as they will be able to view their daily water use through the customer portal thereby providing water and cost savings.

- *What is the significance of the collaboration/support?*

The District has found that regional collaboration is key to sustainable use of limited water resources, particularly within the Chino Basin. The support for the Project from the agencies listed in the previous response demonstrates the regional support for complementary efforts to better manage water resources.

Another significant factor of the AMI Project collaboration is that the water savings are a joint effort between the District, Cities of Jurupa Valley and Eastvale, and customers. The AMI Project provides best management tools for monitoring water losses and for managing water usage. The AMI Project will allow the District, City, and its customers to better monitor water use and determine if there is water waste or a leak. The customer will be able to access near real time data regarding water use and be better able to adjust water usage immediately, versus waiting until when the month-end bill arrives that shows total use has increased without a way to determine when it occurred. In addition, with the AMI meters and infrastructure implemented by the Project, customers have a means to quantify irrigation usage separately from indoor or outdoor use if they adjust irrigation times to periods with low to no water usage. This could help distinguish between indoor and outdoor usage and incentivize irrigation conservation measures.

- *Will this project increase the possibility/likelihood of future water conservation improvements by other water users?*

The District participates in local and regional water resource management efforts. Information sharing about conservation programs and efforts, lessons learned, and success of the programs to date provides the incentive and a road map for other agencies to start or follow similar conservation programs. As noted above, other regional agencies join JCSD in pursuing similar conservation initiatives. Each of these partner agencies has an interest in solving the problem of high-water use. By implementing the AMI Project, JCSD demonstrates its proactive approach in helping the region.

Additionally, JCSD used data from other agencies, such as EBMUD, to calculate water savings associated with AMI related customer web portals to analyze the Projects feasibility. The data from EBMUD showed substantial water savings and therefore influenced JCSD to move forward with the Project. It is likely that other agencies will react similarly to the District's AMI Project.

- *Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?*

The Project will benefit multiple sectors and users. Regional water sustainability is dependent on the actions of the water suppliers and users in the Chino Basin. By implementing the Project, JCSD will collaboratively work with its customers to better manage its water supplies, resulting in benefits to many sectors, including residential, municipal and industrial, agricultural, environmental, and recreation.

- *Please attach any relevant supporting documents (e.g., letters of support or memorandum of understanding).*

Please see *Section D.2.2.11* and **Attachment 3** for the letters of support received for the Project.

E.1.8 Evaluation Criterion H—Nexus to Reclamation

Describe the nexus between the proposed project and a Reclamation project or Reclamation activity. Please consider:

- *Does the applicant have a water service, repayment, or operations and maintenance (O&M) contract with Reclamation?*

No. The District does not have a water service, repayment, or 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?*

No, the District does not receive Reclamation water through a Reclamation contractor, however, JCSD does have a requirement to take water from the CDA. By reducing reliance on water supplies in the Chino Basin by more efficiently managing water in areas served by the Project, JCSD will provide a benefit to the sustainability of the Chino Basin and the

Santa Ana Watershed. This reduced reliance will benefit Reclamation in its effort to balance the needs of the various basin producers and users including agencies supplied by the State Water Project and Colorado River basin states and users.

- *Will the proposed work benefit a Reclamation project area or activity?*

Yes, the Project *indirectly* benefits Reclamation and its activities. The Project relates to Reclamation's mission as it will manage water in an environmentally and economically sound manner in the interest of the residents in JCSD's service area. The AMI Project will have considerable reduction of water usage due to the real time data, alerts of customer water leaks, educational reports for District use as well as customer use, and identifying water loss throughout the distribution system. While the District's water is pumped from groundwater, better management of that resource provides opportunities for regional partners to have additional flexibility in their water supply options, including from such sources as the State Water Project (SWP). Reclamation is an owner and operator of the SWP, and will the District's implementation of the AMI Project will likely lead to a reduction in water diverted from the SWP by other local agencies sharing Chino Basin groundwater resources; which directly related to the CALFED Bay-Delta Program.

- *Is the applicant a Tribe?*

No. The District is not a Tribe.

D.2.2.2.7 Performance Measures

Provide a brief summary describing the performance measure that will be used to quantify actual benefits upon completion of the project (e.g., water saved or better managed, energy generated or saved).

