

# City of Universal City Advanced Metering Infrastructure (AMI)

April 28, 2022



**Applicant Name:** City of Universal City

**Applicant Address:** 2150 Universal City Boulevard, Universal City, TX 78148

**Applicant Project Manager:** Randy Luensmann

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Notice of Funding Opportunity No. R22AS00195

**WaterSMART Small-Scale Water Efficiency Projects**

Department of the Interior

Bureau of Reclamation

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Attachment A – Letters of Support

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# Technical Proposal

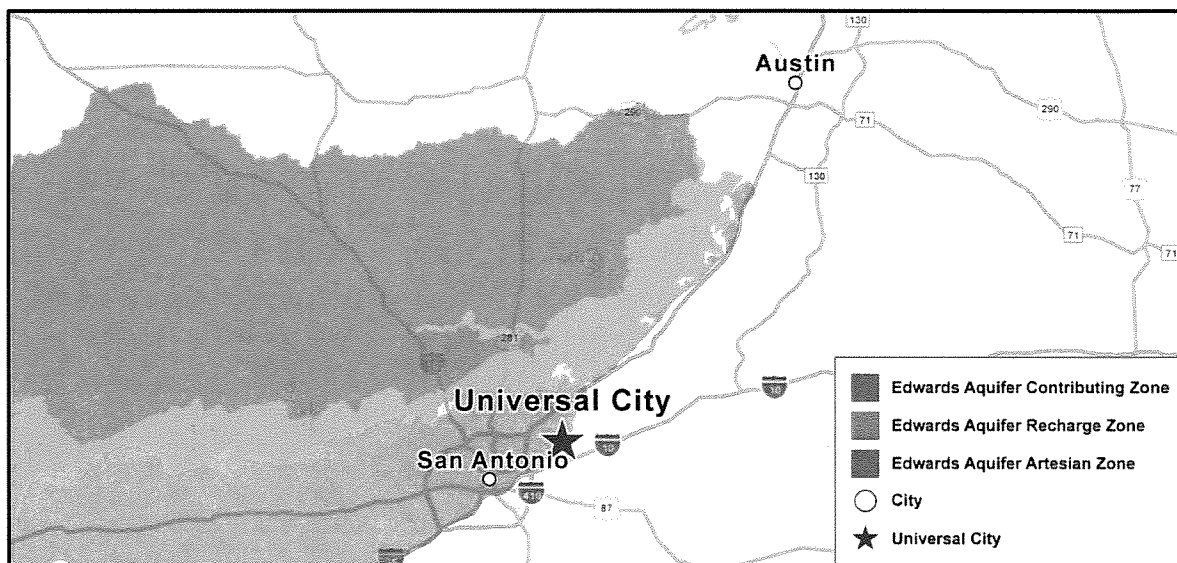
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## 1.0 Executive Summary

**Project Name:** City of Universal City Advanced Metering Infrastructure (AMI)

**Applicant Name:** City of Universal City (Category A applicant)

**City, County, State:** Universal City, Bexar County, Texas



**Figure 1.** Edwards Aquifer encompassing Universal City

The City of Universal City, population 21,463, requests \$100,000 from the Bureau of Reclamation to offset costs for a \$218,747 project to replace approximately 658 aging and failing water meters with new automated meters (651 ¾" meters will be replaced and seven 1" meters will be replaced). The City's existing meters are nearly two decades old and provide limited leak detection capabilities due to some of these meters not accurately recording all water use. There is an immediate need to upgrade the existing meters. In alignment with the Department of the Interior's ongoing effort to modernize American infrastructure, this project will bolster water infrastructure in South Central Texas and provide accurate and detailed leak and billing data for thousands of residents. The new meters will allow for more accurate collection of real-time water usage data, and this upgrade is estimated to save approximately 8.2 acre-feet per year (AFY) of potable water. It is anticipated that this project will commence in April 2023 and will take approximately six months to complete. The actual meter installation should be completed in three to four months; however, additional time has been allocated for contracting, project close-out and any unanticipated delays.

This project is not located on a Federal facility.

## 2.0 Background Data

### Source of Water Supply

Currently, the City of Universal City receives the majority of its potable water from groundwater via wells located in the Edwards Aquifer. Located in South Central Texas, the Edwards Aquifer extends into parts of 11 counties and encompasses an area of roughly 4,350 square miles. The aquifer's boundaries also include the city of San Antonio, Texas, which is the seventh largest city in the country. The Edwards Aquifer is one of the most prolific artesian aquifers in the world and serves as the main source of drinking water for over two million Texans. It is also used for a variety of industrial, recreational, and agricultural purposes.

In the last few decades, the region's water demands have increased far beyond the aquifer's capacity. Furthermore, water demands for the counties using significant supplies from the Edwards Aquifer are projected to continue growing at a rate of approximately 0.76 percent per year between 2020 and 2040. However, not even present levels of water use can be sustained through drought periods to meet downstream water rights while maintaining adequate water flow to Comal and San Marcos springs, which support habitats of threatened and endangered species.

Operations of several surface water supply sources in this area are also linked to the Edwards Aquifer. Dependable supplies from Canyon Reservoir for municipal and industrial customers are a function of springflows from the Edwards Aquifer, since inflow passage through Canyon Reservoir is necessary to meet downstream water rights when springflows drop below certain levels. Other reservoirs used for steam-electric power generation (Coletto Creek, Calaveras, and Braunig) and local hydropower generation are dependent upon springflows and/or treated municipal effluent that originate from the Edwards Aquifer.

According to the 2021 South Central Texas Regional water supply plan, the City of Universal City is projected to have a total water demand of 3,170 ACY in 2030 with available supplies of only 2,856 ACY. Supplies are limited from the Edwards Aquifer due to the adopted Habitat Management Plan to ensure adequate springflows are available to support the region's endangered species populations. It is projected that the City will need an additional supply of 314 ACY in 2030 to meet its projected water demand. To meet the projected need, Water conservation was a recommended water management strategy in the adopted regional water plan to meet the projected need. This water management strategy includes an increased level of leak detection and repair. Installing new meters with this capability will help the City to meet its long-term water needs.

