# Advanced Metering Infrastructure Project Phases 6, 7, & 8

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### **Technical Proposal and Evaluation Criteria**

The technical proposal and evaluation criteria (50 pages maximum) includes:

- (1) Executive Summary
- (2) Project Location
- (3) Technical Project Description
- (4) Evaluation Criteria.

### **Executive Summary**

September 14, 2020 City of La Habra Utility Authority La Habra, Orange County, California

• A one paragraph project summary that provides the location of the project, a brief description of the work that will be carried out, any partners involved, expected benefits and how those benefits relate to the water management issues you plan to address. Please note: this information will be used to create a summary of your project for our website if the project is selected for funding. For example, note the following description of a project selected for funding in FY 2020.

The City of La Habra Utility Authority (Utility Authority), located in southern California in the northwest corner of Orange County, has implemented an Advanced Metering Infrastructure (AMI) Project (AMI Project) as part of its long-term goal of water supply reliability and efficient water management. The AMI Project includes the upgrade of 13,220 existing manually-read water meters with an AMI fixed-based network system that will automatically collect and store hourly consumption data, aiding in water conservation and water use efficiency, improved water management, energy savings, and reduced carbon emissions. The Utility Authority is entering into the sixth, seventh, and eighth phases of its AMI Project with AMI Project Activities to include: 1) upgrade of 5,089 water meters to an AMI fixed-based network that will automatically collect and store hourly consumption data; 2) deploy a web-based utility management portal and a web-based customer portal for water customers to access their accounts to view both real-time flow and information and historical usage data. The upgrade to a fully automated AMI system leads to wide-ranging efficiency improvements resulting in water savings of 470.68 acre-feet per year (AFY) for the sixth, seventh, and eighth of eight phases, 1,398,390 kilowatt hours (kWh) per year in energy savings, and carbon emissions reductions on the order of 2,179,749 pounds of C02 per year. Furthermore, deployment of a Customer Portal through which water users will have online access to their own real-time hourly water usage data will prompt customers to make positive changes to their water use behaviors. The AMI Project will reduce real system losses and increase water use efficiency and conservation through the availability of near real-time data on water usage and daily water needs. Fifteen (15) percent of the Utility Authority's drinking water is surface water imported by the Metropolitan Water District of Southern California (MWD) and delivered via the Municipal Water District of Orange County and the California Domestic Water Company. MWD's imported water sources are the Colorado River and the State Water Project, which draws water from the San Francisco-San Joaquin Bay Delta. The AMI Project will expand upon the Authority's efforts to promote water use efficiency by accomplishing the following: 1) More rapid identification and correction of water leaks (currently meters are read every month allowing leaks to go undetected and water to be wasted for a month before being noticed), 2) More accurate meter readings compared to aging meters (half of the Authority's meters are greater than 20 years of age and are likely erroneously registering lower water use than actual water use), and 3) Reduced potable water usage based on customer education through the AMI Project's data on water usage. With the current drought conditions and decreased reliability of imported water supply, conservation and water use efficiency are key factors for improving water sustainability within the service area. Figure 1 shows the Project Location.

#### • State the length of time and estimated completion date for the project.

Assuming a January 1, 2021 Funding Award date, the environmental paperwork can be finalized by February, 2021. Phases 6, 7, and 8 of the Utility Authority's AMI Project can be completed by November, 2022, or within two (2) years of awarding of the grant.

#### • Whether or not the project is located on a Federal facility.

The AMI Project is not located on a Federal facility.

### **Project Location**

The La Habra Utility Authority's service area covers nearly 7.6 square miles and includes the entire City of La Habra. La Habra is located in the northwest corner of Orange County, California. The City is bounded by the City of Brea to the east, the City of Fullerton to the south, the Cities of Whittier and La Mirada to the west, and the City of La Habra Heights to the north. The service area is characterized by gently rolling and steep hillside areas.

Figure 1 shows the location and boundary of the Utility Authority in the State of California, within the County of Orange, and with the City of La Habra as identified. The actual AMI project will be citywide at numerous locations within the City of La Habra.

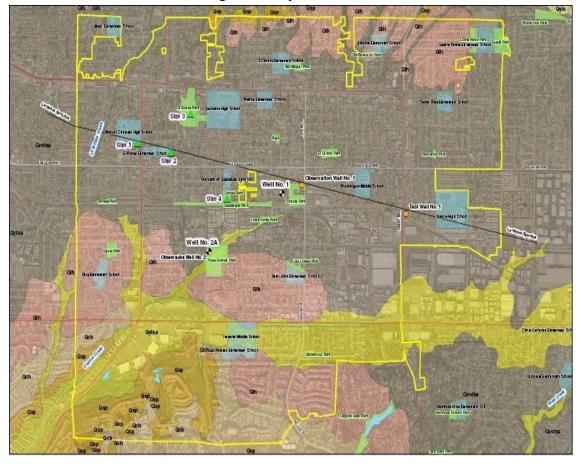


Figure 1- City of La Habra

#### **Water Supply and Demand**

The Utility Authority currently obtains water from three water sources: treated import water from the Metropolitan Water District of Southern California (MWD) through the Municipal Water District of Orange County (MWDOC), the California Domestic Water Company (CDWC), and from local groundwater supplies. Groundwater is supplied from three Utility Authority-owned wells. All three wells pump water from the La Habra Groundwater Basin. About 35-40 percent of the Utility Authority's recent water production has come from this groundwater source.

Imported groundwater from CDWC is pumped from the Main San Gabriel Basin and accounts for approximately 55-60 percent of the Utility Authority's total production. Over the past three years, the Utility Authority has purchased an average of 5,740 AFY. Typically, the Utility Authority will exceed entitlement supplies and will purchase an additional 1,000 AFY of water from the Main San Gabriel Basin. Over-entitlement waters are comprised MWD's Full Service Tier 1 water imported by the Main San Gabriel Basin Watermaster and then transferred to La Habra via CDWC.

The Utility Authority has direct access to imported water from the Metropolitan Water District of Southern California, through two metered connections. The first connection, OC-4, takes water

from MWD's Orange County Feeder which is supplied from the Weymouth Treatment Plan. The second connection, OC-45, takes water from MWD's lower Feeder which is supplied by the Diemer Treatment Plant. Until 2012, MWD water represented the second largest supply source with an average annual production of 2,650 AFY or 28% of the Authority's total annual supply. In 2012 and 2013, the Authority invested heavily in the development of the La Habra Groundwater Basin drilling two new wells and increasing pumping capacity from 1,400 gpm to approximately 3,600 gpm. These efforts reduced La Habra's dependence to approximately 500 AFY.

The Utility Authority has approximately 13,220 service connections for approximately 63,000 residents and businesses. The Utility Authority has the following billing classifications: single-family residential, multi-family residential, commercial (includes churches, industrial, hotels, and institutional/government), and irrigation. Table 2 shows water demand by sector.

Table 2. Water Demand by Sector - Current and Projected

		Projected Water Use				
Water Use Sector	2015 (Actual)	2020	2025	2030	2035	2040
Single Family Residential	5,763	5,175	5,503	5,511	5,521	5,507
Multi-Family Residential	1,574	1,413	1,503	1,505	1,508	1,504
Institutional/Governmental	258	232	246	247	247	247
Commercial	1,211	1,087	1,156	1,158	1,160	1,157
Landscape	778	699	743	744	745	743
Total	9,584	8,606	9,151	9,165	9,181	9,158

Source: Water Manager, Brian Jones, City of La Habra Utility Authority

### **Technical Project Description**

The project description should describe the work in detail, including specific activities that will be accomplished as a result of this project. This description shall have sufficient detail to permit a comprehensive evaluation of the proposal.

**General Scope:** The Utility Authority has implemented an Advanced Metering Infrastructure Project as part of its long-term goal of water supply reliability, water conservation, and efficient water management. The AMI Project includes the upgrade of approximately 13,220 manually-read water meters to an automated fixed base network system that will collect and store meter readings hourly. The Utility Authority began the AMI Project in FY 2015-16 and will automate all meters over an 8-year period.

**Project Work:** Entering into the sixth, seventh, and eighth of eight phases, the Utility Authority will install automate 5,089 water meters. Of the 5,089 water meters, 1,859 will require complete replacement of the water meter whereas 3,230 will require replacing the register of an existing meter with an automated digital register. The meters automated during the third phase of the

project represent fifteen different meter reading routes. As each route is completed, real time access for both staff and water customers will be enabled.

The actual project work associated with the AMI Project is extremely straightforward. The La Habra Utility Authority will use grant funds to purchase various sizes of meters equipped with AMI technology, replacement AMI registers, and composite meter box lids. The Authority has already installed a communications network, and integrated a meter reading software with utility billing software.

#### **Project Tasks**

### **Task 1: Project Management**

Activities include coordination of all Project activities including budget, schedule, materials procurement, communication, and grant and cost-share administration (preparation of invoices and maintenance of financial records).

Deliverables: Preparation of invoices and other deliverables as required.

#### Task 2: Reporting

Reporting of the financial status and project progress will be conducted on a quarterly basis. Significant development reports and a final project report will be prepared. Additionally, the Project will comply with any other reporting requirements specified in the Grant Agreement.

Deliverables: Submission of quarterly, annual, and final reports as specified in the Grant Agreement.

#### Task 3: Design

None required.

Deliverables: None

#### **Task 4: Environmental Documentation**

The Utility Authority's AMI project is categorically exempt under the California Environmental Quality Act (CEQA) and will simply replace existing water meters. The data collection tower installed in Phase 1 of the project was constructed on Utility Authority-owned property. The Utility Authority does not anticipate any environmental impacts associated with the AMI project. An environmental assessment satisfying Federal requirements (NEPA), associated with Federal contracting/grant agreements will be completed.

Deliverables: Confirm completed and approved environmental documentation.

#### **Task 5: Permitting**

No permits will be required for the Utility Authority's AMI project, as all work will be performed on existing Utility Authority-owned facilities. Any project-related approvals, if required, will be executed by Authority staff in a timely manner.

Deliverables: Appropriate permitting and approvals will be obtained.

#### **Task 6: Installation**

This involves the installing of 5,089 water meters, registers, and lids. The work will be completed by Authority staff.