The AMI Project will allow for accurate measurement for water demand assessment, customer billing, diagnostic testing, locating and quantifying leakage, and other management needs. Installing new meters within the distribution system will also result in savings through improved leak detection/correction. Replacing existing meters can also result in water savings when new technologies are employed. For example, AMI devices provide real time measurement to the operator and, in some cases, to the customer as well. This allows for improved operator management, more conscientious use by the customer, and improved leakage detection by both. Quantifying savings associated with meter installation and/or replacement requires analysis of pre- and post-installation measurements from existing meters at strategic locations within the system.

The performance measures that will be used to quantify actual benefits upon completion of the AMI Project will include measures to quantify water savings, water better managed, and energy savings resulting from the installation of the newer, more technologically advanced meters. Pre- and post-installation consumption measurements will be analyzed for customers who are notified by the District that they have a leak and for all customers who view their flow data through the Customer Portal on the District's website. Water consumption at the improved meter sites where the AMI units will be installed will be monitored over a 12-month period using monthly billing data. Post-installation water consumption for each of the AMI units will be compared against pre-installation consumption to verify water savings.

Table 6 summarizes the performance measures of the AMI Project that will demonstrate and quantify actual Project benefits and effectiveness. Water use monitoring will be provided to Reclamation throughout the reporting period and included in the final report. Water use monitoring will continue beyond the grant term to make a valid assessment of the actual water savings throughout the AMI Project life (20 years).

The AMI Project will result in approximately 2,206.47 AFY of water saved. Customer connections are metered and billed by volume of use. The District records daily production and demand data, by zones, and reads all meters on a monthly basis. Metered sales and other system verifiable uses, e.g., backwash, flush water, and operations and maintenance, are recorded. In addition, the District currently has an annual meter replacement program for leaking or broken meters and is calibrating large meters in the distribution system.

The following documents provide baseline data for the AMI Project: JCSD's 2020 UWMP (which includes water conservation by citing the water meter calibration and replacement program as an existing demand management measure), JCSD's 2022 Water Loss Audit, and EBMUD's research results prove tremendous savings through the Customer Portal, as described in *Evaluation Criterion A: Quantifiable Water Savings*.

The District has a clear baseline of historical water distribution and billing data to compare with current and future records once AMI has been installed and the Customer Portal has been put into place. Analytical software is included as part of the AMI Project, and this software will assist the District in analyzing the data collected as part of the AMI Project. It is the goal of the District to equip employees with the adequate tools and capability to not only monitor water production and consumption, but also to analyze and evaluate solutions and follow-up actions for all factors that may contribute to water loss and decreased water use efficiency. Similarly, it is the goal of the District to provide tools and resources to its customers so that they can comprehensively understand their water usage

patterns and have access to regular feedback on the effectiveness of activities and efforts to reduce water usage in their homes and businesses.

TABLE 6: AMI PROJECT PERFORMANCE MEASURES

Performance Measure	Metric	Measurement
Water Savings: Reduction in Consumption	1,251.19 AFY	Water consumption reported by the AMI technology for customers who access real-time flow data in the Customer Portal produced by the new water metering units will be analyzed by the District over an initial 12-month period before and after initial exposure to the data. Post-installation water consumption data will be compared against pre-installation consumption to quantify water savings.
Water Savings: Water Loss Reduction	955.28 AFY	Post-installation water consumption will be measured over a 12-month period following AMI installation to verify water better managed. A water loss audit will be periodically conducted.
Energy Savings	1,520,005.12 kWh/Year	Water savings will be converted to energy savings using the calculation of annual water conserved multiplied by unit energy consumption.

D.2.2.3 BUDGET NARRATIVE

Costs and Funding Sources

The Project cost is estimated to be **$20,624,878** including the planning, design, and construction, with **$5,000,000** of Federal funds requested through this application. A budget summary is included as **Table 7** and a complete budget narrative is included below and in the Budget Detail and Narrative (Mandatory and Other Federal Forms).

TABLE 7: BUDGET SUMMARY

Summary			
Budget Object Category	**Total Cost**	**Federal Estimated Amount**	**Non-Federal Estimated Amount**
Personnel	$394,715		
Fringe Benefits	$261,381		
Travel	$0		
Equipment	$0		
Supplies	$0		
Contractual	$0		
Construction	$19,934,331		
Other Direct Costs	$34,450		
Total Direct Costs	$20,624,878		
Indirect Charges	$0		
Total Costs	**$20,624,878**	**$5,000,000**	**$15,624,878**
Cost Share Percentage		**24%**	**76%**

Table 8 summarizes the total cost and funding request for the Project under this grant application. The cost-share requirement for the Project will be made through local funds contributed by JCSD.