**Water Rights Involved**

Due to the limited availability from the Edwards Aquifer, permits are issued to help ensure a sustainable supply of water to all communities and other parties who obtain water from the aquifer. The City holds several permits to pump water from the Edwards Aquifer. The City also leases water rights from agricultural users when needed in order to meet projected water demands. This City does not own nor use any surface water rights.

The City has also an additional supply of 800 ACY from the Carrizo Aquifer (purchased through Schertz-Seguin Local Government Corporation) in the event that Edwards Aquifer water use restrictions become so severe that City operations would be impacted.

**Current Water Users**

The City of Universal City tracks water use in five categories: Single-Family Residential, Multi-Family Residential, Commercial, Irrigation, and City Use. The primary water users in the City are residents and commercial customers that support residential customers. The highest volume use customers are the Peppermill, Palisades and Sable Ridge apartment complexes. The water use categories by percentage of total use are listed in Table 1. It should be noted that about one-third of the water used for irrigation purposes in the City is reuse water supplied by two entities that treat the City’s wastewater. This reuse water totals almost 11 million gallons of use in a typical year.

<b>Table 1. Water Use Categories – Percentage of Total Use</b>	
<b>Water Use Category</b>	<b>Percentage of Use</b>
Single-Use Residential	61.3%
Multi-Family Residential	21.8%
Commercial	10.7%
Irrigation	4.1%
City Use	2.1%

**Residential**

Water is used in similar ways between single-family and multi-family residences. Water use in this sector typically includes indoor uses, such as bathing, laundry, drinking, cooking, and sanitation, and outdoor uses, such as landscape irrigation, car washing, swimming pools, and hardscape cleaning. Presently there are about 5,740 single-family residential accounts and 3,400 individual apartment units within the City.

**Commercial**

The City has a mix of commercial customers including restaurants, car washes, grocery stores, gas stations, manufacturers, and other facilities serving the local population and visitors. These entities comprise about 360 accounts for the City.

**Irrigation**

Some commercial customers have elected to have a separate irrigation meter to meet outdoor irrigation requirements. There are approximately 80 irrigation accounts within the City. The City’s largest user of irrigation water – Alamo Community College – is supplied primarily with reuse water for its irrigation needs.

**City**

The City meters all of its own use in order to have a complete accounting of water use within the city to accurately track water loss with the water supply system. There are approximately 77 city connections. These connections are associated with City Hall, fire and police stations, and other city services such as water and wastewater service.

**Total Number of Water Users Served**

Universal City serves 9,700 individual residential and commercial customers (Table 2). Ninety-five percent of the current customers are either single-family or multi-family customers, with about four percent being commercial customers. As demonstrated by these numbers, Universal City is largely a residential community, housing many service members from Randolph Air Force Base, located adjacent to the City.

<b>Table 2. Water Use Categories – Percentage of Total Customers</b>	
<b>Water Use Category</b>	<b>Percentage of Customers</b>
Single-Use Residential	59.1%
Multi-Family Residential	35.5%
Commercial	3.7%
Irrigation	0.9%
City Use	0.8%

**Current and Projected Water Demands and Water Needs**

According to the 2022 Texas State Water Plan, the population of Texas is expected to increase by almost 75% between 2020 and 2070. Bexar County, where Universal City is located, is expected to see a population increase of close to 60% during that same period. Many suburbs of San Antonio such as Converse, Schertz, and Shavano Park have seen rapid population increases over the past decade. While the city of Universal City has seen slower growth numbers, it is still seeing an increase in the number of water connections. Between July 2018 and October 2020, the City added 128 new single-family residential connections, as well as new apartment complexes. The latest regional water planning data shows Universal City with a flat population through 2070. However, the City is anticipating new growth and redevelopment as land values continue to rise. The City has been active in expanding its water supply system and acquiring additional water supplies to meet this growing demand. The proposed project will begin to upgrade existing meters and will also lay the groundwork for all future connections to be seamlessly integrated into the City’s AMI system.

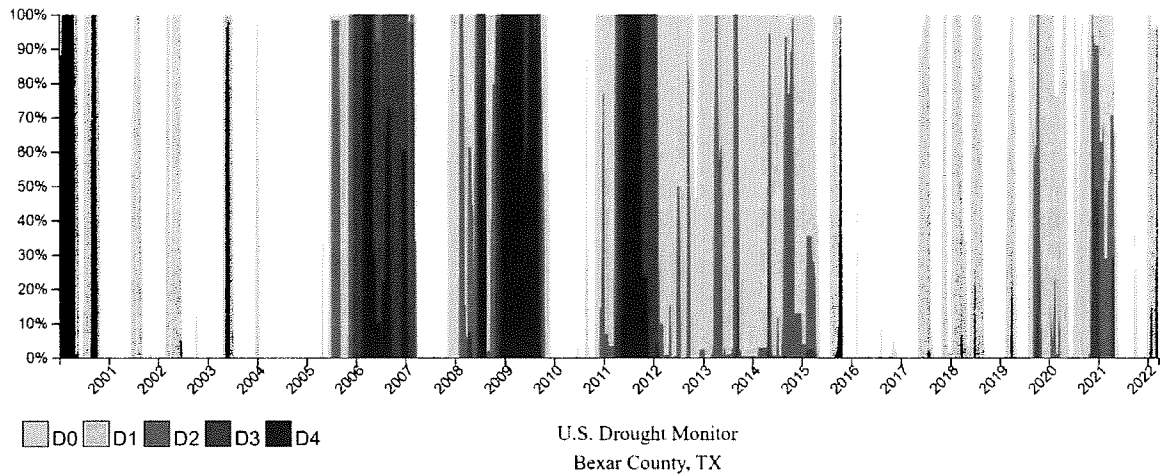
Along with the increasing number of connections, water use has also been increasing. Between 2019 and 2020, the City saw a modest increase in total water use from 737 million gallons of consumption (2,262 ACY) to 754 million gallons of consumption (2,314 ACY). The City completes an annual water audit following the American Water Works Association's (AWWA) guidelines. In 2019, this audit reported an estimated 15.5 million gallons of apparent loss due to inaccurate customer meters. The audit also reported an additional loss of 54.6 million gallons that was uncategorized and is likely due to leaks that have not been detected or additional customer meter losses. These losses represent a large amount of lost water and revenue for the City and illustrate the need to replace the inaccurate meters within the City's water distribution system.

