Advanced Metering Infrastructure (AMI) Water Use Efficiency Project

WaterSMART: Water and Energy Efficiency Grants for FY2021 BOR-DO-21-F001 Funding Group I

Prepared For:
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SECTION 1: TECHNICAL PROPOSAL

A. Executive Summary

Date: September 17, 2020	**Applicant Name**: Olivenhain Municipal Water District
City: Encinitas	**Project Length of Time:** 24 months
County: San Diego	**Estimated Completion Date:** April 2023
State: CA	**Located on a Federal Facility:** No

Olivenhain Municipal Water District (OMWD or the District) is seeking funding from the Bureau of Reclamation's (Reclamation) Water Energy and Efficiency Grant (WEEG) for FY2021 in order to implement the current phase of its **Advanced Meter Infrastructure (AMI) installation project** (the Project). The proposed Project will install an additional 4,181 Meter Transmitting Units (MXUs) on existing meters in OMWD's service area saving **323 acre-feet-per-year (AFY) (3,843 acre-feet for the lifetime of the Project or AFL).**

In addition to the technical aspects of the Project, the Project will also include a public outreach initiative intended to educate customers on the improved functionality of OMWD's web-based Customer Engagement Portal (CEP) and promote customer awareness that results in time sensitive leak detection capability, strong participation in landscape transformation and irrigation device incentive programs available through the regional SoCalWaterSmart Rebate Program.

Implementing this phase of the Project will enable OMWD to collect water metering data on majority of its service meters and bring OMWD closer to finalizing their AMI implementation efforts. The Project is in direct alignment with Reclamation's WEEG FY2021 Program in that it will produce **323 AFY** in water savings and will improve water consumption management which are both central objectives of the WEEG Program.

B. Project Location

Provide detailed information on the proposed project location or project area including a map showing the specific geographic location. For example, {project name}is located in {state and county} approximately {distance} miles {direction, e.g., northeast} of {nearest town}. The project latitude is {##°##'N} and longitude is {###°##'W}.

OMWD's service area is located in northern San Diego County, California and spans over 48 square miles. Within OMWD's service area are parts of the cities of Encinitas, Carlsbad, San Diego, Solana Beach, and other neighboring communities. OMWD also operates the Elfin Forest Recreational Reserve which is made up of 784 acres of natural habitat and 11 miles of trails which are used for hiking, biking, and equestrian use. This phase of MXU installations will take place in the northwest area within OMWD's service area. **Figure 1** below shows the location of the meters to be replaced. The approximate Project latitude is {33°04'04.2"N} and longitude is {117°14'47.7"W}.

Figure 1. Project Location

C. Technical Project Description

Provide a more comprehensive description of the technical aspects of your project, including the work to be accomplished and the approach to complete the work. This description should provide detailed information about the project including materials and equipment and the work to be conducted to complete the project. This section provides an opportunity for the applicant to provide a clear description of the technical nature of the project and to address any aspect of the project that reviewers may need additional information to understand.

The Project will have two technical components which are as follows:

1. Install MXUs equipment to 4,181 meters so they can be connected to the AMI network
2. Integrate the new meters to the CEP system to connect all the customers to a centralized portal to observe real-time water use

Currently, the District collects metering data for these meters by driving past the water meters each month. By installing 4,181 MXUs in this phase, OMWD will no longer have to complete the monthly driving routes associated with these meters which would not only result in substantial water savings but also conserve energy and help reduce greenhouse gas emissions. The types of MXUs that will be installed are Sensus 520Ms. All MXU installations will be completed by OMWD in-house personnel.

In order to ensure that all AMI meter data will be recorded and sent to OMWD, a Propagation Study was completed to identify low transmission zones and OMWD installed the required fixed base receivers in prior phases. The current AMI system is already equipped with Sensus FlexNet equipment; therefore, the new installations will have to be Sensus products to ensure network functionality.

Lastly, the Project will also include connecting the new meters to CEP to provide customers with the tools to understand, monitor, and adjust their water use patterns and respond to leaks promptly.

The components of the Project will not have any impact on the environment and is expected to be exempt from California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) review. OMWD successfully obtained Notice of Exemptions (NOE) for its previous projects that included installation of Tower Gateway Base Stations related to the AMI installation process.

OMWD staff will be responsible for all grant compliance efforts after the award, execution of the grant agreement, reporting and submittal of reimbursements, and final completion report to meet Reclamation requirements.

D. Evaluation Criteria

D.1. Evaluation Criterion A—Quantifiable Water Savings

Up to 30 points may be awarded for this criterion. This criterion prioritizes projects that will conserve water and improve water use efficiency by modernizing existing infrastructure. Points will be allocated based on the quantifiable water savings expected as a result of the project. Points will be allocated to give greater consideration to projects that are expected to result in more significant water savings.

Describe the amount of estimated water savings. For projects that conserve water, please state the estimated amount of water expected to be conserved (in acre-feet per year) as a direct result of this project. Describe the support/documentation of estimated water savings.

As a direct result of completing this phase of implementing OMWD's AMI system and installing 4,181 MXUs, the OMWD's conservation estimate is **323 AFY (3,843 AFL)**.

Describe current losses: Please explain where the water that will be conserved is currently going (e.g., back to the stream, spilled at the end of the ditch, seeping into the ground)?

This Project will bring OMWD closer to its goal for providing access to near real-time consumption data for all of its customers, a significant improvement over the monthly data consumption that is currently collected from automated meter reading (AMR) (collected by driving alongside each meter each month) meter reads.

OMWD performed an audit of water losses in the potable water distribution system between January and December 2018 using American Water Works Association (AWWA) Water Audit Software (WAS) v5.0. The water loss audit found that OMWD supplied a total of 18,629 AF of water in 2018. Accordingly, water losses accounted for **6.4**% of the total water supplied in 2018 which occurred from leaks (898.0 AF or 4.8% of total water supplied), unauthorized consumption (46.6 AF or 0.3% of total water supplied), customer metering inaccuracies (199.2 AF or of total water supplied 1.1%), and systematic data handling errors (43.2 AF or 0.3% of total water supplied). This percentage of water losses is used in the estimated water savings calculations included in **Table 1** below. The 2018 AWWA Audit is provided in **Appendix 2**. The Project will also provide customers with the tools to understand, monitor, and adjust their water use patterns and respond to leaks promptly. Water savings achieved by implementation of this project will offset the purchase of expensive imported water from the State Water Project (SWP).

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

Note: projects that do not provide sufficient supporting detail/calculations may not receive credit under this section. Please be sure to consider the questions associated with your project type (listed below) when determining the estimated water savings, along with the necessary support needed for a full review of your proposal. In addition, please note that the use of visual observations alone to calculate water savings, without additional documentation/data, are not sufficient to receive credit under this section. Further, the water savings must be the result of reducing or eliminating a current, ongoing loss, not the result of an expected future loss.

The Project will produce water savings in three separate ways:

1. More timely identification and correction of leaks and correction in abnormal consumption resulting in reduced water loss
2. Customers making behavioral changes in response to the availability of near-real time data consumption metrics provided through the CEP resulting in reduced water consumption
3. Customer installation of water efficient devices as reflected in customer participation in the SoCalWaterSmart Rebate Program

Two prominent vendors of CEPs (WaterSMART and Smart Water Energy) have documented water reductions ranging from 4-7%. Additionally, 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%. OMWD based its assumptions on this study that customer access to and utilization of the CEP would result in water savings of 5%, which is applied to 4,181 of OMWD's customers/services that will be connected to the CEP 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.

Water savings estimates resulting from reductions in water losses is based on an Environmental Protection Agency (EPA) report on water loss control for public water systems that up to 75% of water loss in systems is recoverable (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, from 6% down to 2% (Godwin, 2011). In our water savings analysis, we estimated that two-thirds of OMWD's non-revenue water losses were recoverable due to implantation of the AMI system. Therefore, of OMWD's 6.4% of water losses, 4.3% is estimated to be recovered and therefore additional water savings.

Please address the following questions according to the type of infrastructure improvement you are proposing for funding. See Appendix A: Benefit Quantification and Performance Measure Guidance for additional guidance on quantifying water savings.

Municipal Metering:

Municipal metering projects can provide water savings when individual user meters are installed where none exist to allow for unit or tiered pricing, when existing individual user meters are replaced with advanced metering infrastructure (AMI) meters, and when new meters are installed within a distribution system to assist with leakage reduction. 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:

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.

The steps taken in calculation of water savings are reflected in the below table:

Table 1: Water Savings Calculations

Water Savings Calculation Variables	Value	Unit	Calculation	Source
Total MXUs in OMWD system	22,361	MXUs		OMWD
MXUs installed as part of the Project	4,181	MXUs		
Percentage of total MXUs connected to AMI through the Project	18.7%		=4,181/22,361	
Total Water Supplied in 2018	18,629	AFY		2018 Water Loss Audit (Appendix 2)
Estimated Volume of Water Supplied by MXU fitted smart meters within Project	3,483	AFY	=18.7% x 18,629	
Percentage of System Water Losses in 2018	6.4%			2018 Water Loss Audit (Appendix 2)
Percentage of Recoverable Losses	4.3%		=2/3 x 6.4%	1) Godwin 2011 , 2) EPA 2013
Annual Recoverable Water Loss	149	AFY	=4.3% x 3,483	
Water Savings from Reduced Water Loss (20-years)	2,972	AFL	= 149 x 20	
% Water Savings from CEP (38% of all MXUs/customers – formula assumes equal % consumption by each customer)	0.9%		= 5% x 18.7%	EBMUD 2014
Annual water savings from CEP launch	174	AFY	= 0.9% x 18,629	
Total water Savings from customer access ad utilization of CEP (assumed 5-year life)	871	AFL	= 174 x 5	
Annual Water Conserved	**323**	**AFY**	**= 149 + 174**	
Project Lifetime Water Conserved	**3,843**	**AFL**	**= 2,972 + 871**	

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

Current distribution losses are determined by using AWWA WAS v5.0 Audit Software that are reported annually. The potential reductions in water use assumptions are based on the Environmental Protection Agency's (EPA) WaterSMART tool, Smart Water Energy, and the

EBMUD 2014 study which all assume that individual water use decreases anywhere from 4-7% when AMI is installed.