TABLE 8: SUMMARY OF NON-FEDERAL AND FEDERAL FUNDING SOURCES

Funding Sources	Amount
Non-Federal Entities	
Jurupa Community Services District	$15,624,878
Non-Federal Subtotal	**$15,624,878**
Requested Reclamation Funding	**$5,000,000**

Budget Narrative

Personnel

The salaries and wages included in the budget proposal are for all District employees who will be administrating and overseeing the AMI Project. Tasks include project meetings, inspections, preparing bid advertisements and community outreach. This will include but is not limited to completing the following essential tasks:

1. Setup of AMI software system.
2. Update of meter data in billing system.
3. Coordination with chosen vendor to update customer service software to run compatible with new AMI software.
4. Set up and maintenance of customer portal.
5. Address customer questions on customer portal, changes in bill, leaks, etc.
6. Address field issues with newly installed meters and base stations.
7. Ln-house program coordination with vendor, project management and outreach campaign consultants.

The cost share for the salaries and wages falls solely on the District. The salary and wage rates are provided based on 2024 rates. A detailed breakdown of all positions and salaries is included in the *Budget Detail and Narrative* form. The total salaries and wages cost for the 3-year project period is $394,715.

Fringe Benefits

The cost share for the fringe benefits falls solely on the District. The fringe benefit rate of 66.22 percent is provided based on 2024 rates. Fringe rates are a calculated average based on the hours and benefit rate in a percentage for the employees involved in the AMI project. The total fringe benefit cost for the 3-year project period is $261,381.

Travel

The Project does not include any costs in this Budget Object Category.

Equipment

The Project does not include any costs in this Budget Object Category.

Supplies

The Project does not include any costs in this Budget Object Category.

Contractual

The Project does not include any costs in this Budget Object Category.

Construction

The total construction costs for the 3-year project period is $19,934,331.

Construction Materials

The estimated cost for construction materials is based on estimates provided in the AMI Feasibility Study for the purpose of replacing or retrofitting a total of 33,447 existing non-efficient meters through the Project.

- **Meters.** A projected average was used based on price estimates received for the feasibility study. A quantity breakdown by size is as follows: ¾" – 29,831, 1" – 2537, 1 ½" – 339, 2" – 461, 3" – 78, 4"- 23, 6" – 9, 8" – 11, 10" – 6. Note that 5/8" are to be replaced with ¾" short meters.

- **Endpoints.** A projected average was used based on price estimates received for the feasibility study. A quantity breakdown by size is as follows: ¾" – 29,831, 1" – 2537, 1 ½" – 339, 2" – 461, 3" – 78, 4"- 23, 6" – 9, 8" – 11, 10" – 6. Note that 5/8" are to be replaced with ¾" short meters.

- **Meter Box Lids.** A projected average was used based on price estimates received for the feasibility study taking into account that approximately 20 percent of the existing lids are composite and would not require replacement.

- **Infrastructure & Reading Equipment.** Projected costs developed based on average number of collectors and repeaters required per propagation studies developed for the feasibility study.

The total construction materials cost for the 3-year project period is $15,004,331.

Contractual

The requested budget is to support contractual services that include construction and implementation costs for the Project. The contract for this work will be procured through a competitive RFP process and approved by the JCSD Board.

The scope of work under the anticipated contracts for the Project includes:

- Projected costs developed based on average number of collectors and repeaters required per propagation studies developed for the feasibility study.

- Projected costs developed based on average number of collectors/repeaters proposed by possible vendors within propagation studies contained within the feasibility study.

The total construction contractual cost for the 3-year project period is $4,930,000.

Other Direct Costs

Other direct costs include printing and mailing of outreach mailers to customers to notify and educate all residents and gain support for the Project goals. The total other direct costs for the 3-year project period are $34,450.

Indirect Charges

The Project does not include any costs in this Budget Object Category.