As previously noted, it is projected that with conservative growth assumptions the City will need an additional 314 ACY of water supply by 2030 to meet customer demand during periods of drought. It is anticipated that replacing 658 meters will save the City about 2.7 million gallons a year or 8.2 ACY due to reduced customer demand with more accurate metering and reduced losses through undetected leaks. While this may seem small in comparison to the City's total water demand and projected water needs, it is a cost-effective step toward meeting future water needs and reducing pumping from the Edwards Aquifer.

#### **Potential Shortfalls in Water Supply**

The Edwards Aquifer is karst in nature with declining water availability during times of drought. Additionally, many threatened and endangered species rely on springflows from the Edwards Aquifer, further reducing its "firm" supply during times of drought. In fact, recent groundwater availability models have shown that the aquifer cannot sustain current pumping rates during times of drought, which happen frequently in this area. As shown in Figure 1, Bexar County (and Universal City) are susceptible to drought conditions throughout the year. The region is persistently in Abnormally Dry conditions (D0) with several instances crossing over into Moderate Drought (D1) and Severe Drought (D2) in just the last six months. There have been times in the past when 100 percent of the County has been in Exceptional Drought. Developing strategies to conserve water supply, eliminate water waste, and ensure that groundwater supplies are sustainable is a priority in this region. Currently, Universal City is in Stage II water use restrictions due to limited supply from the Edwards Aquifer.

**Figure 2. United States Drought Monitor for Bexar County, TX**



**Dryness Categories:**

*D0 – Abnormally Dry, used for areas showing dryness but not yet in drought, or for areas recovering from drought.*

**Drought Intensity Categories:**

*D1 – Moderate Drought; D2 – Severe Drought; D3 – Extreme Drought; D4 – Exceptional Drought*

**Water Delivery System**

The City of Universal City owns seven groundwater wells that provide water to the community. All water users in Universal City are metered, including City connections. The City, through its Public Works Department, maintains and repairs the water system inclusive of valves, hydrants, and water meters, while regulating system pressure and water volume through calculated pump efficiencies, water storage tower elevations, and electronic controls.

The Texas Commission on Environmental Quality (TCEQ) – the state agency that regulates drinking water production and distribution standards – has rated the City of Universal City as a Superior Water System. To distribute this water, the City maintains five square miles of water lines ranging in size from 2-inch to 24-inch.

**Past Working Relationship with the Bureau of Reclamation**

The City of Universal City does not have a past working relationship with the Bureau of Reclamation but is eager to start a new relationship with the Bureau of Reclamation with the funding of this grant application.



### 3.0 Project Location

The City of Universal City, located in Bexar County, Texas, is a suburban community of approximately 21,463 people. It is located just to the east of San Antonio, Texas (see Figure 1 presented earlier), and is a leading residential provider for airmen and their families stationed at Randolph Air Force Base located adjacent to the City. The water service area of Universal City covers approximately five square miles. The project latitude is 29.5523 North and longitude is 98.3044 West.

The City of Universal City is committed to maintaining exceptional water service and high-quality water infrastructure to our community and residents. With a smaller population and commercial base to support discretionary spending, Universal City relies more heavily on grant funding than neighboring cities with higher populations.

Universal City has a strong project management team that has experience managing federal and state grant funds. The team currently manages over \$300,000 in CDBG funds which require adhering to multiple federal rules and regulations including procurement, federal prevailing wage laws, and a host of other requirements including quarterly reporting, use of online drawdown portals, and close-out procedures. We are also audited annually using a professional accounting firm. We follow sophisticated governance policies and procedures to ensure successful management of a BOR grant award.

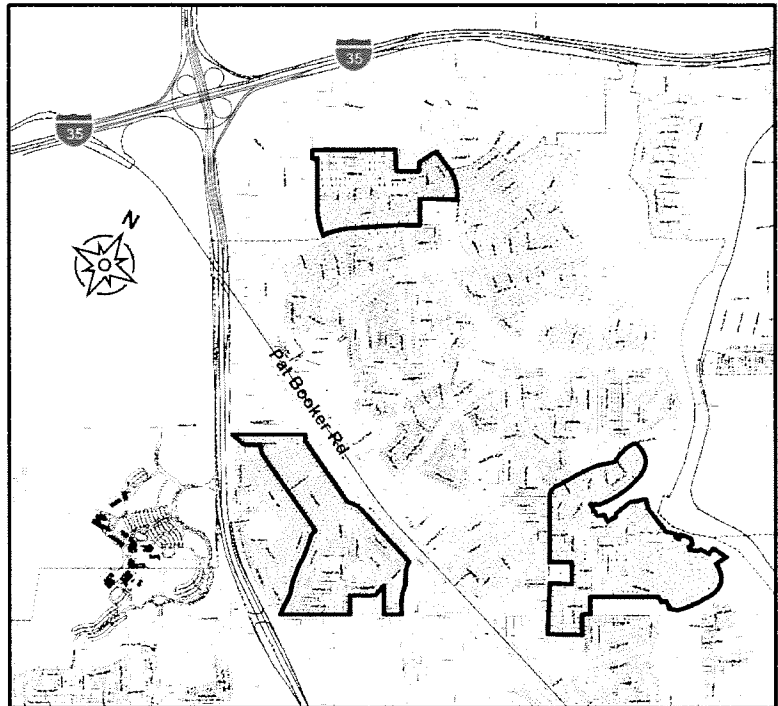


Figure 3. Detailed map that highlights in red the areas identified for meter replacement.