Deliverables: Reference Task 7: Construction Management

#### **Task 7: Construction Management**

Utility Authority staff will negotiate, execute and manage the cooperative agreement with Reclamation. Reporting will be performed on a semiannual basis, including submittal of Financial Reports and Program Performance reports, as well as Financial Reimbursement Requests using the online ASAP system through the System for Award Management (SAM). Program Performance and Final Reports will be in accordance with requirements included in the cooperative agreement. Performance Reports will include information regarding the status of the Project's Performance Measures, including Water Savings, Water Better Managed, Energy Savings, and Carbon Emission Savings. The methods of measuring Project Performance, which will be used for producing these reports, are explained in more detail in Subcriterion F.3 Performance Measures.

### **Evaluation Criteria**

The evaluation criteria portion should be addressed in the technical proposal section of the application. Applications should thoroughly address each criterion and any sub-criterion in the order presented below. It is suggested that applicants copy and paste the below criteria and subcriteria into their applications to ensure that all necessary information is adequately addressed. **Applications will be evaluated against the evaluation criteria listed below**. If the work described in your application is a phase of a larger project, only discuss the benefits that will result directly from the work discussed in the technical project description and that is reflected in the budget, not the larger project.

#### **Evaluation Criterion A: Quantifiable Water Savings (30 points)**

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.

The La Habra Utility Authority AMI Project is expected to result in a large amount of water, energy, and greenhouse gas savings. The Authority expects the project to conserve 470.68 Acre feet per year (AFY). This water savings will also result in savings of approximately 1,398,390 kWh per year on the potable water system, or 2,179,749 pounds of carbon dioxide emissions.

#### Describe current losses.

The Utility Authority recently completed a Water Master Plan (September, 2017). Historical water consumption information by customer class was provided for the period from 1993 to 2016. The total water demand for the 13,220 service connections is approximately 9,480 AFY<sup>1</sup>. A comparison of total production versus total metered purchases calculated an average 8% water loss over the past 23 years<sup>2</sup>, resulting in approximately 940.33 AFY<sup>3</sup> in water losses.

Unmetered water losses are likely seeping back into the ground or making its way into a storm drain or ocean. Metered water losses could also be seeping into the ground, but are also possibly going down the sewer drain. The AMI project is projected to change behavior in residents so that they will reduce their metered water use and discover unknown leaks. Water conserved as a result of the Project's implementation represents a decrease in local demand, which would decrease the amount imported by the Utility Authority through MWDOC, and MWD, decrease the amount imported through Cal Domestic, and decrease the amount pumped from the La Habra Groundwater Basin. Thereby, the conserved waters will remain at their sources, for environmental and other uses.

#### **Describe the support/documentation of estimated water savings:**

Please address the following questions according to the type of project you propose for funding.

(2) 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

<sup>&</sup>lt;sup>1</sup> City of La Habra 2017 Water Master Plan, page 4-2, conversion rate on 1-6

<sup>&</sup>lt;sup>2</sup> City of La Habra 2017 Water Master Plan, page 4-3

<sup>&</sup>lt;sup>3</sup> City of La Habra 2017 Water Master Plan, page 4-3

from similar previously implemented projects. Applicants proposing municipal metering projects should address the following:

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

The Utility Authority's AMI Project will be able to reduce some of the estimated 940 AF in water losses, but the project is expected to show even more savings from the metered water demand mostly from improved leak detection and repair. As these phases of the AMI project are expected to install 5,089 meters, they represent 38.49% of the entire meter population (13,220). La Habra's estimated average annual water savings will be totaled from the following two savings areas of 1) Improved Customer Side Leak Identification, and 2) Improved Accuracy of Meters. All calculations are based upon data from various sources which are noted sections (b) and (c) under this Criterion section.

#### **Improved Customer-Side Leak Identification**

The City's AMI Project will achieve water savings by implementing more rapid identification and correction of water leaks. Currently meters are read every month allowing leaks to go undetected and water to be wasted for a month before being noticed. The new AMI meters will provide readings every hour. This will enable customers and Water Authority staff to identify leaks more easily, such as higher than normal minimum night flow (MNF) values. The software will notify the authority of potential leaks and the volume of the potential water loss and staff will work with the customer to inform them of the amount of potential water losses. Educating the customers on their actual water usage will reduce potable water usage.

Savings will also result from the deployment of a Customer Portal, through which customers for all AMI units will be able to independently access their own real-time flow data on the Utility Authority's website. Customers will be able to set up alerts and reports through the customer portal and the software will enable notifications through text or email. These systems generated notifications will assist customers to monitor their consumption and if it has reached a particular threshold. Additional water savings will come from self-leak detection and water use behavioral change on the part of customers who access the data for the purpose of monitoring their consumption.

#### **Improved Residential (SFR) Customer-Side Leak Identification:**

Annual Water Savings = Consumption x SFR% x % of SFR Leaks x % of Meters Installed Annual Water Savings = 9,480 AF x 57.6% x 13.0% x 38.49% = **273.23 AFY** 

#### **Improved Non-SFR Customer-Side Leak Identification**:

Annual Water Savings = (GPCPD converted to AF) x % of Non-SFR Leaks x % of Meters Installed Annual Water Savings = 874.51 AF x 42.4% x 38.49% = **142.72** AFY

#### **Improved Accuracy of Meters**

The new AMI meters that the Water Authority will install give more accurate meter readings when compared to the current aging meters. Half of the Utility Authority's meters are at replacement age and are likely erroneously registering lower water use than actual water use.

#### **Improved Accuracy of Meters**

Annual Water Savings = Consumption x % Inaccuracy x % of Meters Installed Annual Water Savings =  $9,480 \text{ AF x } 1.5\% \text{ x } 38.49\% = \mathbf{54.73 \text{ AFY}}$ 

#### **Total Amount of Water Saved/Conserved (AFY):**

Improved Residential SFR Customer-Side Leak Identification:273.23 AFYImproved Non-SFR Customer-Side Leak Identification:142.72 AFYImproved Accuracy of Meters:54.73 AFYTOTAL AMOUNT SAVED:470.68 AFY

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

The Utility Authority's Water Master Plan describes system losses in order to determine water demand and development within the Utility Authority. Historic water usage in the 23-year period from 1993 to 2016 was analyzed with yearly totals of water delivered to the Utility Authority, water billed to customers, and active services. The Water Master Plan described water conservation measures to reduce water loss. In addition, as described above in section (a), current distribution system losses were determined by the Utility Authority comparing the total water purchased and produced to the water billed to customers and calculated an average of 8% water loss over the past 23 years, resulting in approximately 940.33 AFY in water losses. Some potential reasons for water loss include water used in operation and maintenance, pipe leaks, reservoir leaks, fire department use, meter error and unmetered water usage.

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

The Water Authority's Improved Customer-side leak identification water savings was determined from the following facts and reports. An Energy Department report cited that "leaks account for 13% of all residential indoor water consumption across the U.S." This savings area was used for

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<sup>&</sup>lt;sup>4</sup> M. A. Berger, L. Hans, K. Piscopo, and M. D. Sohn (2016, August). Exploring the Energy Benefits of Advanced Water Metering. Ernest Orlando Lawrence Berkeley National Laboratory. Page 19.

single-family residential (SFR) units only. A recent rate study report found that 57.6% of all La Habra water consumption is from SFR.<sup>5</sup> For Non-SFR units, we used data from a City of Sacramento study that found that fixing 1,076 citywide leaks resulted in a savings of 12.6 gallons per capita per day<sup>6</sup>. This per capita estimate was used to determine the remaining 42.4% of La Habra water consumption from Non-SFR accounts.

The Water Authority has not performed specific local studies on meter inaccuracy. In concurrence with the annual AWWA water loss calculation report, an inaccuracy assumption of 1.25% will be used. The Water Authority used this same assumption amount on the 2016 AWWA water loss calculation worksheet.

(d) 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.

Not applicable. No AMI distribution main meters will be installed.

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

Phases 6 through 8 of the AMI Project includes the upgrade of 5,089 existing water meters, which are currently manually read, with an AMI fixed base network system. The Authority is deploying a multi-jet water meter manufactured by Master Meter Systems. Meters are equipped or are retrofitted with an Allegro 4G digital register. The transmitter is contained within the Allegro 4G register, eliminating a wired connection from meter to transmitter.

#### (f) How will actual water savings be verified upon completion of the project?

Actual water savings will be verified upon completion of the AMI Project through the use of utility data management software to conduct a water balance of the completed Phases. Additionally, all usage data for all meters equipped with AMI will be compared to historical values to determine water savings due to increased water use efficiency.

<sup>&</sup>lt;sup>5</sup> S. D. Pardiwala, K. Harmon (2017, November). City of La Habra Cost of Service and Water Rate Study. Raftelis Financial Consultants. Page 10.

<sup>&</sup>lt;sup>6</sup> M. A. Berger, L. Hans, K. Piscopo, and M. D. Sohn (2016, August). Exploring the Energy Benefits of Advanced Water Metering. Ernest Orlando Lawrence Berkeley National Laboratory. Page 19.

#### **Evaluation Criterion B: Water Supply Reliability (18 points)**

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.

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:

# 1) Will the project address a specific water reliability concern? Please address the following:

The Basin Study's portfolio includes in Chapter 3 an adaptation strategy for municipal water conservation and reuse, and the proposed WaterSMART Grant Project will address the imbalance between water supply and demand identified in the Basin Study by reducing the demand on imported water from the Colorado River and State Water Project. Imported water supplies for Orange County are uncertain due to periodic droughts in northern California and the Colorado River Basin, court decisions related to Bay-Delta endangered species, implementation of the terms of the Quantification Settlement Agreement for Colorado River water, and environmental concerns affecting delivery of Owens Valley water. Changing demographics and climate variability present many additional long-term challenges to an adequate water supply. Various Orange County area water management agencies, such as the Utility Authority, have and will continue to pursue the development of local water resources. The AMI Project will implement water conservation measures to assist with water savings for the region. The AMI Project contributes to a sustainable water supply within the Utility Authority's service area and provides an overarching benefit to the region. The AMI project will conserve an estimated 470.68 AFY or 9,413.60 AF over the 20**year useful lifespan of the project.** The water conserved can be re-allocated to those impacted by water supply shortages due to the current drought.

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

The Colorado River Basin (Basin) Water Supply and Demand Study confirms that without future actions, the Basin faces a range of potential future imbalances between supply and demand. As the Utility Authority is reliant on imported water sources, availability of water supply from the State Water Project and Colorado River Aqueduct are critical. One of the primary adaptation strategies identified in the Basin Study included water use efficiency and reuse. The AMI Project would help increase water use efficiency of potable water. Greater water use efficiency would reduce the stress on the system and its limited water supply.