D.2.2.4 ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

Please answer the following questions to the best of your knowledge. If any question is not applicable to the project, please explain why. 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.*

No. The proposed project is not anticipated to impact the surrounding environment. Work primarily includes the replacement of existing water meters with upgraded AMI meters and software installation. The Project is expected to be exempt from California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) review. Environmental documentation for the Categorical Exemption will be filed after the grant is awarded and the contract is executed.

- *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?*

No. There are no known species listed or proposed to be listed as a federal endangered or threatened species, or designated critical habitats within 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.*

No. There are not wetlands or other surface waters inside the project boundaries that potentially fall under Clean Water Act jurisdiction as "Waters of the United States." No associated impacts would occur, and no mitigation is required.

- *When was the water delivery system constructed?*

The District was created in 1956 to provide sewer service to the Jurupa area of western Riverside County. Water deliveries to customers began 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. The proposed AMI Project will not result in any modifications of, or effects to, individual features of an irrigation system.

- *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. While JCSD is not an irrigation district, there are no known buildings, structures, or features in the project area listed or eligible for listing on the National Register of Historic Places (NRHP) that would be impacted by the installation of AMI infrastructure and equipment on JCSD and private property and facilities.

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

No. There are no known archeological sites in the Project area.

- *Will the proposed project have a disproportionate and adverse effect on any communities with environmental justice concerns?*

No. The Project will not have a disproportionate or adverse effect on any communities with environmental justice concerns. In fact, by installing AMI technology for customers, the District will be providing equipment that is expected to help in real-time monitoring of water use, with the goal of avoiding significant rate increases in the future.

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

No. The proposed project will not limit access to, and ceremonial use of, Indian sacred sites or result in impacts on Tribal lands as all AMI infrastructure and equipment will be located on JCSD and private property and facilities.

- 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. The proposed project to install AMI infrastructure and equipment will be located on JCSD and private property and facilities and will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area.

D.2.2.5 REQUIRED PERMITS OR APPROVALS

There no permits or approvals necessary for the Project as described in the response to *Evaluation Criterion F—Readiness to Proceed*.

D.2.2.6 OVERLAP OR DUPLICATION OF EFFORT STATEMENT

There is no overlap between the Project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel.

The funding request included in this proposal does not in any way duplicate any proposal or project that has been or will be submitted for funding consideration to any other potential funding source, Federal or non-Federal.

D.2.2.7 CONFLICT OF INTEREST DISCLOSURE STATEMENT

Jurupa Community Services District certifies it is not aware of any actual or potential conflict of interest with this request and will comply with all necessary Federal regulations.

D.2.2.8 UNIFORM AUDIT REPORTING STATEMENT

Jurupa Community Services District (Employer Identification Number 953840033) is required to submit a Single Audit report. The Annual Comprehensive Financial Report (ACFR) for the most recently closed fiscal year (June 30, 2022) is available through the Federal Audit Clearinghouse website.

D.2.2.9 CERTIFICATION REGARDING LOBBYING

The Authorized Official's signature on the SF-LLL form included in the Mandatory Forms with this application represents JCSD's certification of the statements in 43 CFR Part 18, Appendix A-Certification Regarding Lobbying.

D.2.2.10 SF-LLL: DISCLOSURE OF LOBBYING ACTIVITY

The Authorized Official's signature on the SF-LLL form included in the Mandatory Forms with this application represents JCSD's certification of the statements in 43 CFR Part 18, Appendix A-Certification Regarding Lobbying.

D.2.2.11 LETTERS OF SUPPORT

Letters of support for the Project have been received from a number of stakeholders and included as **Attachment 3**. Letters of support are included in **Table 9** from:

TABLE 9: LETTERS OF SUPPORT

Agency or Individual Providing Letter of Support	Agency or Individual Type
U.S. Senator Laphonza Butler	United States Senate
State Senator Richard Roth	California State Senate
Assembly Member Bill Essayli	California State Assembly
City of Jurupa Valley	Municipality
City of Eastvale	Municipality
Rubidoux Community Services District	Special District
Western Municipal Water District	Special District
Santa Ana River Water Company	Special District
San Gabriel Valley Water Company	Special District
Fontana Water Company	Special District

D.2.2.12 LETTER OF PARTNERSHIP (*NOT APPLICABLE*)

This section is not applicable as JCSD is a Category A applicant.