### 4.0 Technical Project Description

This is the second year of a 10-year project to replace all existing meters within the water distribution system. In the first and second years of this project, the City is targeting areas with the oldest and most deficient meters. The proposed project is to purchase and install 658 water meters in the City of Universal City. All of the meters

purchased will be Advanced Metering Infrastructure (AMI) meters in order to provide the best available water use and leak detection data to the City.

The proposed project will begin in April 2023 and will be completed within six months. We are estimating a six-month project period to account for grant agreement execution and grant close-out time, meter installation should take three to four months. The City will choose the selected vendor through a formal bid process; and the selected vendor will manage the purchase, delivery, installation, integration, testing, training, and implementation of the AMI system, with oversight from the City's Project Manager, Mr. Randy Luensmann. Randy has been with the City for approximately 30 years, and is currently serving in the Public Works Director capacity. Prior to this role, he served as the Public Works Inspector where he managed all City related construction projects. His experience is ideal for overseeing this infrastructure upgrade project.

#### **4.1 Current Problems**

The majority of the existing water meter infrastructure in the City of Universal City is reaching the end of its useful life and is becoming inefficient. In addition, many meters are no longer recording accurately, further resulting in inaccurate water accounting and lost revenue to the City. It is currently estimated that about 10% of the water is "lost" – either through meter inaccuracies or through unreported leaks. While this number is manageable, it has been increasing over time as meters continue to age. This City would like to be proactive in managing and controlling water loss before losses become even greater. Customers are receiving water, yet are not being accurately billed, leading to a large revenue loss for the City. It is estimated that the City loses over \$200,000 of revenue per year due to meter reporting inaccuracies and water lost to leaks. To summarize, the City is losing water and has no way of knowing how much is in leaks and not accounted for. Even though the City is fully aware of all water entering the water distribution system, there are problems with the existing water meters ranging from leaking water to dead meters, and therefore no accurate accountability of water distributed to customers.

#### **4.2 Addressing Problems and Needs**

Installing new AMI meters throughout the City will help to bring full accountability of distributed water. As previously mentioned, the City's water source is groundwater and is pumped from wells to water consumers. The installation of new, more modern water meters will allow the City to align what was pumped out of the wells and purchased through other sources and what was sold, and reduce an estimated 70 million gallons of water that are being lost due to leaks or otherwise not accounted for by the current aged meters.

### **4.3 Expected Outcomes**

The City of Universal City's project will replace 658 residential and commercial water meters that are approximately 20 years old. The installation of more advanced metering infrastructure will save measurable amounts of water by quickly identifying where leaks are so that repair measures can be implemented. It is anticipated that 2.7 million gallons of water will be saved by upgrading to more accurate meters. Additional water savings will be realized by reducing the number of unreported water leaks in the distribution system. The new meters will tie into the current utility billing software system and will account for all water being sold, in turn helping the City maximize its water sales revenue. Increasing the revenue of the City will provide funds to update and improve other critical infrastructure such as the water piping system; ultimately benefitting the entire community with higher quality water distribution methods and increased system efficiency.

## **5.0 Evaluation Criteria**

### **5.1 Evaluation Criterion A — Project Benefits**

This project will significantly advance state and federal water conservation efforts, further aligning the City of Universal City with guidelines and recommendations set forth by the State of Texas and the United States. As identified in the City of Universal City Comprehensive Plan (2018 to 2022), the City's vision for infrastructure is "To provide citizens and businesses with reliable and affordable infrastructure." This plan contains goals to repair and replace aging water and sewer infrastructure, targeting older areas of the City first. Completing the upgrade to newer water meters will help the City in meeting this goal, specifically allowing for increased capacity for residential and commercial growth through continued infrastructure improvements.

In addition to the numerous benefits generated for the City of Universal City, the proposed project also has local and regional support to promote and encourage collaboration to achieve Texas' goal to increase the State's water supply through conservation-oriented water management strategies. Letters of support are included in the appendix of this application.

The City is deeply concerned with the well-being of its community, taking pride in our commitment to the preservation of the environment and precious water resources. Aquifers are dependent upon the amount of water in the ground and therefore precipitation. With Texas being a known drought region, there is always a concern that the water supply will not be enough. Installation of new water meters will help to better regulate the amount of water used by providing real-time usage and leak detection information. The Edwards Aquifer will benefit as less water will be lost and conserved.

## **5.2 Evaluation Criterion B — Planning Efforts Supporting the Project**

The City of Universal City is aligned with several state, regional, and local planning documents:

### **Universal City Water Conservation Plan**

The City has recognized the need for water conservation planning and has taken proactive measures to address these critical issues by updating the City's Water Conservation Plan which outlines key goals and plans for meeting the conservation goals included in the plan. In the latest Water Conservation Plan, the City has set a 10-year (2029) gallons-per-capita-per-day (GPCD) goal of 128. The 2020 GPCD for the City was estimated to be 111. Replacing aging meters will help the City reach its water conservation goals by reducing water use through providing customers a bill for all water consumed. In addition to GPCD goals, the City has set a goal to keep water loss (including meter inaccuracy loss) to less than 5% of total water input into the system. The City followed the guidelines and requirements as established by the Texas Commission on Environmental Quality (TCEQ) in developing this Plan. Included in the Plan are water conservation goals directly aligned with the project:

- Perform an annual water loss audit
- Maintain a level of water loss below 5 percent
- Maintaining a robust leak detection program.