The conserved water from the La Habra AMI project will reduce demand on the imported State Project and Colorado River Aqueduct water. This extra water can be used at the discretion of the State planning agencies. The water could be left to remain in the river, which will benefit the environment, or the water can be put to other uses such as agriculture, or used in other Bureau of Reclamation areas that are competing for water or have even more limited water supplies.

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

Of the 470.68 AFY that will be saved, the State planning agencies tasked with the allocation of water, can reallocate those water resources to another use. Of the multiple annual claims and demands on California's water resources, another agency or region could have their allocation increase, whether it be another water agency, an environmental interest, or agricultural interest. This water is not available for other uses in the state.

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

The AMI project will conserve an estimated 470.68 AFY or 9,413.60 AF over the 20-year useful lifespan of the project. The water conserved can be re-allocated to those impacted by water supply shortages due to the current drought.

- 2) Will the project make water available to achieve multiple benefits or to benefit multiple water users? Consider the following:
  - o Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)?
    - 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.

The Sacramento Bay-Delta is home to the Delta Smelt. Historically, delta smelt were relatively abundant in the upper Sacramento-San Joaquin Estuary, with populations declining dramatically in the 1980s. They were listed as threatened by both federal and state governments in 1993, and sustained record-low abundance indices prompted their listing as a protected species through a 2007 court order. In 2010, the species was listed as endangered under the California Endangered Species Act. The fish is extremely endangered and recent sampling done in 2015 collected only 6

specimens in contrast to several hundred collected in samples in years prior. A last ditch effort to save the species from extinction was released in July, 2016 by the California Natural Resources Agency and is titled the "Delta Smelt Resiliency Strategy." It calls for allowing between 85,000 and 200,000 acre-feet of extra water to wash out to sea in the summer to bolster the smelt habitat. 8

The La Habra Utility Authority is not aware of a specific ratio or recovery rate for certain endangered species living in either the Sacramento Bay Delta or the Colorado River watershed, but our projected water savings of 470.68 AF per year for this phase of our AMI project will help to alleviate the environmental stress on this specific endangered species.

The Utility Authority's AMI project will be able to address specific critical habitats that survive in the Sacramento River and Colorado River watersheds. The project will help to reduce the Authority's dependence on imported water thereby benefitting the habitat of the Delta Smelt and other species. The Authority does not have specific data on areas covered. The primary endangered species that the Authority is aware of is the Delta Smelt. Salmon and other species will also benefit. The water savings created from this phase of our 8-year project will be able to benefit the Smelt habitat. By keeping water flows higher in the delta, seawater intrusion will be limited and the Smelt will have an increased chance of survival.

The Utility Authority's AMI project will have no negative impacts to endangered, threatened, candidate species, or critical habitats. Conversely, the AMI project would only have positive impacts to species and habitats.

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

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#### o Will the project benefit Indian tribes?

The project will indirectly benefit Indian tribes if those tribes depend on the same imported water from the State Water Project or Colorado River Aqueduct that the La Habra Utility Authority uses. This project will reduce the Authority's water use from these sources thus making them more sustainable for others to use, such as Indian tribes.

# • Will the project benefit rural or economically disadvantaged communities?

Yes, the AMI Project will indirectly make water available for economically disadvantaged communities. The AMI Project will conserve 470.68 AFY of potable water thereby making that same amount of potable water available to serve Disadvantaged Communities (DACs) within the Orange County region. The AMI Project will increase regional supply reliability, decrease water

<sup>&</sup>lt;sup>7</sup> J. Kay (2015, April 3). Delta Smelt, Icon of California Water Wars, Is Almost Extinct. National Geographic. <a href="https://www-staging.nationalgeographic.com/news/2015/04/150403-smelt-california-bay-delta-extinction-endangered-species-drought-fish/">https://www-staging.nationalgeographic.com/news/2015/04/150403-smelt-california-bay-delta-extinction-endangered-species-drought-fish/</a>

<sup>&</sup>lt;sup>8</sup> R. Sabalow (2016, July 12). State's Delta smelt plan calls for more water flowing to sea. Sacramento Bee. <a href="https://www.sacbee.com/news/california/water-and-drought/article89089322.html?fbclid=lwAR2CHZIfdydOYGz52eG">https://www.sacbee.com/news/california/water-and-drought/article89089322.html?fbclid=lwAR2CHZIfdydOYGz52eG</a> KwTqW8Xrzcos-PtFy UT79szHkN0bNvo IsQB-Y

consumption, and decrease energy needed for supplying and transporting water. The City of La Habra, which is directly served by the Authority does have several neighborhoods listed under as disadvantaged communities as defined by the Department of Housing and Urban Development (HUD).

o 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.

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

The AMI Project will improve the reliability of water supplies from both the State Water Project and the Colorado River Aqueduct, which would ultimately benefit people, agriculture, and the environment associated with both of these water supply sources. The Utility Authority is committed to the collaboration and maintenance of regional and local partnerships to enhance water supply reliability by promoting a regional common goal and adding flexibility to water portfolios and distribution systems. The AMI Project will provide a step forward in contributing towards this goal. This AMI Project could result in an additional availability of approximately 9,413.60 AF of water supply over the 20-year lifespan of the project that would otherwise be lost and unavailable to the Utility Authority and region. The AMI Project enhances its partnership with MWDOC to work towards greater regional water conservation efforts throughout Southern California.

#### o Is there widespread support for the project?

Yes, there is widespread support for the AMI Project from MWDOC, Congressman Gil Cisneros, State Senator Ling Ling Chang, Assemblyman Phillip Chen, and Water Systems Optimization, as it aims to enhance water reliability for the region and State.

#### • What is the significance of the collaboration/support?

The significance of the collaboration is that the AMI Project would provide a step forward in contributing towards this goal. This AMI Project, if funded, could result in an additional availability of approximately 470.68 AFY of annual water supply that would otherwise be lost and unavailable to the Utility Authority and the Orange County region. Increased collaboration between the Utility Authority and its customers will also demonstrate acknowledgement of the Utility Authority's progressive approach to increasing conservation through improved water management.

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

Yes, the Authority's AMI project will show other water users real time usage data. With this data, they could be encouraged to perform water conservation improvements on their house or business such as retrofitting washing machines or toilets, or outdoor irrigation systems.

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

There is a water-related conflict within the Bay-Delta and the Colorado River Basin (over limited water supplies) from which the Utility Authority receives its imported water. This AMI Project will help to reduce the amount of water needed for import to southern California through the MWD system. In addition, this AMI Project may serve as a model to other agencies that are looking for ways to meet current emergency drought reductions. The water-related conflict within the Bay-Delta and Colorado River is significant and implementing the AMI Project will assist in increasing local water reliability and decreasing imported water demand.

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

The Authority is not collaborating with other agencies, so not supporting documents are not needed.

## 4) Will the project address water supply reliability in other ways not described above? described above?

The ways water conserved through the project will improve water supply reliability have been listed.

#### **Evaluation Criterion C: Implementing Hydropower (18 points)**

Up to 18 points may be awarded for this criterion. This criterion prioritizes projects that will install new hydropower capacity in order to utilize our natural resources to ensure energy is available to meet our security and economic needs.

Although this project will not be implementing a hydropower project, this project is expected to save a lot of energy. Based on the publication "California's Water- Energy Relationship" prepared by the California Energy Commission (November 2005, page 51), the amount of electrical energy required to transfer 1 acre-foot of water from northern California (State Water Project) to an area just north of the Authority requires 3,000 kWh. The same publication also identifies 2,000 kWh for each acre-foot of water that is imported from the Colorado River to Southern California. Using an assumed 50-50 split of water sources the amount of power per AF required to transfer the water is 2,500 kilowatt-hours per AF (kWh/AF). "Energy Down the Drain: The Hidden Costs of California's Water Supply," by the National Resources Defense Council indicates that the amount of energy used to deliver water from the State Water Project to Southern California over the Tehachapi Mountains is equivalent to one-third of the total average household electric use in the region. This does not include the energy required to import water to Southern California from the Colorado River Aqueduct, and any reduction in water loss and overall consumption would reduce the overall energy consumption from system operations.

In addition to the 2,500 kWh/AF required for conveyance and pumping of State Water Project and Colorado River Aqueduct imported water, the Authority uses additional energy to distribute that water. The Authority serves water at elevations from 319 ft.-MSL to 543 ft.-MSL. Due to the variation in topography, pumping is required to move this water throughout the system. To pump the imported water for distribution is an additional 471 kWh/AF based on actual energy usage provided by Authority staff. Therefore, a total of 2,971 kWh/AF of energy is used to distribute the water within the service area. A reduction in consumption by 470.68 AFY due to increased water use efficiency and decreased water losses could result in a savings of approximately 1,398,390 kWh per year on the potable water system, or 2,179,749 pounds per year of greenhouse gas emissions.

#### **Evaluation Criterion D: Complementing On-Farm Irrigation Improvements (10 points)**

Up to 10 points may be awarded for projects that describe in detail how they will complement onfarm irrigation improvements eligible for NRCS financial or technical assistance.

This section does not apply to the Utility Authority's AMI Project.

#### **Evaluation Criterion E: Department of the Interior Priorities (10 points)**

Up to 10 points may be awarded based on the extent that the proposal demonstrates that the project supports Department and Reclamation 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.

#### **Department of the Interior Priorities:**

1. Creating a conservation stewardship legacy second only to Teddy Roosevelt. The Authority's AMI project highly supports the conservation legacies of Theodore Roosevelt. President T. 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 other 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.

The authority's AMI project matches the values of T. Roosevelt by assisting to conserve 470.68 Acre-feet of water each year that can help the two major tributaries in the Southwest, the Sacramento Delta and the Colorado River. This project can help these rivers remain a habitable environment for wild species such as the Delta Smelt, Chinook Salmon, Coho Salmon, Bonytail, razorback sucker, humpback chub, and the southwestern willow flycatcher.

The AMI project will utilize scientific breakthroughs in wireless and computer technology to help customers save water. This best practice will bring our water agency further along in achieving our conservation management goals. This project will indirectly help in resolving water supply conflicts and will expand capacity. This project will indirectly help to expand access over time to DOI watersheds and access to fishing as well as providing greater access to the public.

#### 2. Utilizing our natural resources

The Authority's AMI project will save a large amount water and in turn, energy. These energy savings will be available for the nation's security and economic needs. The greenhouse gas emission reductions will help reduce the impacts of climate change which are putting the nation's security at risk.

