

WaterSMART

Small-Scale Water Efficiency Projects for FY 2022

Funding Opportunity No. **R22AS00195**

Edwards Aquifer Authority Municipal and Industrial Meter Upgrades for SCADA

San Antonio, TX



**EDWARDS AQUIFER
AUTHORITY**

MANAGE • ENHANCE • PROTECT

Edwards Aquifer Authority

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April 28, 2022

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Technical Proposal and Evaluation Criteria

Executive Summary

Date: Application due date: April 28, 2022
Applicant: Edwards Aquifer Authority (EAA), Bexar County, Texas
Project Title: **Municipal and Industrial Meter Upgrades for SCADA**

Project Summary:

Edwards Aquifer Authority (EAA) has measured groundwater extraction with mechanical propeller meters for over 25 years. The district now plans to upgrade groundwater measurement on certain wells to propeller meters digital registers or transmitters to provide signal output to the district and individual water users. EAA will make use of local and Bureau funds to upgrade **21** older mechanical propeller meters with new propeller meters with electronic registers that have the capability of communicating with EAA's SCADA system.

EAA will contract with a meter manufacturer for the purchase and configuration of meters that will be compatible with the district's SCADA system and deliver needed data to the district. EAA staff will contract with a local contractor skilled in the installation of these types of meters for proper installation to maintain accuracy and allow district staff to integrate meter data from these water users into the SCADA system for district reporting and management.

Approximate Length: Two Years

Completion Date: Dec 31, 2024

Background Data

Edwards Aquifer Authority (EAA):

In 1993, the U.S. District Court issued a ruling in the Sierra Club lawsuit and ordered that springflow must be maintained to assure that Comal and San Marcos springs will not drop below jeopardy levels; the USFWS must develop springflow thresholds for "take" and "jeopardy" at Comal and San Marcos springs by mid-March; and the Texas State Legislature must put into place a regulatory system to limit withdrawals from the Edwards Aquifer.

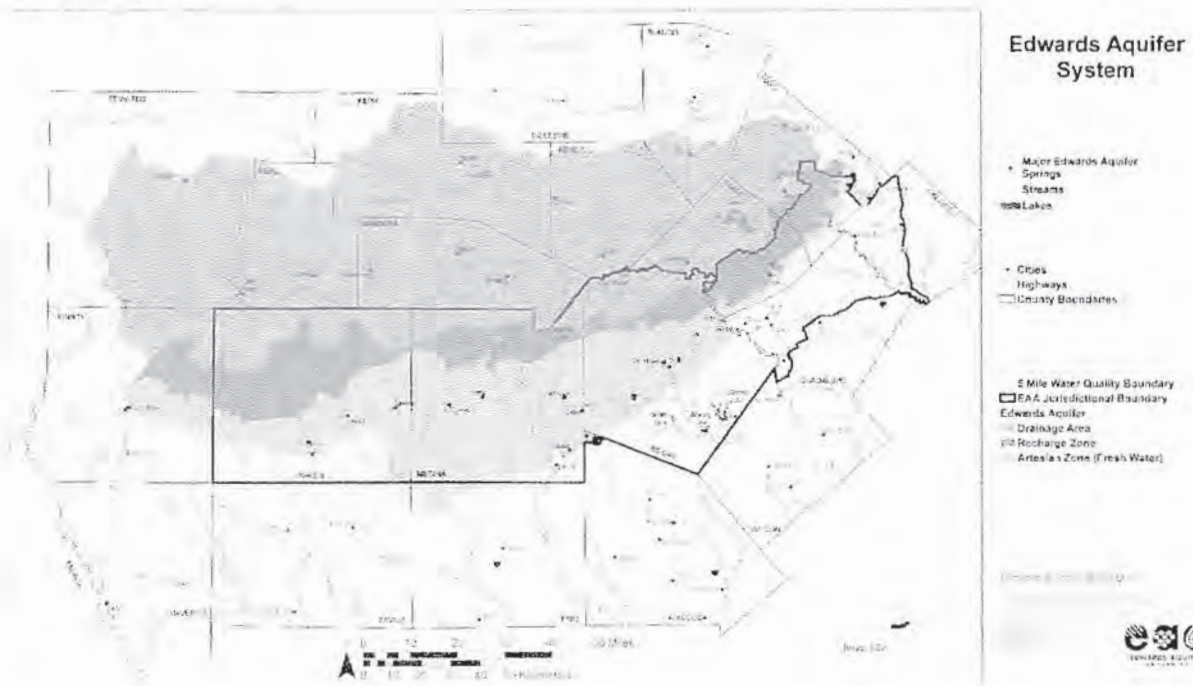
The EAA Temporary Board of Directors, established by HB 3189, held its first organizational meeting Sept. 8, 1995. To begin managing the aquifer, the bill created a 15-member temporary board which would ultimately transition to a 17-member permanent board, with 15 of those members elected from single-member districts and two appointed members. The EAA became fully operational on June 28, 1996. During the summer, Texas experiences a severe drought. Many municipal water purveyors do not have adequate supplies for their customers.