The City has long recognized the importance of water conservation and has actively implemented methods of managing and protecting the groundwater resources for the benefit of the community. This project will further implement the goals of the City to provide accurate means of accounting for all water usage and therefore conserving water and benefiting the citizens, economy, and environment of the City.

### **Edwards Aquifer Authority Critical Period Management Plan**

To address Edwards Aquifer management and springflow during times of drought, the Edwards Aquifer Authority (EAA) developed a critical period management (CPM) plan. The CPM is divided into four critical period stages, each with a trigger based on aquifer level and spring discharges, and with corresponding responses to reduce groundwater withdrawals. To protect unique species and their habitats from future water quantity concerns in the Edwards Aquifer, the EAA and stakeholders developed the Edwards Aquifer Habitat Conservation Plan (EAHCP), which establishes springflow protection measures. These provisions apply to all holders of regular permits, including the City of Universal City, the customers of all permittees who are retail water utilities, and owners of exempt wells. Under these provisions, during times of drought, water use restrictions and other flow protection measures are engaged as appropriate and necessary.

By reducing water usage, the City is helping to ensure that water supplies are conserved, and fewer water use restrictions are needed during times of drought.

#### **Edwards Aquifer Authority Groundwater Conservation Plan**

Increasing water demands, extreme weather variability, and mandated reductions in water use make year-round conservation an important tool in managing groundwater. To improve water-use efficiency, municipal, industrial, and irrigation permit holders are required to implement an individual conservation program and then document those efforts every three years to the EAA.

The EAA developed a regional Groundwater Conservation Plan (GCP) as a guidance document to encourage, promote and document year-round conservation measures. Each municipal, industrial, and irrigation user must implement a minimum number of conservation practices, or Best Management Practices (BMPs), in a timely manner. Best management practices are strategies or actions proven to achieve measurable water savings and are recommended by user type in the EAA GCP. Those BMPs included for municipal permit holders include:

- Meters on all new connections and retrofits of existing connections to account for all water usage.
- Conservation pricing through quantity-based pricing structures to provide economic incentives for efficient water use.
- Public information and school education programs to promote water conservation awareness.
- Appointment of a conservation coordinator to oversee GCP implementation and ongoing activities.
- Water survey programs to track and control water usage.
- Residential plumbing retrofit and rebate programs for distribution or installation of high-quality, low-flow plumbing fixtures.
- Reuse of available treated effluent to replace Edwards Aquifer groundwater on golf courses, in large cooling plants, and in other industrial or landscape processes.
- System water audits and leak detection and repair programs to check for unaccounted water loss exceeding 15% of total system water.

This project will directly address several of these requirements, most notably the requirement to account for all water usage, including meter inaccuracies and leaks, in order to help control water losses within the distribution system.

#### **South Central Texas Regional Water Plan**

As part of the South Central Texas Regional Water Planning Area (of the Texas Water Development Board), the City of Universal City adheres to planning efforts provided by

this group. These plans project future water demands and supplies for each municipal utility within the planning region and then make recommendations for water management strategies to meet water needs. In the last plan, the City of Universal City was projected to have additional water needs during the planning period. Included in the management strategies to meet this need were additional water conservation measures including leak detection and water loss control.

### **5.3 Evaluation Criterion C — Project Implementation**

The City of Universal City staff and the City Council have had several discussions related to the upgrades and modernization of the City's current water meter infrastructure. Project components will be installed on existing facilities, so the project requires no permitting, no engineering or design work, and no new policies or administrative actions to implement the project. The City has done its due diligence and is ready to commence this work upon receipt of BOR funding. The proposed equipment has been identified and the City plans to have a contractor install the meters to ensure the manufacturer's warranty is intact. This will ensure that the new equipment will have an extended useful life.

#### **Schedule**

The proposed project includes the following tasks:

##### Task 1. Project Grant Administration

The City of Universal City will provide administrative oversight for the project, under the direction of the Public Works Director, Mr. Randy Luensmann. Activities will include reviewing and executing the grant agreement and contract, preparing for and attending meetings with the Bureau of Reclamation, maintaining all grant and project files, preparing and processing requests for reimbursements, fully completing form SF-425 federal financial reports semi-annually, and, with the final report, preparing updates for the City Council, ensuring grant compliance, completing and submitting semi-annual interim performance reports (to include accomplishments and milestones met and the status of the schedule and timeline) and a final performance report (to include a summary of the objectives met, benefits achieved, long-term resiliency from the project, collaboration among partners, and photos), coordinating any audit requests or examination of records by BOR or independent auditors, and maintaining all records for at least three years after the project is closed out.

Deliverables include:

- Executed grant agreement
- Meeting agendas and minutes
- Requests for reimbursement
- Completed SF-425 reports

- Interim performance reports
- Final performance report
- Audit report (if applicable)

#### Task 2. Procure and Finalize Agreement with Vendor

Vendors will be selected through a formal bid process. They will be responsible for making periodic deliveries, troubleshooting faulty equipment, and replacing, at no additional cost, any components that are found to be defective. The team will hold a kick-off meeting with the selected vendor to review the schedule (and make refinements, if necessary), the cost estimate, and expectations for the project.

Deliverables include:

- Final vendor agreement documents
- Project schedule, including key milestones
- Kick-off meeting notes
- Refined final cost estimate

#### Task 3. Public Outreach

City of Universal City project staff will alert the 658 customers of the new meters and provide education regarding the logistics and benefits of the installation of new meters. Information will be posted on the City's website about the impending upgrade to new meters and contact information for City staff to answer any questions. Outreach will include information posted on the City's website and may include informational flyers or information included in water bills.