#### 3. Restoring trust with local communities

The drought has had and will have long lasting impacts on California. With Federal assistance for water conservation projects that improve water sustainability throughout DOI lands, The DOI will be improving communications and establishing trust in those local and rural areas where the impact of the drought is seen on a daily basis.

#### 4. Striking a regulatory balance

Current regulations have minimal to no impact on this AMI project getting completed, so this project complements this goal of the Department of the Interior.

#### 5. Modernizing our infrastructure

This project will support the White House Public/Private Partnership Initiative to modernize the U.S. infrastructure by installing 21<sup>st</sup> century modern metering technology. This AMI technology is improving the interaction between water customers and the water supplier. AMI technology is bringing communities together to better detect leaks, save time, money, water, electricity and the impact of greenhouse gases. As this project highlights the installation of new infrastructure, it matches the highest priority of the DOI.

#### **Bureau of Reclamation Priorities:**

1. Increase Water Supply, Storage and Reliability under WIIN and other Authorities

This project meets this Bureau priority as it will increase water supplies, storage and reliability by around 470.68 AF per year for the Bureau of Reclamation to direct for use in other areas in the Western United States.

2. Streamline Regulatory Processes and Remove Unnecessary Burdens to Provide More Water and Power Supply Reliability

Current regulations and governmental burdens have minimal to no impact on this AMI project getting completed, so this project complements this goal of the Bureau of Reclamation.

3. Leverage Science and Technology to Improve Water Supply Reliability to Communities

This project uses science and 21<sup>st</sup> Century technology to help conserve water and improve reliability to Southern California communities and surrounding regions.

4. Address Ongoing Drought

This project also assists in addressing the ongoing drought in the Western States by providing an excellent resource for homeowners and businessowners to learn the details of how and when they are using water each day and how they can conserve that water. The technology will help address leaks faster. When the next extreme phase of the drought happens, La Habra water customers will be able to use the AMI meters to help them conserve water in ways they were not able to before.

5. Improve the Value of Hydropower to Reclamation Power Customers

This project does not address the value of hydropower, but it will save 1,398,390 kWh of energy which can be used for other purposed in the State of California.

6. Improve Water Supplies for Tribal and Rural Communities

This project indirectly improves the water supplies for tribal and rural communities as this 470.68 AF per year will not be taken from the Colorado River or State Water Project. These water supplies will be available for their benefit.

7. Implementation of new Title Transfer authority pursuant to P.L. 116-9

Not applicable. Project installation will occur on City and private easements. No federal land or buildings are part of this project.

**Evaluation Criterion F: Implementation and Results (6 points)** 

Up to 6 points may be awarded for these subcriteria.

#### Subcriterion F.1 – Project Planning

Points may be awarded for proposals with planning efforts that provide support for the proposed project.

Does the project 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:

(1) Identify any district-wide, or system-wide, planning that provides 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.

La Habra's 2035 General Plan supports the AMI Project by identifying water use, water loss, and water conservation practices required to reduce water loss. In addition, the Utility Authority completed a Water Audit of FY 2014 – 15 data in September 2016. A recommended goal identified improvements in data collection, management, and analysis. The Utility Authority is currently underway with an audit of CY2016 data to support findings of the previous audit. Lastly, the Utility Authority's 2015 Urban Water Management Plan includes Demand Management Measures for system leaks and detection, as well as water conservation measures that support the proposed AMI Project.

(2) 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).

The AMI Project conforms to and meets the goals of the City's 2035 General Plan, including water conservation. The AMI Project also meets the goals of the Water Audit to improve upon data collection, management, and analysis.

The AMI Project helps meet the State's AB 32 goals by reducing greenhouse gas emissions as a result of the reduction in water treatment and delivery from imported water supplies. The AMI Project will avoid GHG emissions by reducing approximately 2,179,749 lbs. of CO2 per year. The AMI Project also helps to meet the goals of the Utility Authority's regional 2015 Urban Water Management Plan, California Water Plan Update 2009, and MWDOC's Water Reliability Study. Water use efficiency and energy efficiency are two of the main goals in all of these plans that will enable the region to manage water supplies and resources for future generations. Lastly, as a member agency, the Utility Authority is covered by MWDOC's Regional Urban Water Management Plan. MWDOC is a member of the CUWCC. The AMI Project supports the Utility Authority's efforts to achieve their Conservation Demand Management Measure and Best

# La Habra Utility Authority – Funding Group 1 Request Advanced Metering Infrastructure Project

Management Practice goals as well as the statewide goals of 20% reduction in urban water use by 2020 as mandated by SBX7-7.

#### Subcriterion F.2 – Performance Measures

Points may be awarded based on the description and development of performance measures to quantify actual project benefits upon completion of the project.

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 Measurement Guidance.

Performance Measure A: Projects with Quantifiable Water Savings

#### Performance Measure A.2.a. Measuring Devices: Municipal Metering

For projects that install or replace existing municipal meters, the applicant should consider the following:

• Whether the project includes new meters where none existed previously or replaces existing meters.

The AMI Project replaces existing meters with AMI meters.

• Whether the project includes individual water user meters, main line meters, or both.

The AMI Project includes water user meters only.

• If the project replaces existing individual meters with new meters, whether new technologies (automatic meter reading (AMR) or advanced metering infrastructure (AMI) meters) will be employed.

AMI meters will be employed.

• Include a description of both pre and post-project rate structuring.

The Utility Authority is in the third year of a new tiered rate structure which was adopted in January, 2018 by the La Habra Utility Authority and the La Habra City Council. The most recently adopted two-year rate structure was approved on October 21, 2019 with the first year effective January 1, 2020, and the second year effective on January 1, 2021. Water meters are read on a monthly basis.

Monthly service charge – The Utility Authority's service charge is levied against all customers in the service area on a monthly basis based on the size of each meter on the customer's premises.

The charge recovers costs associated with providing water to the serviced property, which do not vary with consumption. These costs include meter reading and billing customers for each monthly period, maintenance of meters and service lines in the distribution system, administrative costs, water quality testing, and salaries and benefits.

Variable Use Charge	Multi-Year Rate	
(Billed per ccf)	2020	2021
Residential		
Tier 1	\$2.33	\$2.54
Tier 2	\$3.80	\$4.14
Tier 3	\$5.51	\$6.01
Multi-Family		
Uniform Tier	\$3.40	\$3.71
Commercial		
Uniform Tier	\$3.46	\$3.77
Municipal		
Uniform Tier	\$4.21	\$4.59
Irrigation		
Uniform Tier	\$4.95	\$5.40

Monthly Service	Multi-Year Rate		
Charge (Based on Meter			
Size)	2020	2021	
5/8"	\$16.50	\$17.99	
3/4"	\$22.82	\$24.87	
1"	\$35.45	\$38.64	
1 1/2"	\$67.05	\$73.08	
2"	\$104.96	\$114.41	
3"	\$193.42	\$210.83	
4"	\$319.80	\$348.58	
6"	\$635.74	\$692.96	
8"	\$1,014.87	\$1,106.21	

The performance measures that will be used to quantify actual benefits upon completion of the AMI Project will include measures to quantify water savings, water better managed, and energy savings resulting from the installation of the newer, more technologically-advanced water meters. Pre and post installation consumption measurements will be analyzed for all customers who are notified by the Utility Authority that they have a leak and for all customers who view their flow

data through the Customer Portal. Water consumption at each of the 5,089 sites where the AMI units will be installed will be monitored over a 12-month period using monthly billing data. Post-installation water consumption for each of the AMI units will be compared against pre-installation consumption to verify water savings. The following table summarizes the performance measures of the AMI Project that will demonstrate and quantify actual benefits and effectiveness of the AMI Project. Water use monitoring will be provided to USBR throughout the reporting period and will be included in the final report. Water use monitoring will continue beyond that timeframe to be able to make a fair assessment of the actual water savings from this AMI Project. The table below summarizes the Project Performance Measures.

AMI Project Performance Measures				
Performance Measure	Target	Measurement Tools and Methods		
Accurate Measurement	New system should allow for accuracy measurement tools to quantify savings	The new AMI meters will include an online portal, which will allow the Authority to quantify leakage, perform diagnostic testing on how a customer's water system, and other demand assessments.		
Water Savings – Customer-Side Leak Detection	(Savings from Improved operator management, conscientious use by the customer and leak detection by both)	<ul> <li>Water consumption reported by the fixed network for each customer who is provided by the Utility Authority with access to or who accesses independently real-time flow data measurement produced by the new metering units will be analyzed over a 12-month period both and after initial exposure to the data.</li> <li>Post installation Water consumption data will be compared against pre-installation consumption to verify savings.</li> </ul>		
Water Savings – Improved Meter Accuracy	53.78 AFY	<ul> <li>Post-installation water consumption will be measured over a 12-month period following AMI installation to verify that water was better managed</li> <li>A water audit will be performed periodically.</li> </ul>		

Quantified Savings	-Compare pre and post installation flow quantities  -Detail underlying	The Authority's AMI meter project is expected to result in significant water savings. We have detailed reports and data from several sources that support our analysis. These sources are explained in section (c) within Criterion A shown earlier in this technical proposal.
	assumptions	The authority plans to provide a detailed post project report on all water savings achieved. Authority water customers are expected to reduce their usage when the new AMI meters are installed and they can see the real time usage first hand.
Energy Savings	From Water Savings: 1,398,390 kWh/year	- Water savings will be converted to energy savings using the calculation of 2,971 kWh/AF of water conserved
Carbon Emissions Savings	<ul> <li>2,179,749 lbs. of CO2/year from water savings.</li> <li>The amount of reduced water savings is the equivalent of 2,453,394 miles driven from an average passenger vehicle, or taking 214 cars off the</li> </ul>	- Confirm the water savings resulting from the project in the Water Savings Project Performance Measure, and convert to carbon emissions using the EPA greenhouse gas equivalency calculator:  https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator  - calculation of required energy = 1,398,390 kWh/year and CO2 emissions = 1.56 lbs. of CO2/kWh
	road each year.	<ul><li>Calculation of reduced vehicle mile equivalent:</li><li>1.12 miles from an average passenger vehicle =</li><li>1 pound of CO2.</li></ul>

Performance Measure No. B: Projects with Hydropower Benefits Not Applicable.