In 1997 the EAA board approved the first Aquifer Management Fees (AMF) with a rate of \$11

per acre-foot for municipal and industrial users and \$2 per acre-foot for irrigators. The Authority then initiated the Edwards Aquifer Well Metering Program, which requires meters for all municipal, industrial, and irrigation wells in the Edwards Aquifer. Since 1998, the Authority has utilized well pumping data from the Well Metering Program to accurately measure well discharge. The availability of direct pumping data has significantly improved the discharge evaluation process for management of the Edwards Aquifer.

Area Map

Figure 1- Regional Map

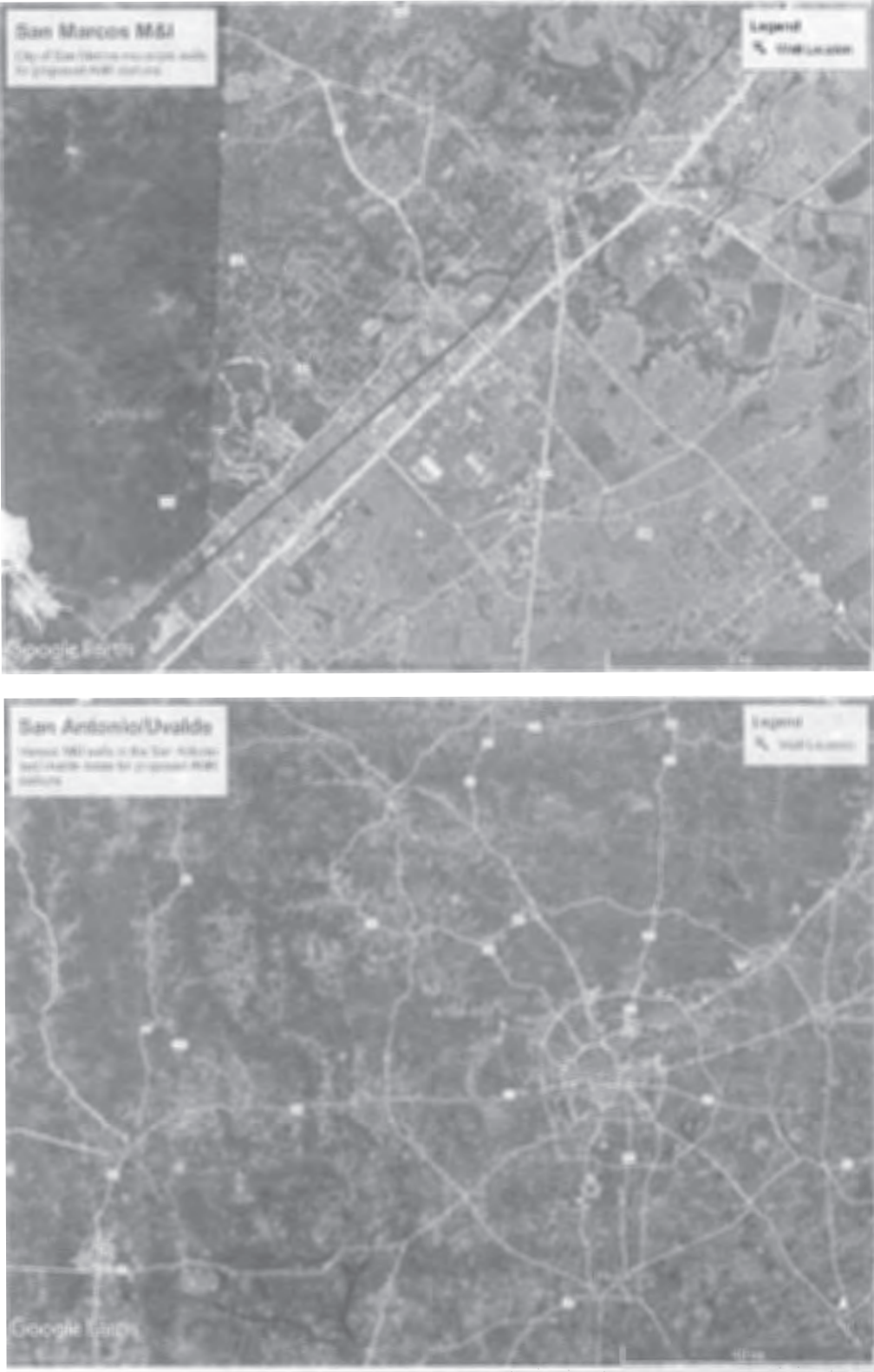


Project Location

The San Antonio segment of the Edwards Aquifer is an artesian aquifer located in Central/South Texas, extending from the western-part of Kinney County to eastern Hays County and is the primary source of water for the City of San Antonio and surrounding communities, as well as the source of the Comal and San Marcos Springs.

