

Prepared For:

Notice of Funding Opportunity No. R22 AS



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Department of the Interior
Bureau of Reclamation
Water Resources & Planning Office

WaterSMART

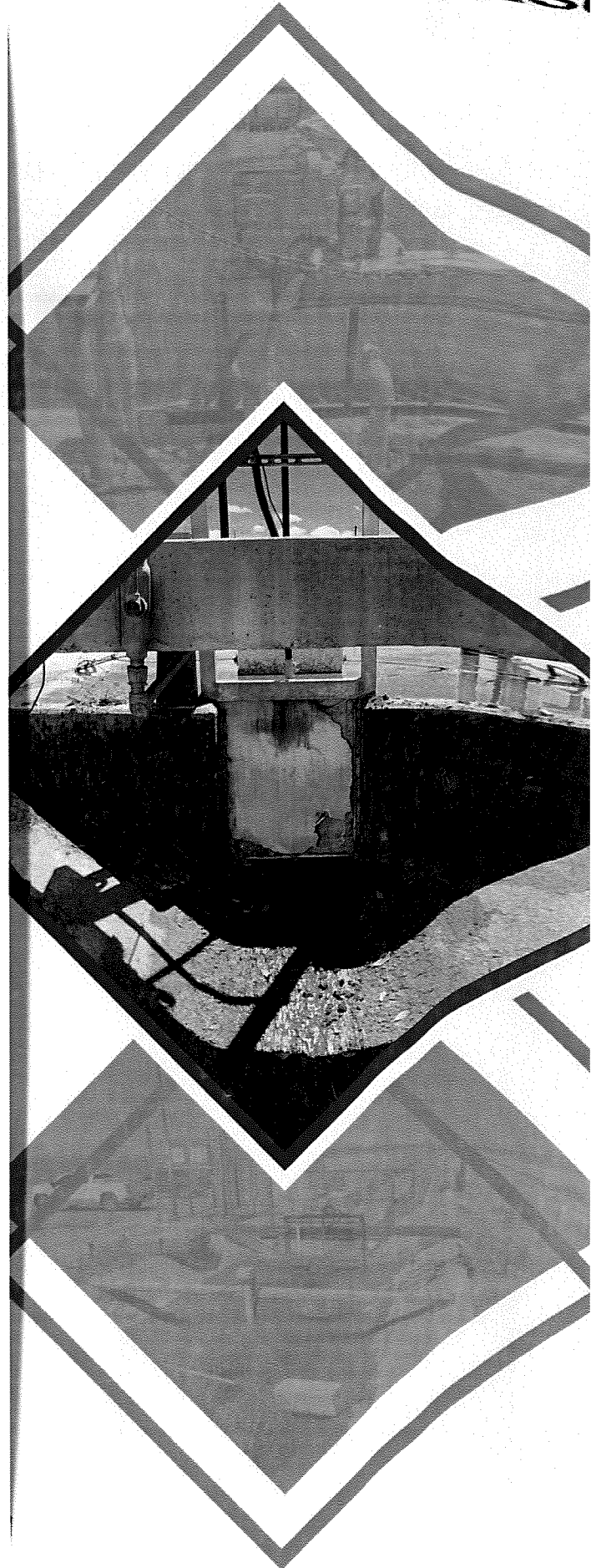
Small-Scale Water Efficiency Projects
CAIDD Phase 1A 2 New Rubicon SlipMeter
Gates & 1 New Rubicon FlumeGate Project

Prepared By:

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April 28, 2022
APR 28 '22 PM 12:59

Table of Contents	Page
TITLE PAGE	
TABLE OF CONTENTS	0
1. TECHNICAL PROPOSAL AND EVALUATION CRITERIA	1-15
1.1 Executive Summary	1
1.2 Project Location	2
1.3 Technical Project Description	2
1.4 Evaluation Criteria	6
2. PROJECT BUDGET	16
2.1 Funding Plan and Letters of Funding Commitment	16
2.2 Budget Proposal	16
2.3 Budget Narrative	18
3. ENVIRONMENTAL AND CULTURAL COMPLIANCE	21
4. REQUIRED PERMITS OR APPROVALS	22
5. LETTERS OF SUPPORT OR APPROVALS	22
6. OFFICIAL RESOLUTION	22
7. APPENDICES	22-40
Figures	
1. Location Map	2
2. Rubicon Gate Schematic	5
Tables	
1. Tentative Milestone/Task Schedule (12 Months)	12
2. CAIDD Disadvantaged Community Variables	14