D.2.2.13 OFFICIAL RESOLUTION

An official resolution will be approved by the JCSD Board of Directors prior to accepting an award under the NOFO. The resolution will verify the identity of the official with legal authority to enter into an agreement; the Board of Directors has reviewed and supports the application submitted; and that JCSD will work with Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

D.2.2.14 LETTERS OF FUNDING COMMITMENT (*NOT APPLICABLE*)

This section is not applicable as JCSD is providing the cost-share funding for the Project.

ATTACHMENTS

1—Mandatory and Other Federal Forms
2—Study and Plan References
3—Letters of Support

Attachment 3

Letters of Support

Attached are letters of support received for the Project as summarized in the response to *D.2.2.11. Letters of Support*:

- U.S. Senator Laphonza Butler
- Senator Richard Roth
- Assembly Member Bill Essayli
- City of Jurupa Valley
- City of Eastvale
- Rubidoux Community Services District
- Western Municipal Water District
- Santa Ana River Water Company
- San Gabriel Valley Water Company
- Fontana Water Company

jurupa
COMMUNITY SERVICES DISTRICT

LAPHONZA R. BUTLER
CALIFORNIA

United States Senate
WASHINGTON, DC 20510

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS
COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
COMMITTEE ON THE JUDICIARY
CHAIR, SUBCOMMITTEE ON THE CONSTITUTION
COMMITTEE ON RULES AND ADMINISTRATION

February 8, 2024

The Honorable Camille Touton
Commissioner
Bureau of Reclamation
1849 C Street NW
Washington, DC 20240

Dear Commissioner Touton,

I write in support of the Jurupa Community Services District's application for funding from the WaterSMART Water and Energy Efficiency Grant Program, administered by the Bureau of Reclamation, U.S. Department of the Interior.

The Jurupa Community Services District (JCSD) is requesting funding for its Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1. JCSD serves over 130,000 people residing within the cities of Eastvale and Jurupa Valley, providing them with water and wastewater treatment, as well as parks and recreational services.

If awarded, this grant would fund the initial phase of JCSD's Advanced Metering Infrastructure Project. The project would equip customers with both real-time and historical water consumption data, leak notifications, and access to water conservation programs. These resources would improve leak detection and incentivize consumers to reduce water waste. The grant would also allow JCSD to conduct customer outreach during the meter deployment process and to monitor water consumption during future mandatory statewide water conservation measures. This project would help to ensure water supply reliability in the region and continued development and implementation of efficient water conservation initiatives.

I urge you to give the Jurupa Community Services District's application every consideration. Please keep my office informed of the status of this request, and if I can be of further assistance, please do not hesitate to contact my Los Angeles office at (310) 914-7300.

Sincerely,

Laphonza Butler
United States Senator

LB/cf/jv

jurupa
COMMUNITY SERVICES DISTRICT

CAPITOL OFFICE
1021 O STREET
SUITE 7510
SACRAMENTO, CA 95814
TEL (916) 651-4031
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3737 MAIN STREET
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TEL (951) 680-6750
FAX (951) 680-6757

8353 SIERRA AVENUE
SUITE 142
FONTANA, CA 92335
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SENATOR.ROTH@SENATE.CA.GOV

California State Senate

SENATOR
RICHARD D. ROTH
THIRTY-FIRST DISTRICT

COMMITTEES
BUSINESS, PROFESSIONS & ECONOMIC DEVELOPMENT
CHAIR
GOVERNMENTAL ORGANIZATION
HEALTH
BUDGET SUBCOMMITTEE #3 ON HEALTH & HUMAN SERVICES
BUDGET & FISCAL REVIEW
SELECT COMMITTEE ON CAREER TECHNOLOGY AND THE NEW ECONOMY
CHAIR
SELECT COMMITTEE ON MANUFACTURED HOME COMMUNITIES
CHAIR

February 7, 2024

Camille Calimlim Touton, Commissioner
U.S. Bureau of Reclamation
1849 C Street NW
Washington DC 20240-0001

RE: SUPPORT FOR THE JURUPA COMMUNITY SERVICES DISTRICT ADVANCED METERING INFRASTRUCTURE IMPLEMENTATION PROJECT GRANT APPLICATION

Dear Ms. Touton:

I write in strong support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

Having represented Jurupa Valley in the State Senate for over a decade, I have witnessed firsthand how JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. Inland Southern California has struggled for many years with the adverse effects of drought and JCSD has time and again stepped up to the plate to encourage and achieve water conservation. These efforts have included water-wise rebates, providing turf removal and landscaping resources, landscaping classes for residents, and educating the public on how to use water more efficiently. To further their progress on this issue, in November, JCSD completed a feasibility study focused on presenting options and identifying preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project. The Phase 1 Project will be built on solid data and proven technology.