Edwards Aquifer Authority's (EAA) jurisdictional area covers all or parts of an eight-county region located in south central Texas, including Uvalde, Medina, Bexar, Atascosa, Comal, Hays, Guadalupe, and Caldwell counties. This project will include meter sites in Medina, Bexar, Uvalde, and Hays Counties.

Figure 2 – Meter Upgrade Locations in the EAA



Technical Project Description and Milestones

EAA intends to improve groundwater measurement within the district for municipal and industrial users by upgrading existing propeller meters for SCADA compatibility with assistance from the WaterSMART Small-Scale Water Efficiency Grant. EAA recognizes that regional and individual groundwater conservation planning is essential in managing regional water resources. The EAA is committed to assisting municipal and industrial water users employ efficient water conservation methods.

Meter Upgrades: The proposed project will upgrade mechanical meters to a propeller meter with a digital register (or equivalent) that has the capability of communicating with the district's SCADA system (see image to the right). The new meters will also reduce the amount of staff time required for meter service and reading meters. Meter down-time will be reduced improving water use records at EAA especially during drought under Critical Period Management. The district is proposing to upgrade **21** mechanical propeller meters with digital registers in the next two years. The meters planned to be installed will be the McCrometer MW500 (or similar model) equipped with the FlowCom digital register. These meters will provide operational advantages to the district as well as improving data collected for water management in the EAA.



Upon the successful award of this proposal, meters will be ordered upon contract approval with the Bureau and will then be installed with these Municipal and Industrial users over the next two years.

Since EAA has approximately 1,200 metered wells within its boundaries, historical baseline water use is well documented. The objective of the automated meter reading program is to assist permit holders improve accuracy and real time understanding of their water usage. This will allow a better understanding of EAA conservation measures when applied to groundwater permits, which can include Critical Period Management reductions in times of drought. Water meter readings can be acquired manually, via telemetry on personal computer or mobile devices once the systems are deployed. Reporting intervals from daily to every 15-minute data collection can be configured to the user's requirements. Currently the EAA's requests data collection up to four times a day.

Evaluation Criteria

Evaluation Criterion (A)- Project Benefits: *Up to 35 points may be awarded based upon evaluation of the benefits that are expected to result from implementing the proposed project. This criterion considers a variety of project benefits, including the significance of the anticipated water management benefits and the public benefits of the project. This criterion prioritizes projects that modernize existing infrastructure in order to address water reliability concerns, including making water available for multiple beneficial uses and resolving water related conflict in the region.*

Benefits to the Category A Applicant's Water Delivery System: Describe the expected benefits to the Category A applicant's water delivery system. Address the following:

- Clearly explain the anticipated water management benefits to the Category A applicant's water supply delivery system and water customers.

In times of declining groundwater levels, the EAA implements a Critical Period Management (CPM) Plan to help sustain aquifer and springflow levels. This program helps slow the rate of decline in aquifer levels and spring discharges during periods of little or no rain by reducing the amount of groundwater permit holders may withdraw. During critical periods, all municipal, industrial and irrigation users are required to submit withdrawal reports monthly. These reports are reconciled at the end of the year to ensure permit holder compliance with the CPM reductions.

Efficiently maintaining water use data is essential for the EAA and permitted water users to monitor usage, especially when meeting Critical Period Management (CPM) requirements (drought reductions). EAA Rules require a reduction in permitted withdrawals when water levels at designated monitoring sites fall below specified thresholds. Accurate metering of water use is very critical for meeting CPM reductions in that it provides the EAA with dependable meter readings for regulatory compliance purposes and helps water users effectively monitor their water use.

- Explain the significance of the anticipated water management benefits for the Category A applicant's water delivery system and customers. Consider:

- o Are customers not currently getting their full water right at certain times of year?*

Depending upon water availability or aquifer levels, applicants may not receive their full allotment. Accurate metering is vital to ensure that water users do not exceed their allotment.