#### E.1.6.3. Subcriterion F.3— Readiness to Proceed

Points may be awarded based upon the extent to which the proposed project is capable of proceeding upon entering into a financial assistance agreement. Please note, if your project is selected, responses provided in this section will be used to develop the scope of work that will be included in the financial assistance agreement.

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.
- Describe any permits that will be required, along with the process for obtaining such permits.
- Identify and describe any engineering or design work performed specifically in support of the proposed project.
- Describe any new policies or administrative actions required to implement the project. 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)

#### **Evaluation Criterion G: Nexus to Reclamation Project Activities (4 points)**

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.

# (1) Is the proposed project connected to Reclamation project activities? If so, how? Please consider the following:

The proposed AMI Project is associated with the Colorado River Basin, and the Utility Authority receives water from MWD via MWDOC and CDWC, which currently relies on the Colorado River Aqueduct and the State Water Project as sources of water. The AMI Project itself does not directly involve Reclamation project lands or Reclamation facilities, but it will increase the availability of the overall water supply through improvements in water use efficiency and conservation and ultimately benefit the Colorado River Basin.

Reclamation manages the Colorado River system from which MWD imports water. The Utility Authority purchases 15% of its supply from MWD through MWDOC and CDWC. Water savings associated with the AMI Project translate to more water remaining in these two fragile systems (Colorado River and State Water Project). The AMI Project directly supports Reclamation's current efforts to further advance water use efficiency and conservation. The AMI Project benefits Reclamation because it reduces imported water supplies from the Colorado River and northern California.

#### o Does the applicant receive Reclamation project water?

Yes, the Utility Authority receives a mixture of Colorado River water and State Water Project water through MWD via MWDOC and CDWC.

o Is the project on Reclamation project lands or involving Reclamation facilities? No, the AMI Project is neither on Reclamation lands nor involves Reclamation facilities.

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

No, the AMI Project is not in the same basin as a Reclamation project or activity.

## • Will the proposed work contribute water to a basin where a Reclamation project is located?

Yes. The water savings attained will be the result of reduced imports from the Bay- Delta and the Colorado River, thereby impacting the Colorado River Basin. By reducing the amount of water imported, this water in effect remains in the basin from which it originates, or is made available to meet demands in other areas of the State. Any increase in water reliability and greater availability in overall water supply resulting from water use efficiency and conservation efforts would also help Reclamation in meeting the federal Indian trust responsibility, a legally enforceable fiduciary obligation on the part of the United States to protect tribal treaty rights, lands, assets, and resources, to the tribes.

#### • Will the project benefit any tribe(s)?

The project will indirectly benefit Indian tribes if those tribes depend on the same imported water from the State Water Project or Colorado River Aqueduct that the La Habra Utility Authority uses. This project will reduce the Authority's water use from these sources thus making them more sustainable for others to use, such as Indian tribes.

#### **Evaluation Criterion H: Additional Non-Federal Funding (4 points)**

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:

\$1,177,319.64 (Non-Federal Funding) \$1,677,319.64 (Total Project Cost)

The Non-federal cost-share is 70.2% and will be provided from Utility Authority funding sources.

### **Project Budget**

The complete AMI Project Budget includes a Funding Plan, Budget Proposal, and Budget Narrative. The SF-424C Budget Form is attached to this application under Exhibit D – Budget Form SF-424C.

### **Funding Plan and Letters of Commitment**

The Utility Authority will fund 100 percent of all non-Federal project costs. The Advanced Metering Infrastructure Project has been listed in the City's 7-year CIP list of projects and the Utility Authority started the project in fiscal year 2016-17. The project is scheduled to have eight separate phases and is currently in the process of finishing work on the fifth phase. The Utility Authority is applying for this grant for the sixth, seventh, and eighth phases of the eight-phase AMI Project. The authorization for the current FY is included on page 651 of the Authority's 2020-2021 Operating Budget available at the following link:

http://www.lahabraca.gov/DocumentCenter/View/10920/The-City-Budget-PDF. The current FY authorization under the CIP program is shown on 743 of the Authority's 2020-2021 Operating Budget available at the following link:

http://www.lahabraca.gov/DocumentCenter/View/10920/The-City-Budget-PDF. Costs for future phase years are not shown in the budget document, however, a rate study report that was completed in 2019 does show the projected capital outlay costs for future years (page 16, Table 3-6). This rate study report is available at the following link:

http://www.lahabraca.gov/DocumentCenter/View/11075/2019-La-Habra-Water-Cost-of-Service-and-Rate-Study

Other than the funding provided by the Bureau of Reclamation under this grant application and the La Habra Utility Authority, there are no other sources of funding necessary to complete this project. As there are no other sources of funding other than the La Habra Utility Authority, a letter of commitment is not required for this application.

#### SOURCES OF THE NON-FEDERAL COST SHARE:

- l. Monetary Contributions (reserves, tax revenues, assessments): The Utility Authority will not be using reserve account funds, or creating special taxes or assessments to fund this project.
- 2. Cost Share Contribution: The Utility Authority will provide its cost share in cash contributions from funds budgeted in the annual budget approved annually. The AMI Project has been and is included in the Capital Budget and is funded by water sales revenue and interest income as detailed in the links shown above. The project has been funded and approved for four prior years and will be for the final several years remaining on the project.
- 2. In-kind Costs: The Utility Authority does not anticipate any in-kind costs prior to the project start date.
- 3. Cash Request or Received from Other Non-Federal Entities: No other funding has been requested or received from other non-Federal entities.
- 4. Pending Funding Requests: There are two pending funding requests for the AMI Project for the next two fiscal years. The first one for FY 2021-22 will be submitted in April and is expected to be approved by June, 2021. The second pending request is for FY 2022-23 and is expected to be approved during the Spring 2022 budget process. Both projects have been approved for inclusion on the authority's 7-year CIP plan (as shown in the Cost of Service Document linked to above, and the budget approval process is essentially a formalized approval of the project. The likelihood that either of these two pending funding requests will be denied for funding is infinitesimally small.

### **Budget Proposal**

Table 1. - Total Project Cost Table

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$ 500,000.00
Costs to be paid by the applicant	\$ 1,177,319.64
Value of third-party contributions	\$ 0.00
TOTAL PROJECT COST	\$ 1,677,319.64

Table 2. – Budget Proposal

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity	
BODGET HEW DESCRIPTION	\$/Unit	Quantity	Type	TOTAL COST
Salaries and Wages				
Water/Sewer Manager (Program Manager)	\$66.49	1,020	hours	\$67,819.80
Part-Time Water Maintenance Laborer #1	\$13.50	2,856	hours	\$38,556.00
Part-Time Water Maintenance Laborer #2	\$13.50	2,856	hours	\$38,556.00
Part-Time Water Maintenance Laborer #3	\$13.50	2,856	hours	\$38,556.00
Part-Time Water Maintenance Laborer #4	\$13.50	2,856	hours	\$38,556.00
Fringe Benefits				
Full-Time Employees- Unemplmt Ins. Rate	0.20%	\$67,819.80	total salary	\$135.64
Full-Time Employees- Medicare Rate	1.45%	\$67,819.80	total salary	\$983.39
Full-Time Employees- Worker's Comp. Rate	0.522%	\$67,819.80	total salary	\$354.02
Full-Time Employees- Employer PERS	13.884%	\$67,819.80	total salary	\$9,416.10
Part-Time Employees- Unemplmt Ins. Rate	0.20%	\$154,224.00	total salary	\$308.44
Part-Time Employees- Medicare Rate	1.45%	\$154,224.00	total salary	\$2,236.25
Part-Time Employees- Worker's Comp. Rate	10.973%	\$154,224.00	total salary	\$16,922.00
Travel				
Trip 1				\$0.00
Equipment				
Meter Boxes - 7199	\$30.00	5,089	units	\$152,670.00
AMI Equipment - Capital Account	\$250.00	5,089	units	\$1,272,250.00
Supplies and Materials				
Item A				\$0.00
Item B				\$0.00
Contractual/Construction				
Contractor A				\$0.00
Third-Party Contributions	<u>'</u>	<u>'</u>		·
Contributor A				\$0.00
Other				·
Other				\$0.00
TOTAL DIRECT COSTS				\$0.00
Indirect Costs				
Type of rate	percentage	\$ base		\$0.00
TOTAL ESTIMATED PROJECT COSTS				
TOTAL ESTIMATED PROJECT COSTS				\$1,677,319.64

#### **Budget Narrative**

Submission of a budget narrative is mandatory. An award will not be made to any applicant who fails to fully disclose this information. The budget narrative provides a discussion of, or explanation for, items included in the budget proposal.

#### Salaries and Wages

The Program Manager for this project is Brian Jones, Water/Sewer Manager for the La Habra Utility Authority. The total cost for this position is expected to be \$67,819.80 with an estimated 1,020 hours of labor at a rate of compensation at \$66.49. This labor rate is separate from the fringe benefit rate. The specific tasks for this position include supervising the project, preparing administrative reports and presentations and attending board meetings.

The total other personnel include four (4) Part-time Water Maintenance Laborer positions. The total cost for each of the four positions is expected to be \$38,556.00 with an estimated 2,856 hours of labor at a rate of compensation at \$13.50. All of the four positions have the labor rate separated from the fringe benefit rate. The specific tasks for each of the four (4) Part-time positions include shutting off the water to each meter customer being retrofitted, removing the older style meter, installing the new advanced AMI equipment, and restoring water service to the meter customer. The salary total for all four (4) positions together is \$154,224.

No subcontractor labor will be used. All salaries will remain at the same rate for all of Fiscal Years 2021-22 and 2022-23 as there will not be any salary increases for the positions listed under the budget.

#### **Fringe Benefits**

For full-time employees, we use percentage rates to calculate the four different fringe benefits. The state unemployment insurance rate is set to 0.20% of the gross salary cost for a total cost of \$135.64. The Medicare rate is set to 1.45% of the gross salary cost for a total cost of \$983.39. The worker's compensation insurance rate is set to the clerical rate of 0.522% of the gross salary cost for a total cost of \$354.02. The employer PERS rate for general employees is set to 13.884% of the gross salary cost for a total cost of \$9,416.10. The total combined fringe benefit costs for all full-time employees' amounts to \$10,889.15.