The proposed Phase 1 Project is part of a multi-phase AMI roll-out designed to achieve measurable water savings when completed. The initial phase also targets the most intensive Disadvantaged Communities (DAC) and neighborhoods within the JCSD service area. An integral part of the Project is to provide customers with real-time and historical water consumption data, including leak notification and access to conservation tools and programs. JCSD anticipates increased water conservation due to improved leak detection and identification, customer behavior changes with access to real-time usage data, and increased customer outreach during the new meter deployment process. Importantly, JCSD could also monitor future mandatory statewide water consumption reduction requests through this system.

Please contact me if you have any questions regarding my strong support.

Sincerely,

RICHARD D. ROTH
Senator, 31st District of California

jurupa
COMMUNITY SERVICES DISTRICT

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0063
(916) 319-2063
FAX (916) 319-2163

Assembly
California Legislature

BILL ESSAYLI
ASSEMBLYMEMBER, SIXTY-THIRD DISTRICT

February 12, 2024

U.S. Bureau of Reclamation
Water Resources and Planning Office
Attn: Josh German
P.O. Box 25007
Denver, CO 80225-0007

RE: Support for the Jurupa Community Services District Advanced Metering Infrastructure Implementation Project Grant Application

Dear Mr. German:

I am writing in support of the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program to support their Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. In November, JCSD completed a feasibility study focused on presenting options and identifying preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project. The Phase 1 Project will be built on solid data and proven technology.

The proposed Phase 1 Project is part of a multi-phase AMI roll-out designed to achieve measurable water savings when completed. The initial phase also targets the most intensive Disadvantaged Communities and neighborhoods within the JCSD service area. An integral part of the Project is to provide customers with real-time and historical water consumption data, including leak notification and access to conservation tools and programs. JCSD anticipates increased water conservation due to improved leak detection and identification, customer behavior changes with access to real-time usage data, and increased customer outreach during the new meter deployment process. Importantly, JCSD could also monitor future mandatory statewide water consumption reduction requests through this system.

For these reasons, I strongly support JCSD's AMI Implementation Project – Phase 1. Should you have any questions, please do not hesitate to contact my District Office at (951) 277-3639.

Sincerely,

Bill Essayli
Assemblyman, District 63

City of Jurupa Valley

January 29, 2024

U.S. Bureau of Reclamation
Water Resources and Planning Office
Attn: Josh German
P.O. Box 25007
Denver, CO 80225-0007

RE: Support for the Jurupa Community Services District's Advanced Metering Infrastructure Implementation Project Grant Application

Dear Mr. German:

As the City Manager representing the city of Jurupa Valley, I am pleased to submit this letter of support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. This project will provide Jurupa Valley residents with the ability to monitor and track water usage in real-time to provide information to customers allowing them to make repairs and improvements as well as providing access to conservation tools and programs. This has shown in the industry to have positive financial impacts on the residents along with tangible water savings for the region. In November, JCSD completed a feasibility study focused on presenting options and opinions of preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project to ensure the Phase 1 Project will be built on solid data and proven technology.

The proposed Phase 1 Project is part of a multi-phase AMI roll-out designed to achieve measurable water savings when completed. The initial phase also targets the most intensive Disadvantaged Communities (DAC) and neighborhoods within the JCSD service area, most of which are in the city of Jurupa Valley. JCSD anticipates increased water conservation due to improved leak detection and identification, customer behavior changes with access to real-time usage data, and increased customer outreach during the new meter deployment process. Importantly, JCSD could also monitor future mandatory statewide water consumption reduction requests through this system.

8930 Limonite Ave., Jurupa Valley, CA 92509-5183
Phone: (951) 332-6464, FAX (951) 332-6995
www.jurupavalley.org

City of Jurupa Valley

Guillermo Silva, Mayor, Brian Berkson, Mayor Pro Tem,
Armando Carmona, Council Member, Leslie Altamirano, Council Member, Chris Barajas, Council Member

I strongly support JCSD's AMI Implementation Project – Phase 1 for USBR WEEG funding, which will benefit JCSD, the Jurupa Valley community, and the region's overall water resources.