- o Does this project have the potential to prevent lawsuits or water calls?*

Yes. This remote monitoring system will allow water users to closely monitor their water use during Critical Management Periods. This will enable them to not only comply with their water allocations, but also remain below their allocation levels to conserve water in the aquifer and maintain spring flows for all uses as well as endangered species protection.

- o What are the consequences of not making the improvement?*

The EAA Act stipulates that all municipal, industrial, and irrigation water wells be classified as non-exempt wells, requiring a water withdrawal permit to be put in use, and that any such well is required to be metered. Approximately 1,200 metered wells (irrigation, municipal, and industrial) are located within the EAA jurisdictional boundaries. The EAA currently owns and maintains over 600 irrigation meters and EAA staff perform annual site visits for each irrigation site to ensure that meters are calculating usage within the meter manufacturer's specifications of a certified error of not greater than \pm five percent. Proper meter function is necessary in order to accurately record groundwater use both on a monthly and annual basis as this information is required to be reported to the EAA no later than January 31 of the following year. Remote monitoring of groundwater withdrawals and evaluating monthly meter readings throughout the year can help a user avoid exceeding annual authorized amounts.

Traditional reporting involves manual record keeping and submission, however, the EAA recently began transitioning to a reporting system with telemetry that allows access to automated meter readings from meters with digital registers with pulse and 4-20mA output or transmitters with digital output capabilities. These systems provide dependable and affordable remote wireless access to flow data which can include flow rates, totalizer readings, and daily, weekly, and annual water usage recording. Bureau funding would help further the EAA's efforts in expanding the availability of remote metering data thus helping the well owner manage their groundwater withdrawals as well as enable the EAA to access water use data for internal research purposes.

o Are customer water restrictions currently required?

Yes. CPM stage reductions apply to all Edwards Aquifer well owners and groundwater permit holders authorized to pump more than three acre-feet annually. This applies to industrial, irrigation, and municipal users, including water utilities authorized to pump Edwards groundwater for delivery to their respective customers.

In addition, all municipal, industrial and irrigation well owners are required to submit monthly withdrawal reports to the EAA for tracking of their pumping. These reports are reconciled at the end of the year to ensure permit holder compliance with the CPM reductions

o Other significant concerns that support the need for the project.

The upgrades to meters with SCADA capability will assist in maintaining water use efficiency and help the EAA ensure water usage is not surpassing its state mandated, annual permitted withdrawal cap of 572,000 acre feet.

The EAA's current meter program is comprised of three Field Inspection Technicians, two Electronics Technicians and one Field Inspection Supervisor. The Field Inspection Technicians average about 20 years of experience in working with meters, wells and the water industry. Technical expertise averages approximately 35 years and has proven to be extremely valuable to our team regarding the current automated meter reading project. This program will improve the efficiency of the staff at EAA.

Broader Benefits: Describe the broader benefits that are expected to occur as a result of the project. Consider:
• Will the project improve broader water supply reliability at sub-basin or basin scale?

Yes. During Drought or Critical Management Periods, the Plan helps sustain aquifer and springflow levels during times of drought by temporarily reducing the authorized withdrawal amounts of Edwards groundwater permit holders. By curbing pumping from the aquifer during periods of little or no rain, this program is designed to slow the rate of decline in aquifer levels and spring discharges until such time that it does rain and the aquifer can recharge itself.

• Will the proposed project increase collaboration and information sharing among water managers in the region?
Please explain.

Yes. The real-time data provided by the SCADA-enabled meters will provide more frequent reporting to water managers at EAA as well as to the water users for improved water management in the district.

• *Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area (e.g., impacts to agriculture, environment, recreation, and tourism)? Please explain.*

Yes. Improved water management during Critical Management Periods will help to stabilize aquifer levels within EAA in order to maintain water accessibility for all water users including agriculture, municipal, industrial, and domestic.

• *Will the project complement work being done in coordination with NRCS in the area (e.g., the area with a direct connection to the districts water supply)? Please explain.*

Yes. EAA administers a Groundwater Conservation Grant Program to fund more efficient irrigation system upgrades such as linear-move sprinkler irrigation systems, drip irrigation, and center-pivot sprinkler systems. These funds often compliment programs from the USDA NRCS programs such as EQIP.