For part-time employees, we use percentage rates to calculate the three different fringe benefits. The state unemployment insurance rate is calculated at 0.20% of the gross salary cost for a total cost of \$77.11 for each of the four (4) part-time employees. The Medicare rate is calculated at 1.45% of the gross salary cost for a total cost of \$559.06 for each of the four (4) part-time employees. The worker's compensation insurance rate is calculated at the outside labor rate of 10.973% of the gross salary cost for a total cost of \$4,230.75 for each of the four (4) part-time employees. Since the part-time employees do not work more than 1,000 hours in a calendar year, they do not earn employer PERS benefits as a result. The total combined fringe benefit costs for all full-time employees' amounts to \$19,466.69.

#### **Travel**

There are no travel expense costs that need to be itemized under this project.

#### **Equipment**

There are two types of equipment that is being purchased for this project.

The AMI equipment includes the AMI meter, and wire connectors to enable connection to the transmitter located on the top of each meter box. This equipment is vital to the project as the AMI meters have the digital capabilities to track usage and to perform an emergency shut off. The cost of this equipment is \$250 for each unit. We will install 5,089 units during the 2021-22 and 2022-23 fiscal years for a total cost of \$1,272,250.

The meter boxes include a base cover, a cover plate for opening the meter box during servicing, an electronic transmitter, a battery, and wiring to connect to each AMI meter. This equipment is also vital to the project as the meter box will transmit the data to the collection station cover and protect as well as protecting the unit. The cost of this equipment is \$30 for each unit. We will install 5,089 units during the 2021-22 and 2022-23 fiscal years for a total cost of \$152,670.

#### **Materials and Supplies**

There are no supplies and materials expense costs that need to be itemized under this project.

#### Contractual

There are no contractual expense costs that need to be itemized under this project.

#### **Third-Party In-Kind Contributions**

There are no Third-Party In-Kind contributions that need to be itemized under this project.

#### **Environmental and Regulatory Compliance Costs**

There are no environmental and regulatory compliance expense costs that need to be itemized under this project.

#### **Other Expenses**

There are no other expenses that need to be itemized under this project.

#### **Indirect Costs**

There are no indirect costs that need to be itemized under this project.

#### **Total Costs**

The total cost to implement this project is \$1,677,319.64 with a Federal cost share amount of \$500,000 and a non-Federal cost share amount of \$1,177,319.64.

#### **Environmental and Cultural Considerations**

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:

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

No, the AMI Project involves an upgrade to existing meters and should pose no impact to the surrounding environment. The work will be performed on property that is considered already disturbed, and no further requirements are needed.

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

No known species listed or proposed to be listed as a Federal endangered or threatened species, or designated critical habitats are within the AMI Project area.

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

No, there are no wetlands or other surface waters inside the AMI Project boundaries that potentially fall under CWA jurisdiction as "waters of the United States." No associated impacts would occur and no mitigation is required.

(4) When was the water delivery system constructed?

The original water delivery system was built in 1925.

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

No, the AMI Project will not result in any modification of or affect any individual features of an irrigation system.

(6) 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.

There are no buildings, structures, or features listed or eligible for listing on the National Register of Historic Places within the AMI Project sites.

### (7) Are there any known archeological sites in the proposed project area? No.

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

The AMI Project will not have a disproportionately high and adverse effect on low income or minority populations. In reality, the AMI Project has the potential to provide positive monetary benefits to low income and minority populations by identifying water inefficiencies within their community, which after installation of AMI, will potentially decrease the costs to that population.

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

The AMI Project will not limit access to and ceremonial use of Indian sacred sites or result in other impacts on tribal lands.

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

No, the AMI Project will not contribute to the introduction, continued existence, or spread of noxious weeds or non-native species known to occur in the area.

### **Required Permits or Approvals**

Applicants must state in the application whether any permits or approvals are required and explain the plan for obtaining such permits or approvals.

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

### **Letters of Support**

The La Habra Utility Authority has secured five (5) letters of support from various stakeholders. These letters are to be found in Exhibit A in the Exhibit section of this application. The stakeholders and representatives are as follows:

- 1) United States Representative from the 39<sup>th</sup> District The Honorable Mr. Gil Cisneros
- 2) California Senator from the 29<sup>th</sup> District The Honorable Ms. Ling Ling Chang
- 3) California Assemblyman from the 55<sup>th</sup> District The Honorable Mr. Phillip Chen
- 4) Municipal Water District of Orange County General Manager Mr. Robert J. Hunter
- 5) Water Systems Optimization, Inc. President/CEO Mr. Reinhard Sturm

#### **Official Resolution**

An official resolution meeting the requirements set forth above is mandatory. An official resolution of the La Habra Utility Authority is scheduled for review and adoption at the next meeting of the Board of Directors on October 5, 2020. The Resolution will be submitted following the Board Meeting and within 30 days after the application deadline. This 30-day deadline occurs on October 17, 2020. A sample resolution has been attached to this application under Exhibit B – Sample Resolution.

The resolution verifies the Utility Authority's legal authority to enter into an agreement; the Board of Directors has reviewed and supports submittal of this application; the capability of the Utility Authority to provide the amount of funding and in-kind contributions specified in the Funding Plan; and that the Utility Authority will work cooperatively with the Bureau of Reclamation to meet established deadlines for entering into a cooperative agreement.

#### **Unique Identity Identifier and System for Award Management**

(1) Be registered in the System for Award Management (SAM) before submitting its application

The La Habra Utility Authority is registered in the System for Award Management (SAM) under the City of La Habra.

(2) Provide a valid unique entity identifier in its application

The La Habra Utility Authority uses the DUNS number 0947149380000 for the City of La Habra as its unique entity identifier which is currently active and up to date.

(3) Continue to maintain an active SAM registration with current information at all times during which it has an active Federal award or an application or plan under consideration by a Federal awarding agency.

The La Habra Utility Authority under the City of La Habra has and will continue to maintain and keep current the City's active SAM registration.

SAM Search Results List of records matching your search for :				
Record Status: Active DUNS Number: 094714938				
ENTITY La Habra, City C	ıf	Status: Active		
DUNS: 094714938 +4:	CAGE Code: 5GEK7	DoDAAC:		
Expiration Date: 06/05/2021	Has Active Exclusion?: No Debt Sul	bject to Offset?: No		
Address: 110 E La Habra Blvd City: La Habra ZIP Code: 90631-2314	State/Province: CALIFO Country: UNITED STAT			

### **Exhibits**

### Exhibit A – Letters of Support

COMMITTEE ON ARMED SERVICES SUBCOMMITTEE ON SEAFOREST SUBCOMMITTEE ON PERSONNEL

COMMITTEE ON VETERANS' ASTARD SUBCOMMITTEE ON DISABILITY SUBCOMMITTEE ON DISABILITY STANCE AND REMOVAL APPARE BOOMMITTEE ON DIVERSIGHT AND



### United States House of Kepresentatives Stibert &. Ctanerog, Br.

39th Bigtrict, California

September 16, 2020

Brenda Burman Commissioner U.S. Bureau of Reclamation 1849 C Street NW Washington, DC 20240-0001

Re: Support for the La Habra Utility Authority's 2021 Water and Energy Efficiency Grant Application: Advanced Metering Infrastructure Project Phases 6, 7, & 8.

Dear Commissioner Burman,

As the congressman representing California's 39th congressional district including the City of La Habra, I support the La Habra Utility Authority's grant application for the WEEG for Fiscal Year 2021 and their project Advanced Metering Infrastructure Project Phases 6, 7, & 8.

The Advanced Metering Infrastructure Project will replace approximately 5,089 antiquated meters that currently services over 20,000 residents and businesses with advanced metering technologies. This project enhances local, state and federal water conservation objectives by measuring production and tracking leakage quantifications that will result in measurable water savings with reduced greenhouse gas emissions. This project will reduce demand from local groundwater sources and imported water from the Colorado River. These water savings will also aid the city of La Habra and Orange County in meeting long-term statewide water conservation and greenhouse gas reduction goals.

As an advocate for sustainable water solutions, I request full and fair consideration of the La Habra Utility Authority grant application for its Advanced Metering Infrastructure Project Phases 6-8. I am confident that grant funding would allow for continued efforts to improve water and energy efficiencies in Orange County. If you have any question about my support for the proposed project, please contact my grants coordinator Erika Flores at <a href="mailto:Erika.Flores@mail.house.gov">Erika.Flores@mail.house.gov</a> or at (714)459-4575.

Sincerely,

Gilbert R. Cisneros, Jr.

DiHADC J.

Member of Congress



STATE CAPITOL ROOM 4062 SACRAMENTO, CA 95814 TEL (916) 651-4029

DISTRICT OFFICE 1800 E. LAMBERT ROAD SUITE 150 BREA, CA 92821 TE, 17141 671-9474

SENATE CA GOVICHANG SENATOR CHANGESENATE CA GOV SENATOR
LING LING CHANG
TWENTY-NINTH SENATE DISTRICT



COMMITTEES
BANKING AND
FINANCIAL INSTITUTIONS
VICE CHAIR
BUSINESS, PROFESSIONS AND
ECONOMIC DEVELOPMENT
VICE CHAIR
EDUCATION
ENERGY, UTILITIES
AND COMMUNICATIONS

GOVERNMENTAL

September 14, 2020

Bureau of Reclamation Financial Assistance Operations Attn: Mr. Ned Weakland P.O. Box 25007, MS 84-27815 Denver. CO 80225

Subject: Support for the La Habra Utility Authority's 2021 Water and Energy Efficiency Grant Application: "Advanced Metering Infrastructure Project Phases 6, 7, & 8"

Dear Mr. Weakland,

As a legislator representing the City of La Habra, I endorse and support the La Habra Utility Authority's grant application for the "Advanced Metering Infrastructure Project Phases 6, 7, & 8." The Advanced Metering Infrastructure Project will replace approximately 5,089 antiquated meters with advanced metering technologies. This project enhances local, state and federal water conservation objectives by measuring production and/or leakage quantifications that will result in measurable water savings and greenhouse gas reductions. This project will reduce demand from local groundwater sources and imported water from the Colorado River. These water savings will also aid La Habra and Orange County in meeting statewide water conservation and greenhouse gas reduction goals.

I strongly encourage the Bureau of Reclamation to award the requested funding for this project, as it will increase water use efficiency and will provide better water supply reliability, energy savings, and greenhouse gas reductions.