Deliverables include:

- Copies of customer outreach material

#### Task 4. Install Advanced Metering Infrastructure (AMI Meters)

The selected vendor will provide and install 3/4" x 5/8" (or other sizes as needed for commercial customers) AMI meters to replace existing meters. It is estimated that 658 meters will be installed in the first year of the City's water meter replacement program. The City will require that all future development install the water meters chosen under this project to ensure conformity and stability among all City water users. The chosen vendor will ensure that the meters are pre-set and checked to make sure that the mechanism works properly. By having the vendor install the meters, all the meters will be covered under warranty for ten years after installation. If at some point the meters need to be changed out within the warranty period, the warranty will be extended for another ten years for the new meter, with that cycle continuing. It is anticipated that the installation will be finished within three to four months (the entire project period is six months).

Deliverables include:

- Meter installation inspection checklists
- Contractor invoices
- Photographs of the installed meters

**Task 5. Test the AMI Meters**

The vendor will ensure that the new AMI meters will be integrated with the City’s billing system to allow City staff to view periodic flow rates, total water consumed during a selected period, and total consumption over a billing cycle.

Deliverables include:

- Vendor invoices

Please see the anticipated project schedule below in Table 3.

<b>Table 3. Anticipated Project Schedule</b>							
<b>Task No.</b>	<b>Major Project Tasks</b>	<b>2023</b>					
		<b>April</b>	<b>May</b>	<b>June</b>	<b>July</b>	<b>Aug.</b>	<b>Sept.</b>
0	BOR Awards Announced (Fall of 2022)						
1	Project Grant Administration						
2	Procure and Finalize Agreement with Vendor						
3	Public Outreach						
4	Install Advanced Meter Infrastructure (AMI)						
5	Test New AMI Meters						

**Permits**

No easements, permits, or approvals are required for this project. Universal City owns the property or has easements to the property needed to install the new meters. The City will also maintain ownership of all new AMI meters that will be installed throughout the City and extraterritorial jurisdiction. All necessary safety protocols will be followed.

**5.4 Evaluation Criterion D — Nexus to Bureau of Reclamation**

The proposed project is not directly connected to a Reclamation project or activity.



## **5.5 Evaluation Criterion E — Presidential and Department of the Interior Priorities Department Priorities**

### **1. Climate Change**

Drought is a topic of discussion in many municipalities across Texas, including the City of Universal City, and the impacts of climate change are known to increase the duration, severity, and frequency of droughts. As part of an ongoing effort to address these challenges, the City recognizes its duty to collaborate with local stakeholders to identify successful water management strategies, conserve water, and sustain the supply provided by the Edwards Aquifer.

Increasing water demands, extreme weather variability, and mandated water usage reductions necessitate a combination of regional and individual groundwater conservation planning efforts, as explained in the EAA Groundwater Conservation Plan. In accordance with these regional conservation programs, the City follows a variety of conservation practices to improve water-use efficiency.

The installation of AMI meters can further enhance these efforts by providing accurate water usage and leak detection data, ultimately making the aquifer more resilient to future changes in water demand due to climate change. This project will reduce the City's water waste and water demand, while also reducing the energy needed to pump water that will remain as part of the supply in the aquifer.

### **2. Disadvantaged or Underserved Communities**

The older parts of Universal City, especially those located nearest to Randolph Air Force Base, have historically housed lower income populations. These sections of the city tend to have the oldest, most outdated water infrastructure that is prone to water line breaks, leaks, and other failures. Frequent maintenance and repairs are needed to address these deficiencies, leading to regular water service line disruptions to historically underserved communities.

Replacing the water distribution infrastructure in the oldest parts of Universal City is a priority. With new water meters installed throughout these area, lower income communities will receive additional health and safety benefits from modernized infrastructure that provides reliable water service. The City will also realize more water revenue as meters that have been under registering water use will become more accurate. This increased revenue will provide the City with more funds to accelerate the replacement of the aging water lines in the lower-income areas of the City.

### **3. Tribal Benefits**

There will be no tribal benefits provided by this project.

**END OF TECHNICAL PROPOSAL**

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## 6.0 Appendix

### A. Project Budget

#### Funding Plan and Letters of Commitment

The total project cost is \$218,747. Universal City will provide non-Federal matching funds in the amount of \$118,747, or 54% of the total cost. The City’s cost share is cash that comes from the City’s Water and Wastewater Utility Fund and is allocated for the proposed project, as well as in-kind staff time. The City respectfully requests \$100,000, or 46% of the total project cost, in Reclamation funding to complete the proposed AMI meter project. The City of Universal City will fund all non-Reclamation share of project costs and will not be seeking funding commitments from third-party sources. Universal City does not have any pending funding requests for the project, nor will the City be receiving nor requesting monies from other non-Federal entities. No third-party in-kind costs will be used for this project. Funding for the project will be solely provided by City funds and potential funds received from Reclamation under this grant application. In addition, Universal City has not incurred any previous costs on this project.

#### Budget Proposal

The total cost of the project is estimated at \$218,747. The City of Universal City will provide 54% of the funds needed to complete the project, or \$118,747, and is requesting \$100,000 from the Bureau of Reclamation, which is 46% of the total cost. A further breakdown of these costs is noted in Table 4. Total Project Cost Table below:

<b>Table 4. Total Project Cost Table</b>	
<b>Source</b>	<b>Amount</b>
Cost to be reimbursed with the requested Federal funding	\$100,000.00
Cost to be paid by the City of Universal City Utility Fund	\$103,154.00
Cost to be paid by the City of Universal City (in-kind)	\$15,592.51
Value of third-party contribution	\$ –
<b>Total Project Cost</b>	<b>\$218,746.51</b>

A further breakdown of these costs is noted in Table 5 Budget Proposal below:

<b>Table 5. Budget Proposal</b>							
<b>Budget Item Description</b>	<b>Computation</b>		<b>Quantity Type</b>	<b>Total Project Cost</b>	<b>BOR Funds</b>	<b>Universal City Utility Fund</b>	<b>Universal City In-Kind</b>
	<b>\$/Unit</b>	<b>Quantity</b>					
<b>Salaries and Wages</b>							
Project Manager – Randy Luensmann, Public Works Director	\$73.23	10	Hours	\$732.30	\$ -	\$ -	\$732.30
Project Coordinator – Dewayne Bumpers	\$30.86	250	Hours	\$7,715.00	\$ -	\$ -	\$7,715.00
Utilities Coordinator – Athena Ford	\$23.07	150	Hours	\$3,460.50	\$ -	\$ -	\$3,460.50
<b>Fringe Benefits</b>							
Project Manager – Randy Luensmann, Public Works Director	\$21.24	10	Hours	\$212.37	\$ -	\$ -	\$212.37
Project Coordinator – Dewayne Bumpers	\$9.88	250	Hours	\$2,468.80	\$ -	\$ -	\$2,468.80
Utilities Coordinator – Athena Ford	\$6.69	150	Hours	\$1,003.55	\$ -	\$ -	\$1,003.55
<b>Travel</b>					\$ -	\$ -	\$ -
<b>Equipment</b>					\$ -	\$ -	\$ -
<b>Supplies and Materials</b>					\$ -	\$ -	\$ -
<b>Contractual/Construction</b>							
Contractor to Provide and Install Meters (cost includes installation and testing)							
3/4" Meters	\$308.00	651	Each	\$200,508.00	\$99,500.00	\$101,008.00	\$ -
1" Meters	\$378.00	7	Each	\$2,646.00	\$500.00	\$2,146.00	\$ -
<b>Other</b>				\$ -	\$ -	\$ -	\$ -
<b>Total Direct Costs</b>				<b>\$218,746.51</b>	<b>\$100,000.00</b>	<b>\$103,154.00</b>	<b>\$15,592.51</b>
<b>Indirect Costs</b>				\$ -	\$ -	\$ -	\$ -
<b>Total Estimated Project Costs</b>				<b>\$218,746.51</b>	<b>\$100,000.00</b>	<b>\$103,154.00</b>	<b>\$15,592.51</b>

**Budget Narrative**

**Salaries and Wages**

Total salaries of \$11,907.80 are anticipated for this project, executed by the following staff:

1. Project Manager. It is estimated that Randy Luensmann (Public Works Director) will spend approximately 1% of his time managing the overall project for six

months. Duties will include administrative activities in support of the project such as procurement, managing City employees, and review of contractor invoices for accuracy and payment. In addition, Randy will be responsible for compliance with all grant reporting requirements, including SF-425 Federal Financial Report, Interim Performance Reports, and a Final Performance Report. Mr. Luensmann's annual salary is consistently applied to Federal and non-Federal activities. Time spent on this project will equate to \$732.30.

2. Project Coordinator. The Project Coordinator, Dewayne Bumpers will manage the day to day operations of the project and be responsible to oversee all construction activities. It is anticipated that he will spend 17% of his time on this project over the six month project life. Dewayne will work closely with Randy to make sure all meters are installed correctly. It is estimated that \$7,715.00 of his annual salary will be spent on this project.
3. Utilities Coordinator. The Utilities Coordinator, Athena Ford, will spend a smaller amount of time on the project, equating to approximately 10% of her time during the six months of the project of project implementation. Athena will work closely with Randy to keep track of schedules and to complete all required forms and updates required by the BOR. It is estimated that \$3,460.50 of her annual salary will be spent on this project.

#### **Fringe Benefits**

Approximately \$3,684.71 will be spent on fringe benefits for the three key personnel on this project. Fringe benefits for Mr. Randy Luensmann are estimated at an average of 29.0% and will total approximately \$212.37 for the project, while benefits for the project coordinator will total \$2,468.80 (or 32% of salary cost). Benefits for the Utilities Coordinator will total \$1,003.55 for the duration of this project. Fringe benefits for the City of Universal City staff include health, life and disability insurance, retirement, workers compensation insurance, vacation and sick days, and others.

#### **Travel**

Travel does not apply to this project.

#### **Equipment**

Individual equipment costs are not applicable. All equipment will be furnished and installed under a construction contract and is included in the construction cost estimate.

#### **Materials and Supplies**

Individual material and supplies costs are not applicable. All materials and supplies necessary for the project will be furnished and installed under a construction contract and are included in the construction cost estimate.

**Contractual**

Universal City will procure a vendor to furnish and install all meters inclusive of testing and training. A competitive bid process will be used to determine the selected vendor. The City will be procuring approximately 658 AMI meters to be installed throughout the City of Universal City. It is estimated that each ¾" meter will cost approximately \$308 and each 1" meter will cost #378. These cost include the cost of installation and testing of the meters.

**Third-Party In-Kind Contributions**

Not Applicable. No third-party in-kind contributions are included as part of this project.

**Environmental and Regulatory Compliance Costs**

It is anticipated that there will be no environmental or regulatory compliance costs associated with this project. If these costs do arise, they will be minimal and will be paid by the City.

**Other Expenses**

There are no other expenses anticipated for this project.

**Indirect Costs**

Not applicable. The City will not be including indirect costs for this project.

**Total Costs**

Federal Request from the Bureau of Reclamation:	\$100,000
Total non-Federal (City of Universal City) Cost Share:	\$118,747
Total Project Cost:	\$218,747

In addition to the above costs, the City, at their own cost, has contracted with an outside professional consultant. The consultant will be called on to answer any questions, post-award.

**B. Environmental and Cultural Resources Compliance**

The City has evaluated the project for both CEQA and NEPA compliance. It is believed that the project is a Categorical Exemption for CEQA and a Categorical Exclusion for NEPA. The CEQA Categorical Exemption reference is in Section 15301. Existing Facilities, part (b). The project is a Class I project that consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public and private structures, facilities, mechanical equipment, etc. The types of "existing facilities" are consistent with part (b) of Section 15301 which states "existing facilities of both investor and publicly-owned utilities used to provide electric power, natural gas, sewage, or other public utility services." For NEPA, we reviewed the list of Categorical Exclusions located in the Code of Federal Regulations for the Department of Interior and concluded that the project meets the following categorical exclusion definitions:

"minor construction activities associated with authorized projects which...merely augment or supplement..." and "maintenance, rehabilitation, and replacement of existing facilities which may involve a minor change in size, location, and/or operation."