• *Will the project help address drought conditions at the sub-basin or basin scale? Please explain.*

Yes. The CPM Plan is divided into five stages of escalating reduced pumping requirements, each triggered by declining aquifer levels or spring-flow discharge rates as calculated in 10-day averages. In other words, required reductions increase as aquifer levels or springflows decrease. For example, Stage 1 of CPM is triggered and declared for the San Antonio Pool (all counties within EAA jurisdiction except Uvalde) when the 10-day average level at the J-17 Index Well, in Bexar County, drops below 660 feet above mean sea level (amsl) or the 10-day average spring flow at Comal or San Marcos Springs falls below 225 cubic feet per second (cfs) or 96 cfs, respectively. As a result, permit holders must reduce groundwater withdrawals by 20% of their authorized annual withdrawal amounts based on the number of days CPM is in effect. Having SCADA-enabled meters with real-time data accessibility will dramatically improve the management of the Edwards Aquifer during periods of drought.

Evaluation Criterion (B) Planning Efforts Supporting the Project: *Up to 30 points may be awarded based on the extent to which the proposed on-the-ground project is supported by an applicant's existing water management plan, water conservation plan, System Optimization Review (SOR), or identified as part of another planning effort led by the Category A applicant. This criterion prioritizes projects that are identified through local planning efforts and meet local needs.*

Plan Development: Describe how your project is supported by an existing planning effort. Identify the planning effort and who developed it. If the planning effort was not developed by the Category A applicant, describe the Category A applicant's involvement in developing the planning effort.

The Edwards Aquifer Authority Act defines “conservation” as “any measure that would sustain or enhance water supply.” This is of particular significance because the Edwards Aquifer and the Comal Springs and San Marcos Springs need to be maintained and sustained as an adequate habitat for the federally listed endangered species that are native to the water source. When water wells began withdrawing Edwards water, it was observed that spring flows from the San Antonio Springs and San Pedro Springs decreased therefore conservation measures prove necessary due to increased usage of the aquifer over the years. Promoting conservation promotes efficient use of water therefore decreasing waste and saving supplies for future use.

Non-exempt permit holders (meaning that the water use is not solely used for domestic use) that withdraw more than three acre-feet must file a Groundwater Conservation Plan (GCP) with the

EAA. GCPs assist permitted Edwards' users to improve water efficiency and help meet groundwater withdrawal limitations and be prepared for water use reductions. In order to meet statutory requirements and promote the use of GCPs among permit holders, the EAA created a GCP that serves as a guidance document for the development of individual GCPs as well as be useful when the EAA provides biennial updates to the Texas Legislature about the EAA's GCP. The EAA GCP stipulates which BMPs are required to be implemented based on the water's purpose of use.

Once the GCP is on file with the EAA, the municipal and industrial permit holders submit triennial status reports that will describe the status of the implemented BMPs and ensure that their GCP is not deficient according to EAA rules.

Support for the Project: Describe to what extent the proposed project is supported by the identified plan. Address the following:

- *Is the project identified specifically in the planning effort?*

The EAA GCP recommends various Best Management Practices (BMPs) for permitted water users to conserve water using efficient technologies. One of the recommended BMPs for both municipal and industrial users is the installation of meters as a means of monitoring water usage. Municipal permit holders must meter all connections within their service area. Industrial permit holders are encouraged to implement sub-metering as an effective method of tracking water usage when water is used in multiple and distinctly different processes. These metering efforts will enable municipalities and industries to compare water usage with their metered well withdrawals.

- *Explain whether the proposed project implement a goal or address a need or problem identified in the existing planning effort?*

Metering is essential in monitoring water usage as well as detecting any water loss due to leakage within the water distribution system. Water loss is considered water waste which is prohibited in the EAA GCP and is a BMP required of municipal and industrial permit holders.

Explain how the proposed project has been determined as a priority in the existing planning effort as opposed to other potential projects/measures.

Included with the application is an "Affidavit of Individual to Act on Behalf of Applicant" signed by Roland Ruiz, General Manager on **April 22, 2022**.

Evaluation Criterion (C) Implementation and Results: *Up to 20 points may be awarded based upon the extent to which the applicant is capable of proceeding with the proposed project upon entering into a financial assistance agreement. Applicants that describe a detailed 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.*

- *Describe the implementation plan for the proposed project. Please include an estimated project schedule that shows the stages and duration of the proposed work, including major tasks, milestones, and dates.*

April, 2022: Application Submitted to the Bureau

- Sept, 2022: Successful notification of award from the Bureau
- Jan, 2023: Sign contract with the Bureau
- Feb, 2023: Initiate Environmental Compliance with local Bureau office.
- Mar, 2023: Order flowmeters from manufacturer
- April, 2023: Install 10 - 15 new meters at pumps
- Mar, 2024: Order flowmeters from manufacturer
- April, 2024: Install 10 - 15 new meters at pumps
- Dec, 2024: Prepare Final Project Report for Bureau

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

No permits will be required for this program.

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

No engineering or design work is needed for this project. EAA Field Technicians have identified needed sizes and meter models needed for this project.