Sincerely,

SENATOR LING LING CHANG

Jory Chang

District 29

STATE CAPITOL P.O. BOX 942849 SACRAMENTO, CA 94249-0055 (916) 319-2055 FAX (916) 319-2155

DISTRICT OFFICE 3 POINTE DRIVE, SUITE 313 BREA, CA 92821 (714) 529-5502 FAX (714) 529-5548

Assembly California Legislature

PHILLIP CHEN

COMMITTEES
VICE CHAIR: BANKING AND FINANCE
VICE CHAIR: ENVIRONMENTAL SAFETY AND TOXIC MATERIALS INSURANCE UTILITIES AND ENERGY

September 9, 2020

Bureau of Reclamation Financial Assistance Operations Attn: Mr. Ned Weakland P.O. Box 25007, MS 84-27815 Denver, CO 80225

Subject: Support for the La Habra Utility Authority's 2021 Water and Energy Efficiency Grant Application: "Advanced Metering Infrastructure Project Phases 6, 7, & 8"

Dear Mr. Weakland.

As a Legislator representing the City of La Habra, I endorse and support the La Habra Utility Authority's grant application for the "Advanced Metering Infrastructure Project Phases 6, 7, & 8." The Advanced Metering Infrastructure Project will replace approximately 5,089 antiquated meters with advanced metering technologies. This project enhances local, state and federal water conservation objectives by measuring production and/or leakage quantifications that will result in measurable water savings and greenhouse gas reductions. This project will reduce demand from local groundwater sources and imported water from the Colorado River. These water savings will also aid La Habra and Orange County in meeting state wide water conservation and greenhouse gas reduction goals.

I strongly encourage the Bureau of Reclamation to award the requested funding for this project, as it will increase water use efficiency and will provide better water supply reliability, energy savings, and greenhouse gas reductions.

If you have any questions, please feel free to contact my District Director, Steven Nguyen, at Steven.Nguyen@asm.ca.gov or 714-529-5502.

Sincerely,

Phillip Chen, Ed.D

Assemblymember, 55th District

Phillip Chen



Street Address: 18700 Ward Street Fountain Valley, California 92708

Malling Address: P.O. Box 20895 Fountain Valley, CA 92728-0895

> (714) 963-3058 Fax: (714) 964-9389

> > Sat Tamaribuchi

Joan C. Finnegan Vice President

Division I

Larry D. Dick

Bob McVicker, P.E., D.WRE Director

Megan Yoo Schneider, P.E.

Jeffery M. Thomas Director

Robert J. Hunter General Manager

MEMBER AGENCIES

City of Brea City of Buena Park East Orange County Water District El Toro Water District Emerald Bay Service District City of Fountain Valley City of Garden Grove Golden State Water Co. City of Huntington Beach Irvine Ranch Water District Laguna Beach County Water District City of La Habra City of La Palma Mesa Water District Moulton Niguel Water District City of Newport Beach City of Orange Orange County Water District City of San Clemente City of San Juan Capistrano

> Santa Margarita Water District City of Seal Beach Serrano Water District South Coast Water District Trabuco Canyon Water District

> > City of Tustin City of Westminster Yorba Linda Water District

September 11, 2020

Bureau of Reclamation Financial Assistance Operations Attn: Mr. Ned Weakland P.O. Box 25007, MS 84-27815 Denver, CO 80225

Subject: Support for the La Habra Utility Authority's 2021 Water and Energy Efficiency Grant Application: "Advanced Metering Infrastructure Project Phases 6, 7, & 8"

Dear Mr. Weakland,

As General Manager of the Municipal Water District of Orange County, I endorse and support the La Habra Utility Authority's grant application for the "Advanced Metering Infrastructure Project Phases 6, 7, & 8." The Advanced Metering Infrastructure Project will replace approximately 5,089 antiquated meters with advanced metering technologies. This project enhances local, state and federal water conservation objectives by measuring production and/or leakage quantifications that will result in measurable water savings and greenhouse gas reductions. This project will reduce demand from local groundwater sources and imported water from the Colorado River. These water savings will also aid La Habra and Orange County in meeting state wide water conservation and greenhouse gas reduction goals.

I strongly encourage the Bureau of Reclamation to award the requested funding for this project, as it will increase water use efficiency and will provide better water supply reliability, energy savings, and greenhouse gas reductions.

Sincerely.

Robert J. Hunter General Manager

Municipal Water District of Orange County

MUNICIPAL WATER DISTRICT OF ORANGE COUNTY

## La Habra Utility Authority – Funding Group 1 Request Advanced Metering Infrastructure Project

January 17, 2016



To: Mr. Jim Sadro Executive Director, La Habra Utility Authority 201 E. La Habra Boulevard La Habra, CA 90631 FROM: Water Systems Optimization, Inc.

Reinhard Sturm 131 Kissling Street San Francisco, CA 94103

SUBJECT: Letter of Support for the La Habra Utility Authority's Advanced Metering Infrastructure Project

To Whom It May Concern,

As the President of Water Systems Optimization (WSO), I am writing to express my full support for La Habra Utility Authority's grant funding application for the Advanced Metering Infrastructure Project. Completing full-system Advanced Metering Infrastructure (AMI) installation will empower La Habra to:

- Improve customer meter accuracy
- Detect customer-side water leaks quickly
- · Improve demand-side conservation programs
- Analyze and act upon opportunities for distribution-system leakage reduction through ongoing zonal leakage monitoring
- Increase its drought resilience

These outcomes will conserve water throughout the full process of water distribution and ultimate customer use and allow for more proactive system stewardship.

WSO is a consulting firm that specializes in water loss control. WSO has worked directly with more than 40 Californian water suppliers on water loss control assessment, monitoring, and reduction. Additionally, WSO has taken a lead role in defining many of the industry's best practices. WSO's water loss preeminence has been recognized by many industry leaders, ranging from the California Department of Water Resources to the Water Research Foundation to numerous water utility managers throughout the country. As the national leader in water loss control who has worked with La Habra for more than a year on proactive water loss control, WSO is uniquely qualified to evaluate the efficacy of La Habra's AMI installation plan in managing water loss.

By installing new AMI meters for all of its customers, La Habra will improve the accuracy of its customer meter stock. The majority of La Habra's meters are older than 20 years and likely register with significant inaccuracy. Improving meter accuracy through the installation of state-of-the-art metering technology will improve the billing process for both La Habra and its customer alike. Customers will be billed more equitably because far fewer meters will register inaccurately, while La Habra will gather more reliable customer use data, thereby improving the information used to set rates and plan for sustainability of supply. Furthermore, high-frequency AMI customer use data can be harnessed to plan targeted demand-side conversation measures that are much more effective than those based on monthly meter reads.

# La Habra Utility Authority – Funding Group 1 Request Advanced Metering Infrastructure Project

AMI will also equip La Habra to detect customer-side leaks quickly and then alert customers of their existence. As a result, water waste due to customer leaks will decrease. AMI systems collect data at an hourly or daily frequency, while traditional manual meter reading gathers customer meter reads monthly or every-other-month. La Habra can only identify potential customer leaks when meter reads are gathered frequently; as a result, the current practice of monthly billing with manual meter reading allows for leaks to run until the customer notices, sometimes months later. When AMI technology is installed, frequent data collection will significantly decrease the potential duration of customer leaks by automating leak identification.

Furthermore, full-system AMI and resulting improved meter accuracy will empower La Habra to better assess and combat ongoing distribution system leakage. The best-practice method of evaluating distribution system leakage is an American Water Works Association (AWWA) water audit. AWWA water audit methodology estimates leakage by deducting known uses from the volume of water supplied to determine water loss and then deducting apparent ("paper") losses from water loss to determine leakage. In this process of elimination, any inaccuracy or uncertainty will compound in the final estimate of leakage. Therefore, in order to accurately calculate leakage volumes and then harness appropriate leakage management strategies, a utility must first have high-quality billing data and an accurate assessment of the accuracy of customer meters. La Habra's AMI project will accomplish both of these goals by reliably tracking customer use at a high frequency and reducing the range of inaccuracy in the customer meter stock. As a result, AMI implementation will better position La Habra to cost-effectively address distribution system leakage.

Finally, AMI installation will equip La Habra to operate district metered areas (DMAs). A district metered area is a discrete section of a distribution system with fully metered sources of supply and forms of consumption. DMAs allow for local water audits that assess water losses in the zone to be conducted continuously. This zonal management approach is industry best-practice and allows distribution system leak detection and response to occur rapidly, on the order of days to weeks instead of years. By installing AMI infrastructure, La Habra will lay the essential groundwork for at least 19 DMAs. Because each DMA will be AMI-enabled, data collection in each DMA can be automated so leaks can be detected as they develop. Furthermore, the installation of each DMA will be made more precise by the Geographic Information System (GIS) capability of AMI technology.

In summary, by improving the information available to describe customer use, more quickly identifying supply-side and distribution-side leaks, and proactively engaging with infrastructure and metering management, La Habra will improve its drought resiliency and acquire the information and tools necessary to manage the distribution system in the face of changing climate and consumption patterns.

WSO has worked closely with La Habra for more than a year on water loss assessment directed toward producing a selfsustaining, cost-effective water loss control program. WSO has observed that staff are committed to proactive management that ensures system longevity and exceptional customer service. Additionally, WSO has been heartened to observe how well La Habra staff connect innovative ideas to effective implementation. As a result, WSO is fully confident that La Habra, its customers, and the sustainability of its system and supply will greatly benefit from this AMI installation program. It is WSO's distinct pleasure to wholeheartedly recommend La Habra for grant funding for the Advanced Metering Infrastructure Project.

Sincerely,

Reinhard Sturm President/CEO, Water Systems Optimization

### Exhibit B – Sample Resolution

RESOL	UTION NO	).

A RESOLUTION OF THE BOARD OF THE LA HABRA UTILITY AUTHORITY, APPROVING THE APPLICATION FOR GRANT FUNDS THROUGH THE BUREAU OF RECLAMATION FOR THE WATERSMART GRANTS: WATER AND ENERGY EFFICIENCY GRANTS FOR FISCAL YEAR 2021

### SECTION I:

WHEREAS, the United States Department of Interior, Bureau of Reclamation has provided funds for the program shown above; and

WHEREAS, the Bureau of Reclamation has been delegated the responsibility for the administration of this grant program, establishing necessary procedures; and

WHEREAS, said procedures established by the Bureau of Reclamation require a resolution certifying the approval of application(s) by the Applicants governing board before submission of said application(s) to the Federal Government; and

WHEREAS, the La Habra Utility Authority, if selected, will enter into an agreement with the Federal Government to carry out the Project.