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

The proposed project will not impact the surrounding environment. The AMI project solely involves replacing existing meters in sites that have been previously disturbed and are regularly maintained. The project will install meters at each location by removing existing water meters and replacing them with newer models. No earth will be disturbed.

**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?**

The City of Universal City is not aware of any species listed or proposed to be listed as a Federal threatened or endangered species or critical habitat in the proposed project area. No species or habitat will be affected by the activities associated with the AMI installation.

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

There are no wetlands or other surface water inside the project boundaries that potentially fall under CWA jurisdiction as "Waters of the Unity States."

**When was the water delivery system constructed?**

The oldest part of the water delivery system was constructed in the 1950's. The system has been expanded as needed through the current time.

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

No, the project will not result in any modification of or effects to individual features of an irrigation system.

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

No, there are no buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places.

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

No, there are no known archeological sites in the proposed project area.

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

No, the proposed project will not have an adverse effect on low-income or minority populations.

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

No, the proposed project will not limit access to and ceremonial use of Indian sacred sites or result in any other impacts on tribal lands.

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

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

### **C. Required Permits or Approvals**

No permits or approvals are anticipated for this project. Project components will be installed on existing facilities.

### **D. Letters of Project Support**

The City of Universal City received two letters of support, which are included in this application under Attachment A, from the following:

- U.S. Congressman Henry Cuellar, Ph.D.
- Universal City Mayor John Williams

### **E. Official Resolution**

The official resolution approved by the City Council of the City of Universal City on April 19, 2022 is attached to this application under Attachment B.

## **F. Conflict of Interest Disclosure**

There is no actual or potential conflict of interest between the City and the Bureau of Reclamation.



**HENRY CUELLAR, PH.D.**  
U.S. HOUSE OF REPRESENTATIVES

April 25, 2022

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

Dear Commissioner Calimlim Touton:

I am writing to express my support for Universal City's application to the Bureau of Reclamation's WaterSMART: Small-Scale Water Efficiency Grant Program.

Universal City is undertaking steps to replace and modernize infrastructure while improving water reliability to the residents and businesses within their community. Advanced metering infrastructure should in turn allow for the conservation of water resources by identifying potential leaks, which can then be thoroughly evaluated and repaired. This funding would allow the city to continue its meter replacement program, which began in 2021.

Respectfully, I ask that your office provide full and fair consideration on the merits of Universal City's application during the evaluation process. Should you have any questions regarding this letter, please do not hesitate to contact my office at (202) 225-1640.

Sincerely,



Henry Cuellar, Ph.D.  
U.S. Congressman  
28th District of Texas



# CITY OF UNIVERSAL CITY

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2150 Universal City Blvd.  
Universal City, Texas 78148-3492  
www.universalcitytexas.com  
(210) 659-0333  
Fax (210) 659-7062

April 22, 2022

U.S. Department of the Interior  
Bureau of Reclamation  
Denver Federal Center  
Bldg. 67, Room 152  
Denver, Colorado 80225

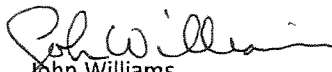
Dear Bureau of Reclamation Funding Team:

Please accept this letter of support for the City of Universal City's advanced meter infrastructure WaterSMART: Small-Scale Water Efficiency Grant application. The City of Universal City is a suburb of San Antonio and is a wonderful community that continually seeks to make improvements to benefit all residents and businesses.

The City of Universal City will replace 658 residential and commercial water meters that are approximately 20 years old. The City is taking proactive measures to upgrade their existing water meter infrastructure before it becomes obsolete and no longer functions properly. Funding from the Bureau of Reclamation will enable the City to continue its meter replacement program allowing us to have a better accounting of water use within our water system.

Your strong consideration for the City of Universal City's application is greatly appreciated.

Sincerely,

  
John Williams  
Universal City Mayor

Resolution No. 936

A RESOLUTION OF THE CITY OF UNIVERSAL CITY, TEXAS, APPROVING THE APPLICATION FOR GRANT FUNDS FROM THE BUREAU OF RECLAMATION WATERSMART: SMALL-SCALE WATER EFFICIENCY GRANTS FOR FY 2022 PROGRAM FUNDING OPPORTUNITY No. R22AS00195.

*WHEREAS*, The President of the United States and the United States Department of the Interior have provided funds for the WaterSMART Program; 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 applicant's governing board before submission of said application(s); and

*WHEREAS*, the applicant, if selected, will enter into an agreement with the Bureau of Reclamation to carry out the development of the proposal.

*NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF UNIVERSAL CITY, TEXAS, THAT:*

SECTION 1. The City Council approves the filing of an application for the WaterSMART: Small-Scale Water Efficiency Grants for Fiscal Year 2022 Program for the City of Universal City; and

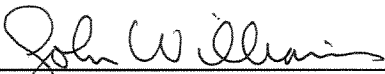
SECTION 2. The City Council appoints that the City Manager, or her designee, to act as agent with legal authority to enter into the grant agreement; and

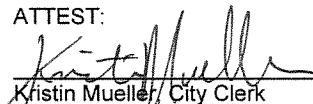
SECTION 3. The City Council certifies that the City Council of the City of Universal City has reviewed and supports the proposed application; and

SECTION 4. The City Council certifies that the City of Universal City has sufficient matching funds to provide the amount of funding/in-kind contributions specified in the funding plan included in the grant application; and

SECTION 5. The City Council certifies that the City of Universal City will work with the Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

PASSED and ADOPTED this the 19th day of April 2022.

  
\_\_\_\_\_  
John Williams, Mayor

ATTEST:  
  
\_\_\_\_\_  
Kristin Mueller, City Clerk