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

No new policies or administrative actions are required for this project.

• *Describe the timeline for completion of environmental and cultural resource compliance.*

EAA has been in contact with the Oklahoma-Texas Area Office of the Bureau of Reclamation. Bureau staff reported that environmental compliance should not be an issue since the Project replaces existing meters and no new infrastructure is proposed.

Was the timeline for completion of environmental and cultural resource compliance discussed with the local Reclamation office?

Upon the successful award of this application, EAA staff will review meter installation sites and plans with Bureau staff from the Area Office to ensure compliance.

Evaluation Criterion (D) Nexus to Reclamation: *Up to 5 points may be awarded based on the extent that the proposal demonstrates a nexus between the proposed project and a Reclamation project or activity.*

Describe the nexus between the proposed project and a Reclamation project or activity, including:

- *Is the proposed project connected to a Reclamation project or activity? If so, how?*

The EAA was selected in 2011 for Water Smart: Water and Energy Efficiency Grant funding for the development of a Regional Water Conservation Program. This Bureau-sponsored program is one of the activities proposed as part of the Edwards Aquifer Habitat Conservation Plan (HCP)

to protect eight species identified as either threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) that live within the aquatic ecosystem of the San Marcos Springs, and the Comal Springs which are both fed by Edwards groundwater. Water is conserved through the implementation of Best Management Practices (BMPs) to include the replacement of inefficient plumbing fixtures, repair and replacement of water distribution infrastructure, conversion of commercial/industrial processes to more water efficient technology, and implementation of graywater/condensate/rainwater harvesting collection. These BMPs are subsidized by the Edwards Aquifer Region Water Conservation Program targeting water purveyors and other nonagricultural Edwards Aquifer users.

The development of AMR programs within the EAA is an example of improving water infrastructure and improving municipal and industrial processes through the incorporation of water distribution technologies consistent with the mission of the Bureau.

• *Does the applicant receive Reclamation project water? Is the project on Reclamation project lands or involving Reclamation facilities?*

No. EAA does not have Reclamation project land or facilities and does not receive Reclamation water.

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

Yes.

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

Yes.

Evaluation Criterion E—Presidential and Department of the Interior Priorities (10 points)

Up to **10 points** may be awarded based on the extent that the project demonstrates support for the Biden-Harris Administration's priorities, including E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, E.O. 13985: *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, and the President's memorandum, *Tribal Consultation and Strengthening Nation-to-Nation Relationships*. Points will be allocated based on the degree to which the project supports the priorities listed, and whether the connection to the priority(ies) is well supported in the application. Without repeating benefits already described in previous criteria, describe in detail how the proposed project supports a priority(ies) below.

E.1.5.1. Sub-criterion No. E1. Climate Change

Points will be awarded based on the extent the project will reduce climate pollution; increase resilience to the impacts of climate change; protect public health; and conserve our lands, waters, oceans, and biodiversity. Address the following as relevant to your project.

Combating the Climate Crisis

E.O. 14008: *Tackling the Climate Crisis at Home and Abroad*, focuses on increasing resilience to climate change and supporting climate-resilient development. For additional information on the impacts of climate change throughout the western United States, see:

<https://www.usbr.gov/climate/secure/docs/2021secure/2021SECURERReport.pdf>. Please describe how the project will address climate change, including:

- *Please provide specific details and examples on how the project will address the impacts of climate change and help combat the climate crisis.*

The proposed meters will have SCADA capabilities. Once implemented, field technicians will be able to read meters remotely, reducing overall vehicle use and reducing greenhouse gas

emissions. With the upgrade of mechanical propellor meters, drive time will be reduced while performing routine maintenance and meter readings.

• Does this proposed project strengthen water supply sustainability to increase resilience to climate change? Does the proposed project contribute to climate change resiliency in other ways not described above?

Yes. Increases in population and drought conditions have historically demonstrated a negative effect on water supplies by depleting current sources and reducing water supply reliability, respectively. Therefore, assessing the viability of water resources should involve accounting for climate conditions as these conditions directly affect how a population will use water.

The foundation for the EAA’s demand management includes the initiation of Critical Period Management Plans that address how groundwater withdrawals are reduced in times of emergency. These thresholds are specified in the CPMs and have a corresponding percent reduction that is applied to the permitted authorized amount to respond to drought conditions that may be a result of climate change.

E.1.5.2. Sub-criterion No. E2. Disadvantaged or Underserved Communities

Points will be awarded based on the extent to which the Project serves economically disadvantaged or underserved communities in rural or urban areas.