For installing individual water user meters, 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.

Above mentioned studies are:

1. East Bay Municipal Utilities District (EBMUD), 2014. "New technology reduces home water use by 5 percent". January 14, 2014.
2. Environmental Protection Agency (EPA), 2013. "Water Audits and Water Loss Control for Public Water Systems". July 2013.
3. Godwin, Angela, 2011. "Advanced Metering Infrastructure: Drivers and Benefits in the Water Industry". Water World, August 1, 2011.

The above-mentioned planning documents all cite conservation as the simplest, most cost-effective way to remedy, or at least postpone, a myriad of resource management issues.

This project is the beneficiary of many years of work OMWD has done to deliver precious water to combat drought and introduce water and energy efficiency to its customers. The lack of local supplies and the difficulties associated with imported supplies have motivated OMWD to construct and operate one of the most efficient water delivery systems in California. Bringing the already installed AMI smart meters online furthers this effort. This proposed project conserves water through education, real time feedback to residential water users, and financial incentives.

Installation of distribution system meters will not receive points under this criterion. Accordingly, these projects must be paired with a complementary project component that will result in water savings in order for the proposal to receive credit for water savings, e.g., pipe installation using upgraded materials, or individual water service meters.

OMWD does not have distribution main meters as part of this project. For this project, 4,181 meters will be equipped with AMI-capable MXUs and will be connected to the CEP network.

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

OMWD has already constructed the entirety of its Sensus FlexNet communication network, which consists of a network of smart meters and MXUs that communicate via a dedicated radio spectrum to collect and transmit hourly water usage data from individual customer meters to the back-end system housed at OMWD.

The types of MXUs that will be installed are Sensus 520Mswhich are compatible with the Sensus AMI Network.

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

Actual water savings will be verified upon project completion by comparing to historical water records:

Performance Measure No. 1: Quantifiable Water Savings
A Final Project Implementation Report will be submitted to Reclamation to verify post-Project benefits. The post-project benefit objective for Performance Measure No. 1. is **323 AFY** of potable water saved annually through implementation of the project.

Performance Measure No. 2: Improved Water Management
The Final Project Implementation Report will contain a section entitled Improved Water Management. A portion of the project journal will be dedicated to documenting general management improvements.

Performance Measure No. 3: Implementing Energy Efficiency in Water Management
The Final Project Implementation Report will contain a section entitled Increased Energy Efficiency in Water Management. This will be achieved by comparison of billing from pre-project installation for water production and distribution cost due to reduction in demand. Other energy savings such as those in cost of vehicle usage and fuel costs will also be calculated.

D.2. Evaluation Criterion B — Water Supply Reliability

Up to 18 points may be awarded under this criterion. This criterion prioritizes projects that address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflicts in the region. Note that an agreement will not be awarded for an improvement to conserve irrigation water unless the applicant agrees to the terms of Section 9504(a)(3)(B) of Public Law 111-11 (see p. 52 of the FOA for additional information).

Please address how the project will increase water supply reliability. Proposals that will address more significant water supply shortfalls benefitting multiple sectors and multiple water users, will be prioritized. General water supply reliability benefits (e.g., proposals that will increase resiliency to drought) will also be considered. Please provide sufficient explanation of the project benefits and their significance. These benefits may include, but are not limited to, the following:

Will the project address a specific water reliability concern? Please address the following: Explain and provide detail of the specific issue(s) in the area that is impacting water reliability, such as shortages due to drought, increased demand, or reduced deliveries.

As indicated in the Urban Water Management Plan (UWMP), OMWD currently purchases 100% of its potable water supply from the San Diego County Water Authority (SDCWA) who receives 57% of its supply from Metropolitan Water District (MWD). MWD supplies imported water from the Colorado River and the San Francisco Bay Delta (the Delta). Both water supply sources are experiencing shortages due to ongoing drought. This factor coupled with projected population increase has pushed OMWD to pursue more conservation-based projects such as AMI implementation.

Implementing AMI will increase conservation of potable water purchased from the SDCWA which will in turn offset the amount of imported water supplied by MWD. This benefits the entire Southern California region by reducing the amount of water imported from the Colorado River via the Colorado River Aqueduct (CRA) and the Bay-Delta (Delta) via SWP. SDCWA began purchasing desalinated seawater from the Claude "Bud" Lewis Carlsbad Desalination Plant in November of 2015, which is operated by Poseidon Water. With the implementation of the Project, OMWD will be able to reduce its purchases of water from the SDCWA, thereby reducing demands from local and imported supplies, including those from the Colorado River and the Delta (benefiting the Central Valley Project (CVP), operated by the Bureau of Reclamation (BOR), by approximately **323 AF**.

Additionally, OMWD's population is expected to increase from 70,522 in 2015 to an estimated 77,535 in 2040 (San Diego Association of Governments). The Project is expected to reduce water usage in OMWD which will increase OMWD's supplies by 3,843 **AF** over the Project's 20-Year service life. Dependence on imported potable water will be minimized and its resilience to the impacts of climate change will be improved as a result of the Project.

Will the project directly address a heightened competition for finite water supplies and over-allocation (e.g., population growth)?

Yes. OMWD expects its service area population to increase from 70,522 in 2015 to an estimated 77,535 in 2040. The Project will add 4,181 meters to the AMI network and increase OMWD's operational flexibility through increased water conservation. Although the Project does not directly provide a separate supply from SDCWA, water conservation as a result of the Project will decrease OMWD's reliance on SDCWA in the long-run and OMWD will be in a better position to ensure the demands of future populations are met.

Describe how the project will address the water reliability concern? In your response, please address where the conserved water 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.

OMWD obtains its entire potable water supply from SDCWA. SDCWA is one of 26-member agencies of MWD. MWD acquires its water from the Colorado River via the CRA and water from

the Delta via the SWP. Increasing conservation within OMWD will decrease OMWD's reliance on SDCWA and thus less reliant on MWD by approximately **323 AFY**. Conserving more water within OMWD will reduce diversions from the Colorado River and the Delta thus increasing operational flexibility for SDCWA, MWD, benefiting all of their member agencies. Implementation of AMI allows OMWD to detect and address water leaks in the system in an efficient and timely manner to prevent water waste. It will also help conserve water by allowing customers and OMWD personnel to monitor water usage consumption and alert customers if there is excessive usage.

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

No additional mechanisms will be necessary. The conserved water will be used to reduce the need to purchase imported water.

Indicate the quantity of conserved water that will be used for the intended purpose.

As it is demonstrated in earlier sections, OMWD estimates with implementation of the proposed Project an annual average savings of about **323 AFY** will be achieved.

Will the project make water available to achieve multiple benefits or to benefit multiple water users? Consider the following:
Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?
The proposed Project will benefit all meters within the OMWD service territory which includes single-family residential, multifamily residential, commercial, and agricultural customers.

Table 2: Water Meter Classes

Customer Class	Meter Size (In.)	Quantity
Commercial	5/8" - 10"	181
Domestic	3/4" - 2"	3,907
Agricultural	3/4" - 2"	2
Irrigation	3/4" - 2"	91
Recycled	5/8" - 2"	0
Total		**4,181**

Reducing water demands from SWP and CRA will promote healthy ecosystems and fisheries that in turn have economic benefits. For example, the Delta provides a variety of recreational opportunities including fishing, hunting, boating, camping, picnics, and viewing nature, which amount to approximately $809M in income and economic value added per year. Recreational

activities on the Colorado River and its tributaries generate $17B in retail sales which stimulate jobs, tax revenues, and other benefits from the state and regional economies, resulting in a total value of around $25.6B.

UMWP reports that commercial, industrial, and governmental (collectively, COM) usage is scaled upwards from existing use proportionate to employment projections in its service area. In addition, OMWD provides about 3% of its water deliveries to nearly 140 customers that irrigate at least one acre of agricultural land. Implementation of the AMI system and the availability of the CEP to growers will complement ongoing and future on-farm improvements by giving growers access to near real-time consumption data.

Owners will be able to follow their water usage patterns on hourly basis, making informed decisions on usage and conservation with the incentive of having lower bills. Reduction of water waste and the energy expended for its production will result in water and energy efficiency and benefit the environment.

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.

Through reduced water imports from the Colorado River and the Delta, OMWD will allow more water to remain in these water sources.