### SECTION II:

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the La Habra Utility Authority hereby:

- Approves the filing of an application through the Bureau of Reclamation for the WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021 for the "La Habra Advanced Metering Infrastructure Project Phases 6, 7, and 8".
- Certifies that the La Habra Utility Authority, as applicant, has reviewed, supports, and understands the assurances and certifications in the application.
- Certifies that applicant or title holder will have sufficient funds to operate and maintain the project consistent grant requirements; or will secure the resources to do so.
- If applicable, certifies that the project will comply with any laws and regulations including, but not limited to, legal requirements for building codes, health and safety codes, disabled access laws, environmental laws and, that prior to commencement of construction, all applicable permits will have been obtained.

LAURIE SWINDELL, CMC, SECRETARY

5.	The applicant will work with the Bureau of Reclamation to meet established deadline for entering into a grant or cooperative agreement.
6.	Appoints the Executive Director, Public Works Director, or designee, as agents to conduct all negotiations, execute and submit all documents including, but not limited to applications, agreements, payment requests and so on, which may be necessary for the completion of the aforementioned project(s).
PASS	ED, APPROVED AND ADOPTED this 5th day of October, 2020.
ATTE	TOM BEAMISH, CHAIR ST:
LAUR	IE SWINDELL, CMC, SECRETARY
COUN	E OF CALIFORNIA ) ITY OF ORANGE ) ss. OF LA HABRA )
hereby	JRIE SWINDELL, CMC, Secretary for the La Habra Utility Authority, do certify that the above and foregoing is a true and correct copy of ation No introduced and adopted at a regular meeting of the bra Utility Authority held on the 5th day of October, 2020, by the following
AYES NOES ABSE ABST	: DIRECTORS: NT: DIRECTORS:
	es my hand and the official seal of the La Habra Utility Authority this 5th October, 2020.

# ${\bf Exhibit} \ {\bf C-Application} \ {\bf for} \ {\bf Federal} \ {\bf Financial} \ {\bf Assistance} \ {\bf SF-424}$

View Burden State	ment			OMB Number: 4040-00 Expiration Date: 12/31/20:					
Application for Fe	ederal Assista	nce SF-424							
* 1. Type of Submission	n:	* 2. Type of Application:	'If Re	evision, select appropriate letter(s):					
Preapplication New									
Z - ++			Othe	er (Specify):					
Changed/Correc	ted Application	Revision							
* 3. Date Received:  Completed by Grants gov upon submission.  La Habra Utility Auti									
Completed by Grants.gov u	pon submission.	La Habra Utility Aut	hori	ty					
Sa. Federal Entity Ident	differ:		5b	. Federal Award Identifier:					
State Use Only:									
6. Date Received by St	tate:	7. State Application I	ldent	fler:					
8. APPLICANT INFOR	RMATION:		_						
* a. Legal Name: La	Wahra Utilit	v Authority							
* b. Employer/Taxpaye			Τ.,	. Organizational DUNS:					
95-6000730	1 IUCINIIICANON Fran	iber (Ener ine).	1-	947149380000					
d. Address:			1_						
Street2:	621 W. Lamber	t Road							
	200 2100000								
* State:				CA: California					
Province:			_						
* Country:			U	SA: UNITED STATES					
" Zlp / Postal Code:	90631-6755								
e. Organizational Uni	nt:								
Department Name:			DN	vision Name:					
Public Works Dep	partment		Ħ	ater Division					
f. Name and contact	information of pe	erson to be contacted on ma	attera	s involving this application:					
Prefix: Mr.		* First Name	5	Jeff					
Middle Name:									
* Last Name: Hende	erson								
Suffix:		1							
	Analyst								
THe: Management	on:								
Title: Management Organizational Affiliatio									
				Fax Number: 562-383-4497					

Application for Federal Assistance SF-424	
* 9. Type of Applicant 1: Select Applicant Type:	
C: City or Township Government	-
Type of Applicant 2: Select Applicant Type:	
	<u>-</u>
Type of Applicant 3: Select Applicant Type:	
	•
* Other (specify):	
* 10. Name of Federal Agency:	
Bureau of Reclamation	
11. Cafalog of Federal Domestic Assistance Number:	
15.507	
CFDA Title:	
WaterSMART (Sustain and Manage Americals Resources for Tomorrow)	
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* 12. Funding Opportunity Number:	
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*12 Funding Opportunity Number:  BOR-DO-21-F001  *THE:  NaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021	
*12. Funding Opportunity Number:  BOR-DO-21-F001  *Title:  WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021  13. Competition Identification Number:	
* 12. Funding Opportunity Number:  BOR-DO-21-F001  * Title:  MaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021  13. Competition Identification Number:  BOR-DO-21-F001	
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Application	for Federal Assistan	ce SF-424				
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a. Applicant	CA-039			* b. Program/Proj	ect CA-039	
Affach an additi	ional list of Program/Project	Congressional Distric	rts if needed			
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47 Personal	D1f-					
17. Proposed I	07/01/2018			*h Fed D	ate: 06/30/2020	
				5. 2.0 5	06/30/2020	
18. Estimated	Funding (\$):					
a. Federal		500,000.00				
* b. Applicant		1,177,319.64				
" c. State		0.00				
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e. Other		0.00				
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Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.		TOTAL PROJECT COSTS (subtract #16 from #14)	Project (program) income	SUBTOTAL	Confingencies	SUBTOTAL (sum of lines 1-11)	Miscelaneous	Equipment	Canstruction	Demolition and removal	Site work	Project inspection fees	Other architectural and engineering fees	Architectural and engineering fees	Relocation expenses and payments	Land, shuctures, rights-of-way, appraisals, etc.	Administrative and legal expenses	COST CLASSIFICATION	BUDGET INFORMATION - Construction Programs  Contain Federal assistance programs require additional computations to arrive at the Federal sterre of project costs eligible for participation.	A MALE AND ADDRESS OF THE PARTY
<u> </u>		65	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61		одиро	
Enter eligible costs from line 16c Multiply X	FEDERAL FUNDING	1,677,319.64		1,677,319.64		1,677,319.64		1,424,920.00	252,399.64									a. Total Cost	BUDGET INFORMATION - Construction Programs taking to arrive at the Federal stage of project costs eligible for participal taking to arrive at the Federal stage of project costs eligible for participal taking to a review of the Federal stage.	
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30 %																		b. Costs Not Allowable for Participation		
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503,195,89		1,677,319.64		1,677,319.64		1,677,319.64		1,424,920.00	252,399.64									c. Total Allowable Costs (Columns a-b)	auch is the case, you will be notified.	Expression Date: 02/28/2022

### Exhibit E – Assurances Form SF-424D

View Burden Statement

#### ASSURANCES - CONSTRUCTION PROGRAMS

OMB Number: 4040-0009 Expiration Date: 02/28/2022

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

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:

- 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 project described in this application.
- Will give the awarding agency, the Comptroller General
  of the United States and, if appropriate, the State,
  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 awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure nondiscrimination during the useful life of the project.
- Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- 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 progressive reports and such other information as may be required by the assistance awarding agency or State.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 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.

- Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards of 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).
- 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 nondiscrimination. 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 statue(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statue(s) which may apply to the application.

Previous Edition Usable

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Standard Form 424D (Rev. 7-97) Prescribed by OMB Circular A-102

## La Habra Utility Authority – Funding Group 1 Request Advanced Metering Infrastructure Project

- 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.
- 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.
- 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 1989 (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).
- 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.
- Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1986, 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).
- 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."
- Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
- 20. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
Completed on submission to Grants.gov	Director of Public Works
APPLICANT ORGANIZATION	DATE SUBMITTED
La Habra Utility Authority	Completed on submission to Grants.gov

SF-424D (Rev. 7-97) Back

### RESOLUTION NO. 2020-02

A RESOLUTION OF THE LA HABRA UTILITY AUTHORITY, APPROVING THE APPLICATION FOR GRANT FUNDS THROUGH THE BUREAU OF RECLAMATION FOR THE WATERSMART GRANTS: WATER AND ENERGY EFFICIENCY GRANTS FOR FISCAL YEAR 2021

### SECTION I:

WHEREAS, the United States Department of Interior, Bureau of Reclamation has provided funds for the program shown above; and

WHEREAS, the Bureau of Reclamation has been delegated the responsibility for the administration of this grant program, establishing necessary procedures; and

WHEREAS, said procedures established by the Bureau of Reclamation require a resolution certifying the approval of application(s) by the Applicants governing board before submission of said application(s) to the Federal Government; and

**WHEREAS**, the La Habra Utility Authority, if selected, will enter into an agreement with the Federal Government to carry out the Project.

## SECTION II:

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the La Habra Utility Authority hereby:

- Approves the filing of an application through the Bureau of Reclamation for the WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2021 for the "La Habra Advanced Metering Infrastructure Project Phases 6, 7, and 8".
- Certifies that the La Habra Utility Authority, as applicant, has reviewed, supports, and understands the assurances and certifications in the application.
- Certifies that applicant or title holder will have sufficient funds to operate and maintain the project consistent grant requirements; or will secure the resources to do so.
- 4. If applicable, certifies that the project will comply with any laws and regulations including, but not limited to, legal requirements for building codes, health and safety codes, disabled access laws, environmental laws and, that prior to commencement of construction, all applicable permits will have been obtained.

- 5. The applicant will work with the Bureau of Reclamation to meet established deadline for entering into a grant or cooperative agreement.
- 6. Appoints the Executive Director, Public Works Director, or designee, as agents to conduct all negotiations, execute and submit all documents including, but not limited to applications, agreements, payment requests and so on, which may be necessary for the completion of the aforementioned project(s).

PASSED, APPROVED AND ADOPTED this 5th day of October, 2020.

Tom Beamish, Chair

TEDI.

aurie Swindell, CMC

Secretary

STATE OF CALIFORNIA )
COUNTY OF ORANGE ) ss.
CITY OF LA HABRA )

I, Laurie Swindell, CMC, Secretary for the La Habra Utility Authority, do hereby certify that the above and foregoing is a true and correct copy of Resolution No. 2020–02 introduced and adopted at a regular meeting of the La Habra Utility Authority held on the 5th day of October, 2020, by the following vote:

AYES:

DIRECTORS:

Beamish, Espinoza, Gomez, Medrano, Shaw

NOES:

DIRECTORS:

NONE

ABSENT:

DIRECTORS:

NONE

ABSTAIN:

DIRECTORS:

NONE

Witness my hand and the official seal of the La Habra Utility Authority this 5th day of October, 2020.

Laurie Swindell, CMC

Secretary