1. Technical Proposal and Evaluation Criteria

1.1 Executive Summary

This application is being submitted on 04/28/2022 by	If NTP January 2023
Central Arizona Irrigation and Drainage District – Category A Applicant	Start January 2023
231 S. Sunshine Blvd., Eloy, AZ 85131 Pinal County	End December 2023

The Central Arizona Irrigation & Drainage District (CAIDD, District) is a political subdivision and municipal corporation of the State of Arizona. It was organized on May 11, 1964, by an order of the Board of Supervisors of the County, acting pursuant to Arizona statutes authorizing such entities for the purpose of providing a supply of irrigation water for agricultural use by constructing and operating an irrigation system and related works. The entire District is within Pinal County. The overall system consists of 41 miles of open channel main stem canals, 139.25 miles of open channel laterals, 34.75 miles of pipelines and 350 wells/pumps. The economy within the District boundary is almost entirely agricultural. Irrigation water delivered within the district comes from two sources: groundwater pumped from district operated wells and surface water conveyed from the Central Arizona Project (CAP) facilities. The main canals carry delivery water through to District lands, Tohono O’Odham Nation San Lucy Farm, Maricopa-Stanfield Irrigation and Drainage District (MSIDD), and the Ak-Chin Indian Reservation (Ak-Chin). The canal system from the CAP received its first water around 1985 and the original SCADA control system was done in-house and implemented on the main canals in 1990, so the system is very old and outdated. This proposed project is **the 2nd USBR grant application and the 1st Rubicon Gates Installation Project – CAIDD Phase IA 2 New Rubicon SlipMeter Gates and 1 New Rubicon FlumeGate Project** and is part of the overall strategy to slowly upgrade the irrigation system with real-time technology, new automated gates, and associated components. CAIDD plans to replace these three gates (CF1, N1A, and N50), which are deteriorated, leaking, poorly functioning, and require constant on-site monitoring and maintenance with three new Rubicon gates (36” SlipMeter Gate, 48” FlumeGate, and 24” SlipMeter Gate) with Network controls.

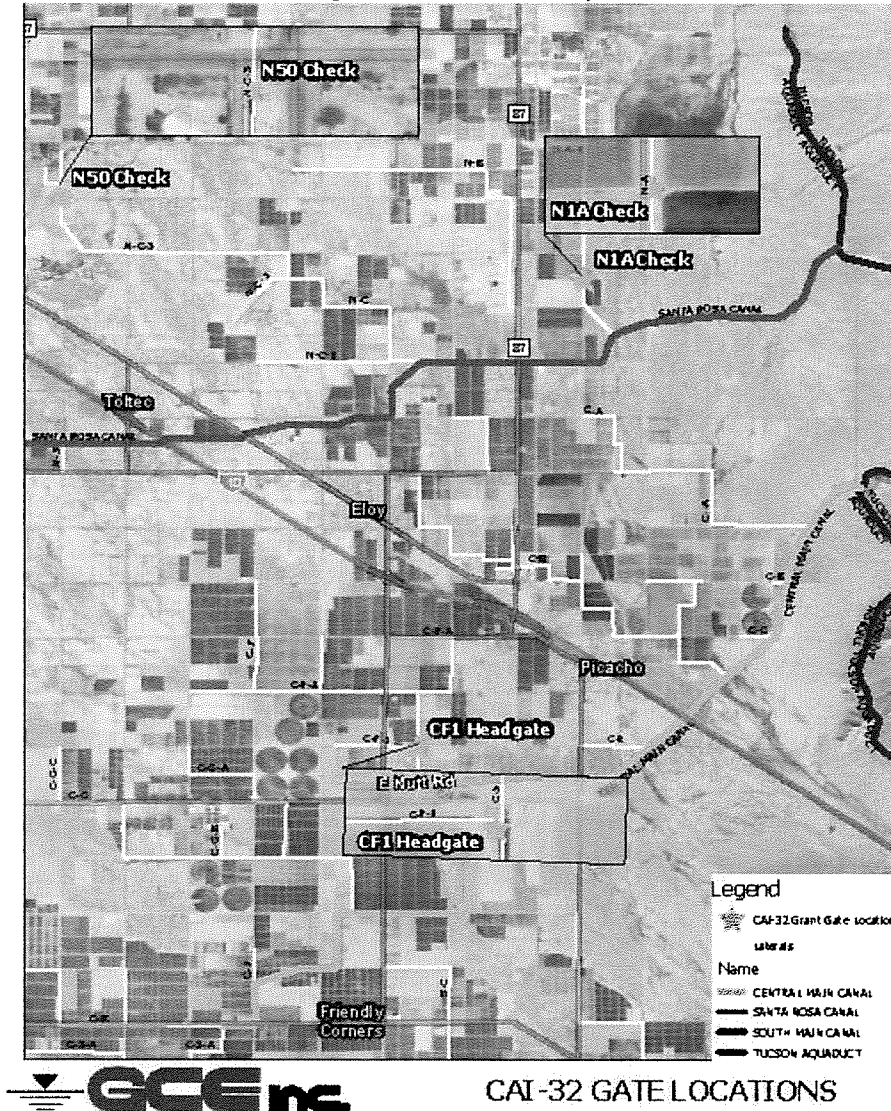
This Small-Scale Water Efficiency project is a priority to CAIDD. It has been brought forth and approved by the Board. The District hopes to leverage funding from the WaterSMART program to help complete this multi-phase project, meeting both CAIDD’s and USBR’s goals to conserve and better manage our water resources and increase efficiency of our system. Stakeholders include farmers and customers in the District, Tohono O’Odham Nation, TOFA and San Lucy Farms, MSIDD, Ak-Chin and the USBR. Further, the entire project area is within the Pinal Active Management Areas (AMA) and is in-line with the goals of the AMA. The District would like to work collaboratively with Native Communities to be good neighbors and stewards to protect the natural environment that we share along our borders. The District economy is primarily agricultural and this project will help us preserve this economy for as long as feasible and preserve groundwater resources for future use. CAIDD will accomplish the goals established for the WaterSMART program and President Biden’s Executive Orders by leveraging funding to conserve and better manage our water resources and increase the efficiency of the system by slowly creating improved operations via an integrated network of automated Rubicon gates. The District plans to perform pre-construction and construction work anytime between **January 2023 and December 2023**, depending upon NTP.