MWD diverts water from the Lower Colorado River to its member agencies throughout Southern California. These diversions to Southern California water users mean there is less water available in the Lower Colorado River to support its ecosystems. In 2004, a program called the Lower Colorado River Multi-Species Conservation Program (LCRMCP) identified 17 species that are not federally listed. The LCRMCP estimates that flow reductions could reach 1,574,000 AFY by 2051 which would result in lower water levels and higher concentrations of contaminants from agricultural runoff. Sufficient water supply quality and quantity is fundamental to the health of the Colorado River and to the survival of the non-listed species. The Project will decrease OMWD's reliance on Colorado River supplies thereby supporting the health of the Lower Colorado River and restoring and enhancing habitat for all of the species dependent on sufficient water flows. The health of the Colorado River has economic benefits as well considering the Colorado River is a major factor in supporting a $25.6B regional economy.

Covering an area of approximately 1,600 square miles, the Delta provides a habitat for more than 500 species of fish and wildlife. In 2013, the Bay Conservation Plan was released and identified over 30 species that are not federally listed that are potentially impacted by withdrawals from the Delta system through the SWP. These species are impacted by the operation of the SWP. Pumping from the Delta for SWP deliveries can reverse the flow of the Delta, capture fish species in pumping equipment, and increase saltwater intrusion. Decreasing reliance on the importation of Delta water could help alleviate these impacts on the Delta's

ecosystem and help restore habitat for all species within the Delta's ecosystem. Additionally, a healthy Delta ecosystem has economic benefits. The Delta is used for fishing, hunting, boating, camping, picnics, and viewing nature which sums to approximately $809 million in income and economic value added per year for the region.

Will the project benefit a larger initiative to address water reliability?

The State of California has developed many initiatives and governors issued executive orders to conserve water over the past 20 years in efforts to sustain this scarce resource and protect the environment. Most recently the State of California developed the Water Resilience Portfolio in 2020, a comprehensive blueprint to preserve California's water resource. The Portfolio is in accordance with Governor Gavin Newsom's Executive Order N-10-19. The Portfolio established goals aimed at addressing the unprecedented challenges threatening the state's scarce water resource. The policy emphasizes the diversity of solutions that need to be implemented to mitigate the issues facing the state's water supply and identifies four categories of solutions. One of the categories states "Each region must prepare for new threats, including flashier floods, deeper droughts, and hotter temperatures." The Project is a great example of an activity that is ultimately a benefit to all sectors and water users in the state.

The goal for OMWD is to continue to meet or exceed the statewide conservation targets and enhance prior strategies deployed for water conservation. Implementation of AMI provides a more targeted approach to conservation program and allows an effective partnership with customers by increasing transparency of information and gain better insight into water pricing options that support conservation.

Will the project benefit Indian tribes?

The water will reduce OMWD's imports from the SWP and CRA, both of which provide water resources to tribes and rural communities. Creating more operational flexibility for the SWP and CRA systems will inherently benefit tribes and rural communities.

Will the project benefit rural or economically disadvantaged communities?

The Project will not provide benefits to economically disadvantaged communities in OMWD and does not service rural areas.

Describe how the project will help to achieve these multiple benefits. In your response, please address where the conserved water will go and where 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.

This project will increase water supply reliability by allowing OMWD and customers within the

service area to efficiently manage and monitor water usage through an interactive web portal. The AMI system will streamline water conservation management efforts to support the reliability of OMWD's water supply. Implementation of leak detection technologies will also help preserve OMWD's valuable water supply by ensuring that water leakages are identified and addressed immediately.

Does the project promote and encourage collaboration among parties in a way that helps increase the reliability of the water supply?

Yes, the Project will involve connecting additional customers to an interactive web portal (CEP) where customers can view their water consumption data, water conservation tips, and associated water pricing. This tool will increase customer awareness of water usage and facilitate communications between OMWD and its customers, thereby encouraging collaboration to increase water conservation. This collaboration will reduce dependency on expensive imported water from SDCWA and MWD.

In addition, the Water Conservation Act of 2009 authorizes urban retail water suppliers to determine and report progress toward achieving conservation targets either on an individual agency basis, or collectively as part of a regional alliance of neighboring water agencies. Accordingly, OMWD, San Dieguito Water District (SDWD), Vallecitos Water District (VWD), and Rincon del Diablo Municipal Water District (RdDMWD) formed a regional alliance pursuant to the Water Conservation Act of 2009. All of these members are recipients of water from a common wholesale water supplier, in this case SDCWA, and all of the members are located within the South Coast Hydrologic Region. In accordance with the California Department of Water Resources (DWR) Guidebook and DWR Methodologies, the members have prepared an urban water use target and an interim urban water use target for the region, as presented in the UWMPs of each of the alliance members. Each member of the regional alliance has also developed its own set of interim and urban water use targets, along with other supporting data and determinations, all of which is included in each member's individual UWMP.

Implementation of the proposed project will achieve the goals of local and regional conservation plans.

Is there widespread support for the project? What is the significance of the collaboration/support?

Yes, this project will connect an additional 4,181 meters in OMWD's service area to the CEP system allowing customers and OMWD personnel to monitor water usage in real-time. OMWD has utilized a strong campaign by introducing water conservation as a necessity for the District moving forward. OMWD has also received multiple letters of support that are listed in **Appendix 1**.

OMWD is relying on the collaboration and proactive efforts of all its customers as partners in achieving water savings that can be attained through knowing and understanding water

consumption patterns, fixing leaks and breaks more quickly, and installing water efficient devices on their property. The possibility of future water conservation improvements by the agricultural sector may be positively impacted, as described in other sections.

This project directly affects water customers within the service area because it will allow them to view their water usage and receive alerts and notifications through an interactive web portal. In addition, OMWD can use this tool to help educate the public on water conservation issues.

Lastly, the conserved water will move the regional alliance of neighboring water agencies closer to their conservation goals.

Is the possibility of future water conservation improvements by other water users enhanced by completion of this project?

The Project will benefit OMWD's goal to reduce the total residential gallons per capita daily (gpcd) average of 132 to meet State standards set at 55 indoor gallons per capita daily. The Project supports the SDCWA's goal of securing greater water independence and reduced reliance on imported water supplies from MWD (hence the SWP and CRA).

This phase will connect additional 4,181 meters in OMWD's service area to the CEP system so customers and OMWD personnel can monitor water usage in real-time. The entire system is expected to be connected to the CEP system by 2025. This feature will be available to new customers of the system.

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

By reducing water consumption and demand for imported supplies, a water-related crisis or conflict such as the one experienced in 2015 and 2016 in California that resulted in State-mandated cutbacks of 25% can be deferred and/or avoided.

Describe the roles of any partners in the process. Please attach any relevant supporting documents.

This question is not applicable to this project.

Will the project address water supply reliability in other ways not described above?
No.

D.3. Evaluation Criterion C — Implementing Hydropower

This criterion is not applicable to this project.

D.4. Evaluation Criterion D — Complementing On-Farm Irrigation Improvements

Describe any planned or ongoing projects by farmers/ranchers that receive water from the applicant to improve on-farm efficiencies. Provide a detailed description of the on-farm efficiency improvements.

OMWD provides about 3% of its water deliveries to nearly 140 customers that irrigate one or more acres of agricultural land. Implementation of the AMI system and the CEP will enable farmers to access near real-time consumption data and will complement ongoing and future on-farm improvements.

Provision of such data meets one of the preliminary requirements to participate in the federal Environmental Quality Incentives Program (EQIP), coordinated through local Natural Resources Conservation Districts (NRCS). Mission Resources Conservation District (MRCD) is the local NRCS for OMWD. In the last five years, MRCD has provided seven irrigation evaluations (technical assistance) to growers in the OMWD service area, covering 68 acres of land. Irrigation evaluations provide information about uniformity distribution and emitter flow rates associated with the existing irrigation system. Evaluations are a precursor to grower participating in EQIP.

Have the farmers requested technical or financial assistance from NRCS for the on-farm efficiency projects, or do they plan to in the future?

The real-time water data provision meets one of the preliminary requirements to participate in the federal Environmental Quality Incentives program, which is coordinated through the local NRCS. The local NRCS for OMWD is MRCD who provided technical assistance in the form of seven irrigation evaluations to grower in the OMWD. The evaluations spanned over a 5-year period and covered 68 acres of land. These irrigation evaluations provided information about uniformity distribution and emitter flow rates associated with the existing irrigation system. The evaluations are a precursor to growers being eligible to participate in EQIP.

If available, provide documentation that the on-farm projects are eligible for NRCS assistance, that such assistance has or will be requested, and the number or percentage of farms that plan to participate in available NRCS programs.

Not applicable at this time**.**

Applicants should provide letters of intent from farmers/ranchers in the affected project areas.

There are no letters of intent for the affected project area at this time.

Describe how the proposed WaterSMART project would complement any ongoing or planned on-farm improvement. Will the proposed WaterSMART project directly facilitate the on-farm improvement? If so, how? For example, installation of a pressurized pipe through WaterSMART can help support efficient on-farm irrigation practices, such as drip-irrigation.

Access to real-time data provides growers with the information necessary to determine how much water is being delivered to a crop. This information is fundamental in a grower's ability to adjust the amount of irrigation by comparing actual water consumption against a water budget that utilizes evapotranspiration and plant factor formulas. It also provides the basis for additional on-farm improvements that are part of the irrigation water management best management practices recognized by BOR, which include soil moisture sensors and low application rate irrigation emitters.

Implementation of the Project by equipping MXUs and connecting them to the CEP will allow farmers to track their water use in real-time. Being able to track water in real-time would be very advantageous to growers who rely on optimal water use to increase their farming productivity.

Will the proposed WaterSMART project complement the on-farm project by maximizing efficiency in the area? If so, how?