Sincerely,

Rod B. Butler

Rod Butler,
Jurupa Valley City Manager

8930 Limonite Ave., Jurupa Valley, CA 92509-5183
Phone: (951) 332-6464, FAX (951) 332-6995
www.jurupavalley.org

CITY OF EASTVALE
12363 Limonite Avenue | Suite 910 | Eastvale, CA 91752
951.361.0900

February 14, 2024

U.S. Bureau of Reclamation
Water Resources and Planning Office
Attn: Josh German
P.O. Box 25007
Denver, CO 80225-0007

RE: Support for the Jurupa Community Services District's Advanced Metering Infrastructure Implementation Project Grant Application

Dear Mr. German:

As the Mayor representing the City of Eastvale, I am pleased to submit this letter of support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. This project will provide Eastvale residents with the ability to monitor and track water usage in real-time to provide information to customers allowing them to make repairs and improvements while also providing access to conservation tools and programs. This has shown in the industry to have positive financial impacts on the residents along with tangible water savings for the region. In November, JCSD completed a feasibility study focused on presenting options and opinions of preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project to ensure the Phase 1 Project will be built on solid data and proven technology.

The proposed Phase 1 Project is part of a multi-phase AMI roll-out designed to achieve measurable water savings when completed. JCSD anticipates increased water conservation due to improved leak detection and identification, customer behavior changes with access to real-time usage data, and increased customer outreach during the new meter deployment process. Importantly, JCSD could also monitor future mandatory statewide water consumption reduction requests through this system.

I strongly support JCSD's AMI Implementation Project – Phase 1 for USBR WEEG funding, which will benefit JCSD, the Eastvale community, and the region's overall water resources.

Sincerely,

Christian Dinco
Mayor

eastvaleca.gov

Rubidoux Community Services District

Water Resource Management | Refuse Collection | Street Lights | Fire / Emergency Services | Weed Abatement

January 31, 2024

U.S. Bureau of Reclamation
Water Resources and Planning Office
Attn: Josh German
P.O. Box 25007
Denver, CO 80225-0007

RE: Support for the Jurupa Community Services District's Advanced Metering Infrastructure Implementation Project Grant Application

Dear Mr. German:

As the General Manager of the Rubidoux Community Services District (RCSD), I am pleased to submit this letter of support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. This project will provide Jurupa Valley and Eastvale residents with the ability to monitor and track water usage in real-time to provide information to customers allowing them to make repairs and improvements while also providing access to conservation tools and programs. This has shown in the industry to have positive financial impacts on the residents along with tangible water savings for the region. In November, JCSD completed a feasibility study focused on presenting options and opinions of preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project to ensure the Phase 1 Project will be built on solid data and proven technology.

The proposed Phase 1 Project is part of a multi-phase AMI roll-out designed to achieve measurable water savings when completed. JCSD anticipates increased water conservation due to improved leak detection and identification, customer behavior changes with access to real-time usage data, and increased customer outreach during the new meter deployment process. With these improvements, water will be used more efficiently and support further potential water resources and partnerships in the region.

3590 Rubidoux Blvd. Jurupa Valley, CA 92509 P.O. Box 3098 Jurupa Valley, CA 92519 951-684-7580 Fax: 951-369-4061
www.rcsd.org

jurupa
COMMUNITY SERVICES DISTRICT

Water Resource Management | Refuse Collection | Street Lights | Fire / Emergency Services | Weed Abatement

I strongly support JCSD's AMI Implementation Project – Phase 1 for USBR WEEG funding, which will benefit Jurupa Valley, the Eastvale community, and the region's overall water resources.

Thank you for your time and consideration of this important grant for Jurupa Community Services District. There is no doubt these efforts align with the U.S. Bureau of Reclamation's goals of fostering environmental stewardship and community resiliency. Please do not hesitate to contact me with any questions at (951) 684-7580, or bladdusaw@rcsd.org.