• Will the proposed project serve or benefit a disadvantaged or historically underserved community? Benefits can include, but are not limited to, public health and safety by addressing water quality, new water supplies, or economic growth opportunities.

Yes. 2019 data from the U.S. Census Bureau reports that the annual median household income for the State of Texas is **\$61,874**. The median annual income for two of the four counties in the EAA project area is less than the statewide annual median household level as shown in the table below:

EAA Project Counties	2019 Median Household Income
Medina	\$62,559.00
Bexar	\$57,157.00
Hays	\$68,717.00
Uvalde	\$41,679.00

Section 1015 of the Cooperative Watershed Act defines a disadvantaged community as one with an annual median household income that is less than 100 percent of the statewide annual median household income for the State. Consequently, the majority of the project area meets the criteria for a disadvantaged community in two of the four counties. (<https://data.census.gov>)

• Please describe in detail how the community is disadvantaged based on a combination of variables that may include:

- o Low income, high and/or persistent poverty*
- o High unemployment and underemployment*
- o Racial and ethnic residential segregation, particularly where the segregation stems from discrimination by government entities*
- o Linguistic isolation*
- o High housing cost burden and substandard housing*

- o Distressed neighborhoods*
- o High transportation cost burden and/or low transportation access*
- o Disproportionate environmental stressor burden and high cumulative impacts*
- o Limited water and sanitation access and affordability*
- o Disproportionate impacts from climate change*
- o High energy cost burden and low energy access*
- o Jobs lost through energy transition*
- o Access to healthcare*

As described above, much of the project area is at or below the median household level of income for the State of Texas. These counties rely heavily on the agricultural industry which is being plagued by the drought and higher prices input costs including seed, fuel, chemical and fertilizer. Water shortage creates a burden on the agricultural industry which has an effect on other industries, including retail, import/export, and energy.

- If the proposed project is providing benefits to an underserved community, provide sufficient information to demonstrate that the community meets the underserved definition in E.O. 13985, which includes populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life.*

E.1.5.3. Sub-criterion No. E.3. Tribal Benefits

Points will be awarded based on the extent to which the Project will honor the Federal government’s commitments to Tribal Nations.

- Does the proposed project directly serve and/or benefit a Tribe? Will the project improve water management for a Tribe?*

No tribes exist in the project area.

- Does the proposed project support Tribal resilience to climate change and drought impacts or provide other Tribal benefits such as improved public health and safety by addressing water quality, new water supplies, or economic growth opportunities?*

No tribes exist in the project area.

Environmental and Cultural Resources Compliance

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.

EAA plans to accomplish meter upgrades or improvements with this project. The meters will be in the same locations as previous meters and any environmental impacts will be minimal. All pipeline work to be done will be above ground installations.

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 proposed activities will not impact the San Marcos and Comal Springs aquatic ecosystems, which are the habitats to 12 Endangered and Threatened Species in the Edwards Aquifer. In fact, this project should have a beneficial effect on the habitat of Endangered and Threatened Species within these ecosystems.

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.

The EAA jurisdictional boundary encompasses several counties where wetlands do exist subject to the Federal Clean Water Act however no impacts are anticipated.

When was the water delivery system constructed?

The EAA became fully operational on June 28, 1996 and began managing water in 1998. The EAA has approximately 1200 metered wells within its boundaries to measure groundwater extraction. The wells for this project have been constructed over a period of several years beginning over twenty-five years ago.

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.

Discharge pipes of existing pumps will need slight modifications, but no changes will be made to canals, headgates, or flumes as a result of this project.

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.

The EAA jurisdictional boundary covers several counties and structures listed under the National Register of Historic Places do exist however, because this project does not involve construction, none will be affected as a result of this project.

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

The EAA jurisdictional boundary covers several counties and archeological sites do exist however, because this project does not involve construction, none will be affected as a result of this project.

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

The project will not have a disproportionately high or adverse effect on low income or minority populations.

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

The project will not limit access or ceremonial use of Indian sacred sites or affect tribal lands any other way

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.

Project Budget

Funding Plan

Table 1 - Total Project Cost Table

Funding Sources	% of Total Project Cost	Total Cost by Source
Costs to be reimbursed with the requested federal funding	50.0%	\$31,856
Costs to be paid by applicant, JVID	50.0%	\$31,856
TOTAL PROJECT COST	100%	\$63,712

Table 2 - Budget Proposal

Budget Item Description	Computation \$/unit	Quantity	Type (hours/days)	Total Cost
Salaries and Wages				
No salaries to be requested by this project				
Fringe Benefits				
No fringe benefits being requested by this project				
Travel				
No federal funds to be used for travel to install				
Equipment				
21 meters of various sizes SCADA-ready				\$52,871
Subtotal				\$52,871
Supplies and Materials				
SCADA Pulse Modules	\$ 65.00	9	ea	\$585
			ea	\$0
			ea	\$0
Subtotal				\$585
Contractual/Construction				
Meter Installation	\$400.00	21		\$8,400
Subtotal				\$8,400
Total Direct Costs				\$61,856
Indirect Costs			3%	\$1,855.68
Total Estimated Costs				\$63,712

Funding for our project will be provided by the WaterSMART grant and the EAA. No letters of commitment from outside sources will be needed.