The WaterSMART project in this application will maximize efficiency within the OMWD service area, including farmers, by providing real-time water use data for all water users. Water meters will be equipped with AMI-ready MXUs, and the Project in this application will bring all of the meters equipped with MXUs online and enable water users and OMWD to observe real-time water use on these meters.

Describe the on-farm water conservation or water use efficiency benefits that are expected to result from any on-farm work. o Estimate the potential on-farm water savings that could result in acre-feet per year. Include support or backup documentation for any calculations or assumptions.

By bringing 4,181 AMI meters online, including farming meters, water conservation is expected to increase anywhere from 4-7%. However, a June 2014 Issues Brief prepared by Natural Resources Defense Council and the Pacific Institute titled "Agricultural Water Conservation and Efficiency Potential in California" concluded that based on previous efficiency studies, agricultural water use could be reduced in California by 17-22% (NRDC, 2014). If agricultural irrigation could be reduced by even 5% due to water management strategies enabled by the provision of AMI's real-time consumption data, this would result in water savings of 28 AFY (.05 water savings x .03 water to agricultural customers x 18,629 AFY used in 2018) in the OMWD service area.

Please provide a map of your water service area boundaries. If your project is selected for funding under this FOA, this information will help NRCS identify the irrigated lands that may

be approved for NRCS funding and technical assistance to complement funded WaterSMART projects.

See **Figure 1** above.

D.5. Evaluation Criterion E — Department of Interior Priorities

Up to 10 points may be awarded based on the extent that the proposal demonstrates that the project supports the Department of the Interior priorities. Please address those priorities that are applicable to your project. It is not necessary to address priorities that are not applicable to your project. A project will not necessarily receive more points simply because multiple priorities are addressed. Points will be allocated based on the degree to which the project supports one or more of the priorities listed, and whether the connection to the priority(ies) is well supported in the proposal.

Creating a conservation stewardship legacy second only to Teddy Roosevelt.

President Teddy Roosevelt found tremendous value in conserving wilderness and preserving wild spaces for future generations to enjoy. He wanted to preserve not just the land, but also the trees, plants and wildlife. He understood that although industry and the extraction of raw minerals and natural resources is important, that there must be a proper balance and the Federal government should be there to help preserve these natural locations for the benefit of the people. OMWD's AMI project is directly in line with the values of T. Roosevelt by reducing water waste by 323 AF of water each year that will leave equivalent amounts in SWP and CRA water sheds.

Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment;

This project is to leverage the latest available AMI technologies to significantly improve the measurement and management of OMWD's resources that will bring direct benefit and value for its customers.

Implementation of advanced smart meter technologies provide water-consumption data in real time and allows for remote meter-reading from a central location through a radiofrequency based fixed communications network. This technology can help OMWD streamline water conservation and water supply management measures and adapt to changes in the environment.

Examine land use planning processes and land use designations that govern public use and access. This priority is not applicable to this Project.

Revise and streamline the environmental and regulatory review process while maintaining

environmental standards. This priority is not applicable to this Project.

Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity. This priority is not applicable to this Project.

Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands. This priority is not applicable to this Project.

Identify and implement initiatives to expand access to DOI lands for hunting and fishing. This priority is not applicable to this Project.

Shift the balance towards providing greater public access to public lands over restrictions to access. This priority is not applicable to this Project.

Utilizing our natural resources

As described in the previous sections, the Project will result in substantial reduction in water consumption, as described in previous sections, as well as energy consumption:

1. **Energy Savings from Reduction of Imported Water:** Based on an energy intensity study by the University of California, Santa Barbara determined that an estimated 3,000 kWh per AF is needed to move water from the SWP to Southern California and approximately 2,000 kWh per AF is required to move water from the CRA to Southern California.

Table 3: Energy Savings from Reduction of Imported Water

Energy Saving from Reduced Water Imports			
System	**SWP**	**CRA**	
Allocation	11%	78%	
Reduced Diversions (AF)	323	323	
Energy Saved (kwh/AF)	3,000	2,000	**Total**
Energy Conserved from Reduced Diversions(kwh)	**106,515**	**503,526**	**610,041**

*Based on SDCWA UWMP

2. **Energy Savings by Reducing Water System Electrical Usage:** OMWD averaged the monthly kWh used in its primary water treatment facilities and divided it by total raw water purchases provided the average of 149 kWh used per AF of water. The annual energy savings as a result of this project would therefore be:

   meters = 323 AFY x 149 kWh/AF = **47,932 kWh/year**

3. **Energy Savings from Reduced Vehicle Miles Driven:** This project would create an additional energy savings through reducing fossil fuel consumption. By replacing the manually read meters with AMI meters, OMWD staff will no longer need to drive to the 4,181 meter locations to record water usage data. It is conservatively assumed that .2 miles is driven for each meter.

   4,181 meters x .2 miles/meter x 12 (no of times meters are read per year) = 10,034 miles/year

   Using EPA's average of 21.5 miles/gallon and adding 10 percent for the stop-and-go condition, we estimate the following:

   10,034 miles per year / 21.5 miles per gallon = 467 x 1.10 = 513 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 **18,803kWh/year** that will be saved as a result of this project.

Table 3: Summary of Total Energy Savings from Project Implementation

Total Energy Savings	
Source of Energy	**Energy Savings (kWh) for 323 AFY**
Reduction of Imported Water	610,041
System Usage	47,932
Reduced Vehicle Miles	18,803
Total:	**676,776**

Energy savings from this project will make energy available to meet other security and economic needs.

Ensure American Energy is available to meet our security and economic needs;
This project will involve significant energy savings that can help meet environment and economic needs. The energy savings will be realized in all aspects of the operation including vehicle miles currently traveled for monthly meter reading, reduction in processing and distribution of water and less dependence on purchased imported water supplies and its conveyance.

Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications.

This priority is not applicable to this Project.

Refocus timber programs to embrace the entire 'healthy forests' lifecycle

This priority is not applicable to this Project.

Manage competition for grazing resources.

This priority is not applicable to this Project.

Restoring trust with local communities

OMWD receives imported water from the Colorado River and the Bay Delta and distributes it for the broader needs of its customers. OMWD encourages water conservation within its service area (mandating it during periods of reduced supply availability) and works regularly with its customers on water use efficiency efforts. The Project will promote these efforts with customers, and the customer education and outreach initiatives included in the scope of the Project will further improve dialogue and relationships as customers become trained on utilizing data provided through the CEP and on opportunities to conserve water through behavior modification, social norming and participation in the SoCalWaterSmart Rebate Program. Interaction and lines of communication will be enhanced with the SDCWA and MWD (both regional water authorities) as lessons learned are shared with colleagues and industry groups about effectiveness of CEPs in achieving water conservation as well as through increased promotion of the SoCalWaterSmart Rebate Program offered through MWD.

Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and entities bordering our lands;

This priority is not applicable to this Project.

Expand the lines of communication with Governors, state natural resource offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

This priority is not applicable to this Project.

Striking a regulatory balance

This priority is not applicable to this Project.

Reduce the administrative and regulatory burden imposed on U.S. industry and the public;

This priority is not applicable to this Project.

Ensure that Endangered Species Act decisions are based on strong science and thorough analysis.

This priority is not applicable to this Project.

Modernizing our infrastructure
Support the White House Public/Private Partnership Initiative to modernize U.S. infrastructure;

This project will support the White House Public/Private Partnership Initiative to modernize the U.S. infrastructure by installing 21st century modern metering technology. Construction of the OMWD water distribution system dates back to the 1960s. The installation of AMI modernizes, benefits and improve the existing infrastructure through advanced leak detection, ultimately resulting in better management of the infrastructure.

Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs.
This priority is not applicable to this Project.

Prioritize DOI infrastructure needs to highlight: 1. Construction of infrastructure; 2. Cyclical maintenance; 3. Deferred maintenance.

This Project highlights construction of infrastructure by equipping 4,181 meters with MXUs and bringing them into the centralized system. The centralized AMI system will decrease cyclical maintenance requirements by automating and updating the metering system so that water leaks and system discrepancies can be identified and addressed immediately. This project will also defer annual meter replacement and meter maintenance spending for faulty meters by installing new AMI ready meters with long-term warranties.

Reclamation Priorities:

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

The Project will increase water supplies by **323 AFY** through the implementation of better managed water resources.

Streamline Regulatory Processes and Remove Unnecessary Burdens to Provide More Water and Power Supply Reliability
This priority is not applicable to this Project.

Leverage Science and Technology to Improve Water Supply Reliability to Communities
The Project will leverage science and technology by centralizing and connecting the existing AMI meters in the District that are and will be equipped with MXUs which will enable OMWD to manage its water supplies more effectively and reduce wasted water. As this project highlights the installation of new infrastructure, it matches the highest priority of the DOI.

Address Ongoing Drought

The AMI system will increase water conservation within OMWD which will improve OMWD's

resiliency to ongoing and future droughts.

Improve the Value of Hydropower to Reclamation Power Customers
This priority is not applicable to this Project.

Improve Water Supplies for Tribal and Rural Communities

The Project will reduce OMWD's imports from the SWP and CRA, both of which provide water resources to tribes and rural communities. Creating more operational flexibility for the SWP and CRA systems will inherently benefit tribes and rural communities.

Implementation of new Title Transfer authority pursuant to P.L. 116-9
This priority is not applicable to this Project.