Sincerely,

BRIAN LADDUSAW
General Manager

3590 Rubidoux Blvd. Jurupa Valley, CA 92509 P.O. Box 3098 Jurupa Valley, CA 92519 951-684-7580 Fax: 951-369-4061
www.rcsd.org

WESTERN WATER
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Western Municipal Water District
14205 Merdian Parkway,
Riverside, CA 92518
District Business | 951.571.7100
Customer Service | 951.571.7104

Craig D. Miller
General Manager

Mike Gardner, Division 1 | Gracie Torres, Division 2 | Brenda Dennstedt, Division 3 | Laura Roughton, Division 4 | Fauzia Rizvi, Division 5

February 1, 2024

U.S. Bureau of Reclamation, Water Resources and Planning Office
Attn: Josh German
P.O. Box 25007
Denver, CO 80225-0007

RE: Support for the Jurupa Community Services District's Advanced Metering Infrastructure Implementation Project Grant Application

Dear Mr. German:

As the General Manager of Western Mutual Water District, I am pleased to submit this letter of support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. This project will provide Eastvale and Jurupa Valley residents with the ability to monitor and track water usage in real-time to provide information to customers allowing them to make repairs and improvements while also providing access to conservation tools and programs. This has shown in the industry to have positive financial impacts on the residents along with tangible water savings for the region. In November, JCSD completed a feasibility study focused on presenting options and opinions of preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project to ensure the Phase 1 Project will be built on solid data and proven technology.

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I strongly support JCSD's AMI Implementation Project – Phase 1 for USBR WEEG funding, which will benefit Jurupa Valley, the Eastvale community, and the region's overall water resources.

Sincerely,

Craig D. Miller,
General Manager

Powered by water. Driven by service.

Santa Ana River Water Company

P.O. Box 61
Jurupa Valley, CA 91752
(951) 685 -6503

February 2, 2024

U.S. Bureau of Reclamation
Water Resources and Planning Office
Attn: Josh German
P.O. Box 25007
Denver, CO 80225-0007

RE: Support for the Jurupa Community Services District's Advanced Metering Infrastructure Implementation Project Grant Application

Dear Mr. German:

As the General Manager of Santa Ana River Water Company (SARWC), I am pleased to submit this letter of support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. This project will provide Jurupa Valley and Eastvale residents with the ability to monitor and track water usage in real-time to provide information to customers allowing them to make repairs and improvements while also providing access to conservation tools and programs. This has shown in the industry to have positive financial impacts on the residents along with tangible water savings for the region. In November, JCSD completed a feasibility study focused on presenting options and opinions of preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project to ensure the Phase 1 Project will be built on solid data and proven technology.

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I strongly support JCSD's AMI Implementation Project – Phase 1 for USBR WEEG funding, which will benefit Jurupa Valley, the Eastvale community, and the region's overall water resources.

Sincerely,

John Lopez,
General Manager

jurupa
COMMUNITY SERVICES DISTRICT

SAN GABRIEL VALLEY WATER COMPANY

January 30, 2024

Josh German
U.S. Bureau of Reclamation
Water Resources and Planning Office
Post Office Box 25007
Denver, Colorado 80225-0007

Support for Jurupa Community Services District's
Advanced Metering Infrastructure Implementation Project Grant Application

Dear Josh:

As the Vice President - Operations for San Gabriel Valley Water Company's Los Angeles County and Fontana Water Company (FWC) operating divisions, I am pleased to submit this letter of support for the Jurupa Community Services District's (JCSD) application to the U.S. Bureau of Reclamation (USBR) Water and Energy Efficiency Grant (WEEG) Program. JCSD's application supports the Advanced Metering Infrastructure (AMI) Implementation Project – Phase 1.

JCSD has established itself as a regional leader in developing and implementing sustainable water-saving initiatives. This project will provide Jurupa Valley and Eastvale residents with the ability to monitor and track water usage in real-time to provide information to customers allowing them to make repairs and improvements while also providing access to conservation tools and programs. This has shown in the industry to have positive financial impacts on the residents along with tangible water savings for the region. In November, JCSD completed a feasibility study focused on presenting options and opinions of preliminary costs for four different AMI alternatives. JCSD is testing its methodology with a large, self-funded AMI pilot project to ensure the Phase 1 Project will be built on solid data and proven technology.

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I support JCSD's AMI Implementation Project – Phase 1 for USBR WEEG funding, which will benefit Jurupa Valley, the Eastvale community, and the region's overall water resources.

Very truly yours,

Josh Swift
Vice President - Operations

15966 ARROW ROUTE • FONTANA, CALIFORNIA 92335 • (909) 822-2201 • FAX (909) 823-5046