Budget Narrative

The estimated project cost is **\$63,712**. Upon delivery of the supplies, the grant funds from the BOR will help pay for the equipment purchased from the meter distributors. In-kind contributions from EAA will be cash required to purchase meters. This will amount to approximately **\$31,586** as noted in the Budget Proposal. EAA will be responsible for all the labor, heavy equipment, and the materials needed for meter installation at the sites to accommodate the new equipment. and accessories as well as the staff time and services required for the administration and field work to install the meters. This will be an in-kind contribution to the project that is not reflected in the budget. In-kind contributions that do not cover our share will be made up by the EAA Operating fund.

Total Costs

The district requests **\$31,586** from the Bureau's Small-scale Water Efficiency Grant. The remaining **\$31,586** will come from the Edwards Aquifer Authority in cash and in-kind services.

Unique Entity Identifier and System for Award

The Edwards Aquifer Authority is registered on the SYSTEM for Award Management (SAM). The unique entity identifier is **V5KCLWCC76F8, CAGE/NCAGE:08GT9**. The Edwards Aquifer Authority will maintain an active SAM registration throughout the project.

Attachment I



3255 West Stetson Avenue
Hemet, CA 92545 USA
Tel (951) 652-6811
Fax (951) 652-3078
www.mccrometer.com

April 20, 2022

Edwards Aquifer Authority
Attn: Jose Barela, Field Operations Manager
900 E Quincy
San Antonio, TX 78215

Re: Bureau of Reclamation Water Smart Application: **"Municipal and Industrial Meter Upgrades for SCADA"**

Dear Mr. Barela:

McCrometer is glad to be a partner in the project titled **"Municipal and Industrial Meter Upgrades for SCADA"**. McCrometer will commit to supplying meters and technical support for SCADA integration upon the successful award of this grant proposal.

McCrometer has provided durable and accurate flow measurement devices for various industries for over 65 years. This project will support improved water management for groundwater preservation, and local communities in the Edwards Aquifer Region of the State of Texas.

McCrometer applauds the Bureau of Reclamation for the recognition of practices that will enhance irrigation water management in the industry of agriculture by supporting projects through the Water Smart Program and strongly encourages the approval of this proposal.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Kenneth A. Quandt".

Kenneth A. Quandt
Regulatory Development Manager, Agriculture
McCrometer, Inc.

Official Resolution

Affidavit of Individual to Act on Behalf of Applicant

Name: Roland Ruiz

Occupation: General Manager of the Edwards Aquifer Authority

I, Roland Ruiz, swear or affirm:

1. That I am the General Manager of the Edwards Aquifer Authority, located in Bexar County, Texas, and I have been authorized by the governing Board of Directors to serve as the designated representative to perform all reasonable and necessary actions in support of submitting a grant application to the Bureau of Reclamation's WaterSMART Small-Scale Water Efficiency Funding Opportunity.

2. I authorize the submission of this grant application to the Bureau of Reclamation requesting \$31,554.00 to purchase 21 various sized meters to be used as part of our municipal/industrial automated meter reading (AMR) project on behalf of the Edwards Aquifer Authority's Board of Directors. The Edwards Aquifer Authority will provide a cash match in the amount of \$31,555.00 for a total project cost of \$63,109.00.

Further affiant saith not.

I SWEAR OR AFFIRM THAT THE ABOVE AND FOREGOING REPRESENTATIONS ARE TRUE AND CORRECT TO THE BEST OF MY INFORMATION, KNOWLEDGE, AND BELIEF.



Roland Ruiz

General Manager

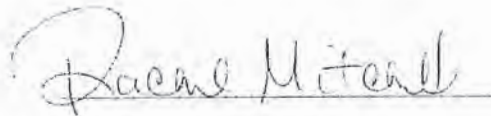
4.22.22

Date

STATE OF TEXAS

COUNTY OF BEXAR

I, the undersigned Notary Public, do hereby affirm that Roland Ruiz personally appeared before me on the 22nd day of APRIL 2022, and signed the above Affidavit as his free and voluntary act and deed.



Notary Public