D.6. Evaluation Criterion F — Implementation and Results

Sub criterion F.1 — Project Planning

Does the applicant have a Water Conservation Plan and/or System Optimization Review (SOR) in place? Please self-certify or provide copies of these plans where appropriate to verify that such a plan is in place. Provide the following information regarding project planning:

Identify any district-wide, or system-wide, planning that provide support for the proposed project. This could include a Water Conservation Plan, SOR, Drought Contingency Plan or other planning efforts done to determine the priority of this project in relation to other potential projects. Describe how the project conforms to and meets the goals of any applicable planning efforts and identify any aspect of the project that implements a feature of an existing water plan(s).

OMWD maintains and abides by the following Plans:

- Urban Water Management Plan
- California Water Plan & Water Resilience Portfolio
- San Diego Integrated Regional Water Management Plan (SDIRWMP)

In compliance with the Urban Water Management Planning Act in the California Water Code, OMWD completed and submitted an UWMP in 2015. The 2015 UWMP guidelines require a specific set of demand management measures (DMMs) to be reported on in the 2015 UWMP, including Water Waste Prevention Ordinances, Metering, Conservation Pricing, Public Education and Outreach, Programs to Assess and Manage Distribution System Real Loss, and Water Conservation Program Coordination and Staffing Support (OMWD, 2016).

The UWMP section on OMWD's demand management measures (DMM) describes how each DMM is being implemented. Additionally, the UWMP lays out agency goals for reducing or maintaining per capita water use to comply with water use targets required by the California Water Conservation Act of 2009, Senate Bill x7-7. This project is qualified as a conservation project and supports OMWD's DMMs.

The State of California maintains two strategic plans for managing and developing water resources statewide for current and future generations which is referred to as the Water Plan and the Water Resilience Portfolio. The Water Plan provides a collaborative planning framework for key representatives who are responsible with making informed decisions for California's water future and supports the actions in the Water Resilience Portfolio. The Water Plan is updated every five years. The recently released Water Resilience Portfolio outlines the initiatives needed in order to build a robust water supply while optimizing water usage. A copy of the Water Plan and Water Resilience Portfolio can be found at these links above.

Additionally, OMWD is a stakeholder in the San Diego Integrated Regional Water Management Plan (SDIRWMP). The role of the SDIRWMP is to describe the region's physical setting, sources of water supply, water quality, environmental resources, planning objectives and targets, and acknowledge partnership and multi-benefit opportunities. The Project will help attain two objectives of SDRWMP, which are to Improve Water Supply and Address Climate Change. In regard to Improv Water Supply, the Project focuses on optimizing local water resources to reduce OMWD's reliance on imported water. The targets in the SDRWMP include conserving water through conservation measures and water use efficiency. The Project addresses both of these targets through increased water use efficiency and reduced loss of potable supplies. Additionally, the reduction in potable water demands will also contribute to lower demands on imported supplies for groundwater replenishment. The objective to address climate change focuses on adapting to and mitigating against climate change vulnerability with targets of increasing local supplies, implementing "no regret" adaptation strategies, and implementing mitigation strategies that decrease emissions of greenhouse gases. The proposed Project will help improve local supply reliability by reducing demands and will result in reductions in energy use and greenhouse gas emissions. As the project will reduce water demand and consumption within OMWD's service area, it also contributes to the DMMs identified in the UWMP.

Lastly, the reduced water consumption that results from the proposed project aligns with the State's objective for reducing per capita water consumption by 20 percent by the year 2020. The Plan indicates that AMI systems are Best Management Practices that assist in providing water conservation. The Plan cites the Pacific Institute and Single- Family Water Use Study to show the significance of water loss due to residential leaks (averaging 7 to 10 gallons per capita per day [GPCD]). This study showed that if residential leaks could be identified and repaired earlier, the savings would be 6-7.5 GPCD (0.007-0.008 AFY per capita).

Subcriterion F.2 — 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). For more information calculating performance measure, see Appendix A: Benefit Quantification and Performance Measure Guidance.

All Water and Energy Efficiency Grants applicants are required to propose a "performance measure" (a method of quantifying the actual benefits of their project once it is completed). A provision will be included in all assistance agreements with Water and Energy Efficiency Grants recipients describing the performance measure and requiring the recipient to quantify the actual project benefits in their final report to Reclamation upon completion of the project. If information regarding project benefits is not available immediately upon completion of the project, the financial assistance agreement may be modified to remain open until such information is available and until a Final Report is submitted. Quantifying project benefits is an important means to determine the relative effectiveness of various water management efforts, as well as the overall effectiveness of Water and Energy Efficiency Grants.

Note: program funding may be used to install necessary equipment to monitor progress. However, program funding may not be used to measure performance after project construction is complete (these costs are considered normal operation and maintenance costs and are the responsibility of the applicant).

The primary objective of the Project is to increase water use efficiency and improve water management by reducing water waste resulting from leaks, breaks and inefficient water use and encourage customers to install efficient irrigation devices. OMWD will compile data to report on water savings as a direct result of project implementation. Performance measures will consist of the following:

1. <u>Overall Water Savings</u>

With the implementation of AMI, OMWD will be able to monitor real time water use and collect and store data with the AMI data management system. Total water savings resulting from project implementation will be quantified by comparing water meter consumption data from a sample set of newly installed MXUs, with historical water meter data for the sample set. Post-implementation water savings will be based on average water use over a one-year period upon implementation. Historic water use data will be appropriately normalized by accounting for water use trends over the past five-year period and accounting for conservation measures implemented in response to ongoing drought conditions and statewide water use reduction mandates of 2015. If possible, water use savings data will also be compared to control groups of customers that did not receive AMI meter upgrades to increase robustness of results.

2. <u>Water Savings from Leak Detection</u>

One of the important benefits of AMI systems is that they can provide accurate and real time data in combination with high accuracy of high and low flows, thereby facilitating early leak

detection. OMWD will also compile and analyze data related to water savings from early leak detection. Additionally, alarms are triggered by unusual water usage that may indicate leaks. OMWD may enlist customers to track a sample set off alarms and report on related actions taken to repair leaks or adjust abnormal consumption. Using the AMI data, OMWD may study a specific area of the distribution system to estimate the portion of water losses resulting from public-side leaks and attempt to quantify the water savings that accrued from detection.

3. Water Savings from Customer-Side Conservation

Another important benefit of the Project is connecting 4,181 meters to a user-friendly CEP, to allow customers to more easily view and track water usage. This accessibility to water use data can result in self-leak detection and water use behavioral changes. OMWD will analyze water use reductions to estimate customer-side conservation as a portion of total water savings. OMWD can track this behavior by comparing a 'before and after' average water consumption.

4. Other Statistics

In addition to water savings measurements, OMWD will produce statistics as follows:

- Record of actual number of MXU installations, by account type

Subcriterion F.3 – 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: please do not repeat the more detailed technical project description provided in Section D.2.2.4.; this section should be focused on a summary of the major tasks to be accomplished as part of the project.

The Project is a continuation of an on-going AMI implementation program that started in 2012. This project will be implemented within the required time limit for a Group 1 funded project, which is two years. Capital Improvement Project matching funds have been identified for the Project. There are no implementation obstacles or challenges anticipated that would prevent the Project from occurring as scheduled. Project implementation could begin as soon as the grant agreement has been executed and will be complete within two years.

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

There are no permits or approvals required to implement the Project.

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

The Project is one of the final phases of a long-term, rigorous water resources planning using best available science to identify best practices for managing water resources. OMWD continuously undertakes methodological planning efforts, including assessments of available and potential future supplies, and demand forecasting.

All preliminary and assessment work for this project has been completed. OMWD prepared a strategic roadmap for implementation of the multi-phase AMI system and this project will follow the prior efforts to complete this phase of it. OMWD has identified the AMI system components and the required equipment in the prior phases of the project and will be able to place the order for the equipment immediately upon getting the notice of award.

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

OMWD board members are fully supportive of this project and there are no administrative actions or new policies required.

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)

Table 4: Project Schedule

Estimated AMI Project Schedule		
Phase	Phase Start	Phase Finish
Application Review	September 2020	March 2021
Equipment order and delivery	April 2021	June 2021
Project Implementation	June 2021	April 2023

D.7. Evaluation Criterion G — Nexus to Reclamation Project Activities

Up to 4 points may be awarded if the proposed project is in a basin with connections to Reclamation project activities. No points will be awarded for proposals without connection to a Reclamation project or Reclamation activity.

Is the proposed project connected to Reclamation project activities? If so, how?

OMWD receives 100% of its water supplies from SDCWA and SDCWA receives approximately 57% of its water supplies from MWD. MWD receives its supplies from two sources, the Colorado River via the CRA and the Delta via the SWP. Although neither of these projects are directly BOR projects, both the CRA and SWP rely on successful management of BOR projects.

In the case of the CRA, BOR constructed the Parker Dam which is vital to maintaining MWD's Colorado River supplies. The Parker Dam, in addition to creating hydropower, manages the levels of Lake Havasu which is located along the Colorado River. MWD diverts and delivers Colorado River water from Lake Havasu to its customers in Southern California via the CRA. Without the successful management of the Parker Dam, MWD would not be able to supply its Colorado River water to its customers such as SDCWA, and SDCWA would not be able to supply water to Olivenhain. Conversely, if OMWD conserves more water, there will be less diversions needed from Lake Havasu which would increase the operational flexibility of Parker Dam and the entire Lower Colorado River Basin thus benefitting BOR.

The SWP derives its water supplies from the Delta which contains a number of BOR projects, most notably the CVP. The SWP delivers water from the Delta to MWD's service territory which includes SDCWA and OMWD. By OMWD reducing its reliance on imported supplies, more water can be stored in the Delta which would increase operational flexibility for all BOR projects that are impacted by the increasingly stringent management of the Delta's water resources.

Please consider the following:

Does the applicant receive Reclamation project water?
OMWD does not receive water directly from BOR. However, as noted above, OMWD relies on the successful operation of the CVP and Parker Dam, both of which are BOR projects.

Is the project on Reclamation project lands or involving Reclamation facilities?
The Project is not located on any BOR project lands.

Is the project in the same basin as a Reclamation project or activity?
OMWD's service territory is not located in the same basin as a BOR project or activity.

Will the proposed work contribute water to a basin where a Reclamation project is located?
As mentioned above, the Project will provide more operational flexibility for the Lower Colorado River Basin and the San Francisco Bay Delta, both of which are areas where BOR projects are located and rely on the preservation of these water resources.

Will the project benefit any tribe(s)?
The water will reduce OMWD's imports from the SWP and CRA, both of which provide water to tribes and rural communities. Creating more operational flexibility for the SWP and CRA systems will inherently benefit tribes and rural communities.

D.8. Evaluation Criterion H — Additional Non-Federal Funding

Up to 4 points may be awarded to proposals that provide non-Federal funding in excess of 50 percent of the project costs. State the percentage of non-Federal funding provided using the following calculation:

Non-Federal Funding/ Total Project Cost

Table 5: Non-Federal Funding Amount and Cost Share

Percentage of Non Federal Funding		
Non-Federal Funding Amount	**Total Project Cost**	**Non-Federal Funding Percent**
$778,969	$1,278,969	61%

SECTION 2: PROJECT BUDGET

A. Standard Form 424 Budget Information

This document is included in the separate submission with all of the OMWD's completed Standard Form 424 copies.

B. Funding Plan and Letters of Commitment

OMWD does not have any third-party funding sources or expected Federal funding sources outside of this application for assistance. Currently, OMWD does not have any pending funding requests for this project outside of this application and will provide the funding from the OMWD Capital Improvement Fund that will be allocated as part of the Capital Improvement Program for the proposed project.

C. Budget Proposal

Table 6: Project Cost By Funding Source

SOURCE	AMOUNT	PERCENTAGE
Costs to be reimbursed with the requested Federal funding	$500,000	39%
Costs to be paid by the applicant	$778,969	61%
Value of third party contributions	$0	0%
Total Project Cost	**$1,278,969**	

Table 7: Project Funding Sources

Funding Sources	Amount
OMWD - Cash Contributions	$ 1,278,969
OMWD value of in-house resources	$0
Other Federal Entities	$0
Bureau of Reclamation	$1,278,969
Total:	**$1,278,969**

Table 8: Project Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		QUANTITY TYPE	TOTAL COST
	$/Unit	Quantity		
Salaries and Wages				**$ 75,684**
General Manager	$125.94	2	Hourly	$ 252
Assistant General Manager	$96.20	3	Hourly	$ 289
Customer Services Manager	$76.40	10	Hourly	$ 764
Field Services Supervisor	$45.51	15	Hourly	$ 683
Field Services Technician	$33.73	2,180	Hourly	$ 73,531
Engineering Project Manager	$82.66	2	Hourly	$ 165
Fringe Benefits				**$ 173,316**
General Manager	229% of salary	5	Hourly	$ 577
Assistant General Manager	229% of salary	7	Hourly	$ 661
Customer Services Manager	229% of salary	20	Hourly	$ 1,750
Field Services Supervisor	229% of salary	30	Hourly	$ 1,563
Field Services Technician	229% of salary	2,534	Hourly	$ 168,387
Engineering Project Manager	229% of salary	4	Hour	$ 379
Travel				**$ -**
N/A				
Equipment				**$ 1,023,719**
MXU Single Port's	$ 199	3,783	Per Unit	$ 751,946.91
MXU Dual Port's	$ 225	398	Per Unit	$ 89,689.30
Lid & Covers (average cost)	$ 44	4,181	Per Unit	$ 182,082.55
Supplies/Materials				**$ -**
N/A				
Contractual/Construction				**$ -**
N/A				
Environmental/Regulatory Compliance				**$ 1,000**
BOR Environmental Review	$ 1,000	1	LS	$ 1,000
Other				**$ 5,250**
Refuse Container	$ 750	7	Per Dump	$ 5,250
TOTAL DIRECT COSTS				**$ 1,278,969**
Indirect Costs				**$ -**
N/A				
TOTAL ESTIMATED PROJECT COSTS				**$ 1,278,969**

D. Budget Narrative

Salaries and Wages:

The salaries and wages include all of OMWD in-house personnel who will be working on the Project. The General Manger, Assistant General Manager, Customer Services Manager and Engineering Project Manager will oversee the Project's implementation and will assist with all administrative tasks required to get the Project completed. The Field Services Supervisor and Technicians will be physically installing the MXU's on all targeted meters.

Fringe Benefits:

The estimated escalation for fringe benefits is 229% of the salary compensation for the employees. Fringe benefits include items such as: employee programs, training, and education, employer's share of Federal Insurance Contributions Act (FICA), all Eligible Employee (EE) insurance, paid leave, employer's share of 457 plan and Voluntary Employee's Beneficiary Association (VEBA), Public Employees Retirement System (PERS), and uniforms. Fringe benefit rates are for grant application purposes only, as they exclude certain costs per OMB Part 225 guidelines.

Travel:

There are no travel expenses anticipated for the Project.

Equipment:

The equipment for this project will include 3,783 single-port MXUs, 398 dual-port MXUs, and 4,181 lids and covers for all MXUs installed in order to protect the MXUs from weather and other variables.

Materials and Supplies:

There are no supplies or materials anticipated for the Project.

Contractual/Construction:

All contractual/construction services will be covered by OMWD in-house personnel.

Third-Party In-Kind Contributions:

There are no third-party contributions towards the Project.

Environmental and Regulatory Compliance Costs:

An allocation of $1,000 has been stipulated in the project budget for the Reclamation's consultant as reflected in **Table 6**.

Other Expenses:

It is assumed that there will be one refuse container located at each dump location.

Indirect Costs:

There are no indirect costs anticipated for the Project.

SECTION 3: ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

To allow Reclamation to assess the probable environmental and cultural resources impacts and costs associated with each application, all applicants should consider the following list of questions focusing on the NEPA, ESA, and NHPA requirements. 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:

A major part of the project involves replacement of existing meters and does not require any earth disturbance for this part of the project. Therefore, this Project will not have any impact on the environment and is expected to be exempt from CEQA/NEPA review. OMWD has successfully processed NOEs previously that included installation of Tower Gateway Base Stations related to this AMI installation process.

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.

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?

There are no known species listed or proposed to be listed as a Federal threatened or endangered species or designated critical habitat that will be impacted by this project.

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.

When was the water delivery system constructed?

Construction of the water delivery system began in 1961.

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.

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.

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

No.

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

No.

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

No.

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.

SECTION 4: REQUIRED PERMITS OR APPROVALS

No permits or approvals other than the contract approvals that have been noted in the schedule section are anticipated to be required in order to implement the project.

SECTION 5: LETTERS OF SUPPORT

Per BOR's application guidelines in Section D.2.2.7. Letters of Support, all statements of support from interested stakeholders are included in **Appendix 1**.

SECTION 6: OFFICIAL RESOLUTION

RESOLUTION NO. 2020-19

RESOLUTION AUTHORIZING THE APPLICATION FOR FUNDING FROM THE UNITED STATES BUREAU OF RECLAMATION'S "WATERSMART GRANTS: WATER AND ENERGY EFFICIENCY GRANTS FOR FISCAL YEAR 2021" PROGRAM AND AUTHORIZING THE EXECUTION OF A GRANT AGREEMENT WITH THE UNITED STATES BUREAU OF RECLAMATION

WHEREAS, Olivenhain Municipal Water District has the authority to construct, operate, and maintain its water system; and

WHEREAS, Olivenhain Municipal Water District desires to leverage its money and resources by cost sharing with the United States Bureau of Reclamation on projects that result in quantifiable and sustained water savings and support broader water reliability benefits; and

WHEREAS, Olivenhain Municipal Water District has the legal authority to enter into an agreement with the Bureau of Reclamation; and

WHEREAS, Olivenhain Municipal Water District has the capability to provide the amount of funding and/or in-kind contributions that it specifies in project funding plans submitted to the Bureau of Reclamation; and

WHEREAS, Olivenhain Municipal Water District will work with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement;

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Olivenhain Municipal Water District that, pursuant and subject to all of the terms and provisions of the WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021, that application be made to the Bureau of Reclamation for funding; and

BE IT FURTHER RESOLVED that the General Manager of Olivenhain Municipal Water District is hereby authorized and directed to cause the necessary data to be prepared and application to be signed and filed with the Bureau of Reclamation.

PASSED, ADOPTED AND APPROVED at a regular meeting of the Board of Directors of Olivenhain Municipal Water District held on August 19, 2020.

Edmund K. Sprague, President
Board of Directors
Olivenhain Municipal Water District

RESOLUTION NO. 2020-19 *continued*

ATTEST:

Robert M. Kephart, Secretary
Board of Directors
Olivenhain Municipal Water District

SECTION 7: UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD MANAGEMENT

Subject: Registration Activated for OLIVENHAIN MUNICIPAL WATER DISTRICT / 072505795 / 5XSQ0 in the U.S. Government's System for Award Management (SAM)

samadmin@sam.gov <samadmin@sam.gov> Tue, Jan 21, 8:46 AM
to John Carnegie, John Carnegie

You are viewing an attached message. Engineering Solutions Services Mail can't verify the authenticity of attached messages.

This email was sent by an automated administrator. Please do not reply to this message.

Dear J. Carnegie,

The registration for OLIVENHAIN MUNICIPAL WATER DISTRICT / 072505795 / 5XSQ0 is now active in the U.S. Government's System for Award Management (SAM). If you did not provide a Commercial and Government Entity (CAGE) Code during the registration process, one has been assigned to you by the Defense Logistics Agency (DLA) CAGE Program.

In order to remain eligible to do business with the Federal government, you must renew your entity's registration in SAM every year.The annual renewal date for the registration is 2021-01-20 11:15:23.696.

You may invite additional users to manage or review your entity registration by following these steps:

1. Go to www.sam.gov and log in.
2. Select Entity Users from the sub-navigation menu on the My SAM page.
3. Select Invite User from the Entity Users menu.
4. Select the desired entity from the Level List.
5. Provide invitee's email address.
6. Assign role(s) to be associated with the user account.
7. Select Submit.

All invitees will receive an email message from SAM with instructions on how to complete the process.

Remember, this process is entirely FREE to you. It is FREE to register and maintain your registration in SAM. It is FREE to get help with your registration. Contact our supporting Federal Service Desk at www.fsd.gov, or by telephone at 866-606-8220 (toll free) or 334-206-7828 (internationally), for FREE help.

In addition, if you are located in the U.S. and its outlying areas, you can also get FREE support from your local Procurement Technical Assistance Center (PTAC), an official resource for government contracting assistance. Go to http://www.aptac-us.org/ to find your closest PTAC.

Thank you,
The System for Award Management (SAM) Administrator
https://www.sam.gov

Appendix 1: LETTERS OF SUPPORT

Our Region's Trusted Water Leader
San Diego County Water Authority

September 10, 2020

Olivenhain Municipal Water District
Attn: Kimberly Thorner
1966 Olivenhain Road
Encinitas, CA 92024

Subject: Letter of Support for OMWD's Grant Application

Dear Ms. Thorner,

San Diego County Water Authority supports Olivenhain Municipal Water District's application to the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency Grants for Fiscal Year 2021 program for funding of its Advanced Metering Infrastructure (AMI) expansion project.

By providing access to hourly water use data, AMI technology allows OMWD staff to find and address leaks faster, resulting in significantly reduced water loss. In addition, AMI technology minimizes the need for trucks to drive with meter readers, thus reducing the carbon footprint associated with traditional meter reading.

The SDCWA previously supported OMWD's application for USBR's WaterSMART grant program in 2019, which resulted in nearly $300,000 in grant funding for the AMI expansion project.

AMI conversion will allow for more precise implementation of district metered areas which cut back on water loss from agency level leaks. Additionally, AMI is the technology needed to utilize the customer engagement software which will provide customers with access to hourly water usage, consumption trends, and other conservation tools to manage water use and increase water efficiency.

SDCWA strongly supports OMWD's application for grant funding to complete the remaining phases of their AMI expansion project. Once completed, the AMI expansion project will result in increased water efficiency by modifying customers' water use behaviors and facilitating prompt leak detection and repair at both the customer and agency level.

If you have any questions regarding our support of this application, please do not hesitate to contact Elizabeth Lovsted at elovsted@sdcwa.org.

Sincerely,

Kelley Gage

Kelley Gage
Director of Water Resources

MEMBER AGENCIES
Carlsbad Municipal Water District
City of Del Mar
City of Escondido
City of National City
City of Oceanside
City of Poway
City of San Diego
Fallbrook Public Utility District
Helix Water District
Lakeside Water District
Olivenhain Municipal Water District
Otay Water District
Padre Dam Municipal Water District
Camp Pendleton Marine Corps Base
Rainbow Municipal Water District
Ramona Municipal Water District
Rincon del Diablo Municipal Water District
San Dieguito Water District
Santa Fe Irrigation District
South Bay Irrigation District
Vallecitos Water District
Valley Center Municipal Water District
Vista Irrigation District
Yuima Municipal Water District

OTHER REPRESENTATIVE
County of San Diego

4677 Overland Avenue, San Diego, California 92123-1233 • (858) 522-6600 • FAX (858) 522-6568 • www.sdcwa.org

City of Encinitas

September 10, 2020

Olivenhain Municipal Water District
Attn: Kimberly Thorner
1966 Olivenhain Road
Encinitas, CA 92024

Subject: Letter of Support for OMWD's Grant Application

Dear Ms. Thorner,

City of Encinitas supports Olivenhain Municipal Water District's application to the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency Grants for Fiscal Year 2021 program for funding of its Advanced Metering Infrastructure (AMI) expansion project.

By providing access to hourly water use data, AMI technology allows OMWD staff to find and address leaks faster, resulting in significantly reduced water loss. In addition, AMI technology minimizes the need for trucks to drive with meter readers, thus reducing the carbon footprint associated with traditional meter reading.
AMI conversion will also allow for more precise implementation of district metered areas which cut back on water loss from agency-level leaks. Additionally, AMI is the technology needed to utilize the customer engagement software which will provide customers with access to hourly water usage, consumption trends, and other conservation tools to manage water use and increase water efficiency.

City of Encinitas strongly supports OMWD's application for grant funding to complete the remaining phases of their AMI expansion project. Once completed, the AMI expansion project will result in increased water efficiency by modifying customers' water use behaviors and facilitating prompt leak detection and repair at both the customer and agency level.

If you have any questions regarding our support of this application, please do not hesitate to contact me at 760-633-2858.

Sincerely,

Carl Quiram
Director of Public Works

Tel 760/633-2600 FAX 760/633-2627, 505 South Vulcan Avenue, Encinitas, CA 92024 TDD 760/633-2700

Carlsbad Municipal Water District

September 4, 2020

Olivenhain Municipal Water District
Attn: Kimberly Thorner
1966 Olivenhain Road
Encinitas, CA 92024

Subject: Letter of Support for OMWD's Grant Application

Dear Ms. Thorner,

The Carlsbad Municipal Water District supports Olivenhain Municipal Water District's application to the Bureau of Reclamation's WaterSMART: Water and Energy Efficiency Grants for Fiscal Year 2021 program for funding of its Advanced Metering Infrastructure (AMI) expansion project.

By providing access to hourly water use data, AMI technology allows OMWD staff to find and address leaks faster, resulting in significantly reduced water loss. In addition, AMI technology minimizes the need for trucks to drive with meter readers, thus reducing the carbon footprint associated with traditional meter reading.

AMI conversion will also allow for more precise implementation of district metered areas which cut back on water loss from agency-level leaks. Additionally, AMI is the technology needed to utilize the customer engagement software which will provide customers with access to hourly water usage, consumption trends, and other conservation tools to manage water use and increase water efficiency.

The Carlsbad Municipal Water District strongly supports OMWD's application for grant funding to complete the remaining phases of their AMI expansion project. Once completed, the AMI expansion project will result in increased water efficiency by modifying customers' water use behaviors and facilitating prompt leak detection and repair at both the customer and agency level.

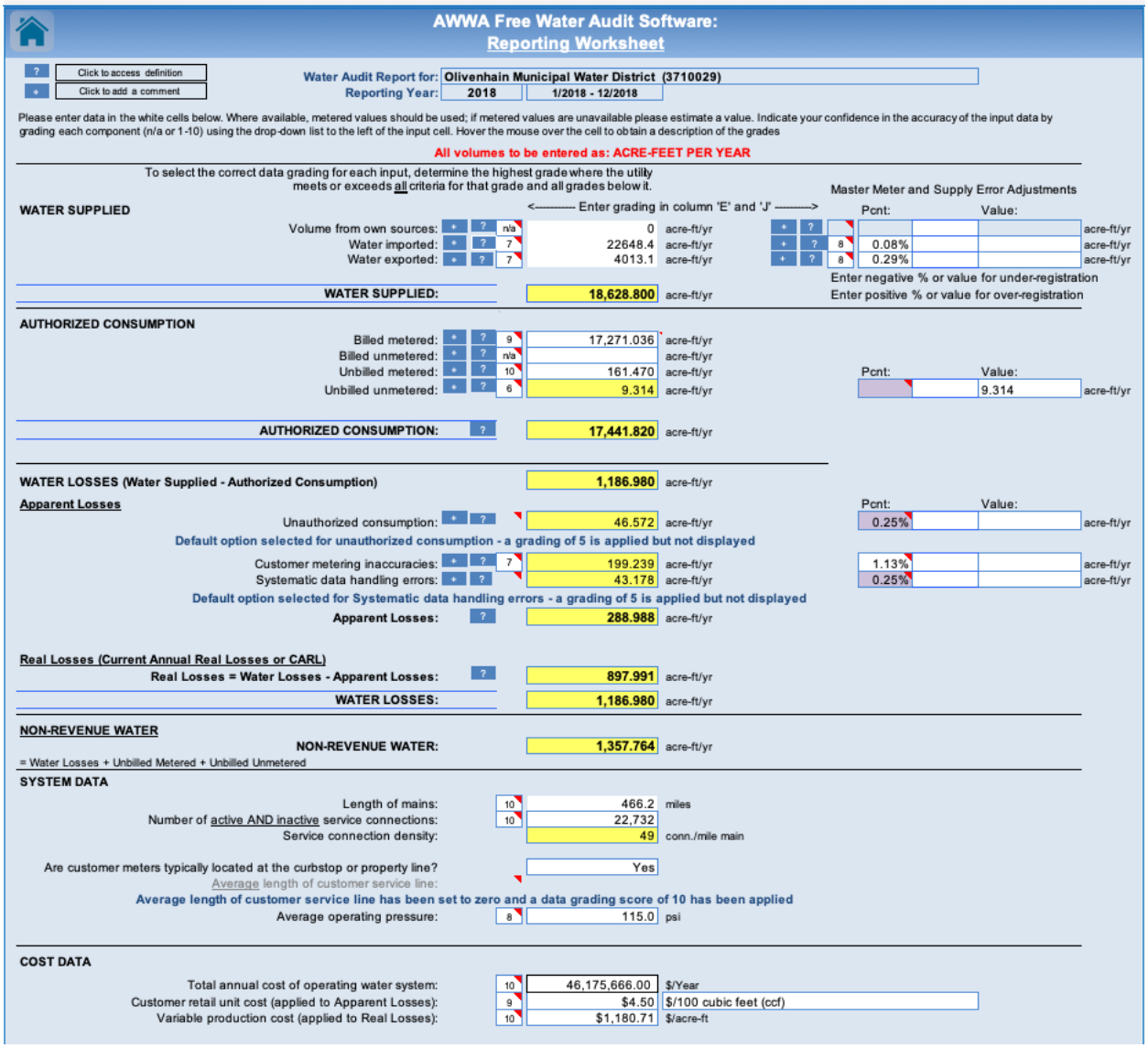
If you have any questions regarding our support of this application, please do not hesitate to contact me at 760-603-7343.

Sincerely,

Mario Remillard
Meter Services Supervisor
Water Conservation Coordinator

Carlsbad Municipal Water District (or you can put a division name here)
5950 El Camino Real | Carlsbad, CA 92008 | 760-438-2722 | 760-431-1601 fax | www.carlsbadca.gov

Appendix 2: 2018 AWWA WATER AUDIT



AWWA Free Water Audit Software:
Reporting Worksheet

Click to access definition
Click to add a comment

Water Audit Report for: Olivenhain Municipal Water District (3710029)
Reporting Year: 2018 1/2018 - 12/2018

Please enter data in the white cells below. Where available, metered values should be used; if metered values are unavailable please estimate a value. Indicate your confidence in the accuracy of the input data by grading each component (n/a or 1-10) using the drop-down list to the left of the input cell. Hover the mouse over the cell to obtain a description of the grades

All volumes to be entered as: ACRE-FEET PER YEAR

To select the correct data grading for each input, determine the highest grade where the utility meets or exceeds all criteria for that grade and all grades below it.

<---------- Enter grading in column 'E' and 'J' ---------->

Master Meter and Supply Error Adjustments

				Pcnt:		Value:	
WATER SUPPLIED							
Volume from own sources:	n/a	0	acre-ft/yr				acre-ft/yr
Water imported:	7	22648.4	acre-ft/yr	8	0.08%		acre-ft/yr
Water exported:	7	4013.1	acre-ft/yr	8	0.29%		acre-ft/yr
						Enter negative % or value for under-registration	
WATER SUPPLIED:		18,628.800	acre-ft/yr			Enter positive % or value for over-registration	
AUTHORIZED CONSUMPTION							
Billed metered:	9	17,271.036	acre-ft/yr				
Billed unmetered:	n/a		acre-ft/yr				
Unbilled metered:	10	161.470	acre-ft/yr				
Unbilled unmetered:	6	9.314	acre-ft/yr			9.314	acre-ft/yr
AUTHORIZED CONSUMPTION:		17,441.820	acre-ft/yr				
WATER LOSSES (Water Supplied - Authorized Consumption)		1,186.980	acre-ft/yr				
Apparent Losses				Pcnt:		Value:	
Unauthorized consumption:		46.572	acre-ft/yr	0.25%			acre-ft/yr
Default option selected for unauthorized consumption - a grading of 5 is applied but not displayed							
Customer metering inaccuracies:	7	199.239	acre-ft/yr	1.13%			acre-ft/yr
Systematic data handling errors:		43.178	acre-ft/yr	0.25%			acre-ft/yr
Default option selected for Systematic data handling errors - a grading of 5 is applied but not displayed							
Apparent Losses:		288.988	acre-ft/yr				
Real Losses (Current Annual Real Losses or CARL)							
Real Losses = Water Losses - Apparent Losses:		897.991	acre-ft/yr				
WATER LOSSES:		1,186.980	acre-ft/yr				
NON-REVENUE WATER							
NON-REVENUE WATER:		1,357.764	acre-ft/yr				
= Water Losses + Unbilled Metered + Unbilled Unmetered							
SYSTEM DATA							
Length of mains:	10	466.2	miles				
Number of active AND inactive service connections:	10	22,732					
Service connection density:		49	conn./mile main				
Are customer meters typically located at the curbstop or property line?		Yes					
Average length of customer service line:							
Average length of customer service line has been set to zero and a data grading score of 10 has been applied							
Average operating pressure:	8	115.0	psi				
COST DATA							
Total annual cost of operating water system:	10	46,175,666.00	$/Year				
Customer retail unit cost (applied to Apparent Losses):	9	$4.50	$/100 cubic feet (ccf)				
Variable production cost (applied to Real Losses):	10	$1,180.71	$/acre-ft				

OMB Number: 4040-0004
Expiration Date: 12/31/2022

Application for Federal Assistance SF-424

* 1. Type of Submission:
- [ ] Preapplication
- [x] Application
- [ ] Changed/Corrected Application

* 2. Type of Application:
- [x] New
- [ ] Continuation
- [ ] Revision

* If Revision, select appropriate letter(s):

* Other (Specify):

* 3. Date Received: 09/16/2020

4. Applicant Identifier:

5a. Federal Entity Identifier:

5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:

7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name: Olivenhain Municipal Water District

* b. Employer/Taxpayer Identification Number (EIN/TIN): 95-6006689

* c. Organizational DUNS: 0725057950000

d. Address:

* Street1: 1966 Olivenhain Road
Street2:
* City: Encinitas
County/Parish:
* State: CA: California
Province:
* Country: USA: UNITED STATES
* Zip / Postal Code: 92024-5699

e. Organizational Unit:

Department Name: Customer Services Department

Division Name:

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: Mr.
* First Name: John
Middle Name:
* Last Name: Carnegie
Suffix:

Title: Customer Service Manager

Organizational Affiliation:

* Telephone Number: 760-753-6466
Fax Number:

* Email: jcarnegie@olivenhain.com

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

D: Special District Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Bureau of Reclamation

11. Catalog of Federal Domestic Assistance Number:

15.507

CFDA Title:

WaterSMART (Sustain and Manage America's Resources for Tomorrow)

*** 12. Funding Opportunity Number:**

BOR-DO-21-F001

* Title:

WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021
Funding Group 1

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment | Delete Attachment | View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Advanced Metering Infrastructure (AMI) Water Use Efficiency Project

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: CA-49 | * b. Program/Project: CA-49

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 09/30/2020 | * b. End Date: 04/30/2023

18. Estimated Funding ($):

* a. Federal	500,000.00
* b. Applicant	778,969.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	1,278,969.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix:	Ms.
* First Name:	Kimberly
Middle Name:	A.
* Last Name:	Thorner
Suffix:	
* Title:	General Manager
* Telephone Number:	760-753-6466
Fax Number:	
* Email:	kthorner@olivenhain.com
* Signature of Authorized Representative:	Kimberly A Thorner
* Date Signed:	09/16/2020

OMB Approval No. 0348-0042

ASSURANCES - CONSTRUCTION PROGRAMS

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property aquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.

4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.

5. Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.

6. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

9. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

10. Will comply with all Federal statutes relating to non-discrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.

14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).

18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
	General Manager
APPLICANT ORGANIZATION	DATE SUBMITTED
Olivenhain Municipal Water District	09/16/2020

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
[b] a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance

2. Status of Federal Action:
[b] a. bid/offer/application
b. initial award
c. post-award

3. Report Type:
[a] a. initial filing
b. material change
For Material Change Only:
year _____ quarter _____
date of last report _____

4. Name and Address of Reporting Entity:
[x] **Prime** [ ] **Subawardee**
Tier _____, *if known*:

Congressional District, *if known*: CA-49

5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime:

Congressional District, *if known*:

6. Federal Department/Agency:
Department of Interior/ Bureau of Reclamation

7. Federal Program Name/Description:
CFDA Number, *if applicable*: _____

8. Federal Action Number, *if known*:
BOR-DO-21-F001

9. Award Amount, *if known*:
$ 500,000

10. a. Name and Address of Lobbying Registrant
(*if individual, last name, first name, MI*):
BlueWater Strategies llc
Mathews, Jason
500 Montgomery Street
Suite 610
Alexandria, VA 22314

b. Individuals Performing Services (*including address if different from No. 10a*)
(*last name, first name, MI*):

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signature: Kimberly A Thorner
Print Name: Kimberly A. Thorner
Title: General Manager
Telephone No.: 760-753-6466 Date: 09/16/2020

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Standard Form LLL (Rev. 7-97)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.

7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).

11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.