1.2 Project Location

The project site is located near the town of Eloy, in Pinal County, Arizona. The gates are along CAIDD Lateral N-A, N-C, and C-F.

CF1 Turnout gate:	Latitude: 32° 41' 25.27" N	Longitude: 111° 32' 32.37" W
N1A Check gate:	Latitude: 32° 48' 51.24" N	Longitude: 111° 29' 52.92" W
N50 Check gate:	Latitude: 32° 50' 08.57" N	Longitude: 111° 38' 13.13" W

Figure 1 – Location Map



1.3 Technical Project Description

The Central Arizona Irrigation & Drainage District (CAIDD, District) is a political subdivision and municipal corporation of the State of Arizona. It was organized on May 11, 1964, by an order of the Board of Supervisors of the County, acting pursuant to Arizona statutes authorizing such entities for the purpose of providing a supply of irrigation water for agricultural use by

constructing and operating an irrigation system and related works. The entire District is within Pinal County. The overall system consists of 41 miles of open channel main stem canals, 139.25 miles of open channel laterals, 34.75 miles of pipelines and 350 wells/pumps. CAIDD consists of a total area of approximately 87,600 acres of active irrigated farmlands. In 1988, the United States purchased approximately 2,910 acres within CAIDD as reservation trust land for the Tohono O'odham Nation San Lucy Farm. The land is used for agricultural purposes and the Tohono O'odham Farming Authority (TOFA) have entered into agreements with CAIDD for annual water service.

The economy of the District and the surrounding area is almost entirely agricultural. The principal crops produced in the district are cotton, grains, alfalfa, feed grain for dairies, nursery trees, and vegetables. Irrigation water delivered within the district comes from two sources: groundwater pumped from district operated wells and surface water conveyed from the Central Arizona Project (CAP) facilities. The surface water from the CAP is delivered through a system of canals, pipelines and appurtenances beginning at the Santa Rosa Canal (SRC), Central Main Canal, and South Main Canal turnout off the CAP Canal southeast of the city of Eloy. The main canals carry delivery water to District lands, TOFA San Lucy Farms, Maricopa-Stanfield Irrigation and Drainage District (MSIDD), and the Ak-Chin Indian Reservation (Ak-Chin). The canal system from the CAP received water around 1985, so the irrigation facilities are about 37 years, and the original SCADA control system was done in-house and implemented on the main canals in 1990, therefore the SCADA elements are over 32 years old. The District SCADA system is outdated, and replacement requires upgrade to modern control and communications.

This proposed project is **the 2nd USBR grant application and the 1st Rubicon Gates Installation Project – CAIDD Phase IA 2 New Rubicon SlipMeter Gates and 1 New Rubicon FlumeGate Project** and is part of the overall strategy to slowly upgrade the irrigation system with real-time technology, new automated gates, and associated components. CAIDD plans to replace these three gates, which are deteriorated, leaking, poorly functioning, and require constant on-site monitoring and maintenance with three new Rubicon discussed below:

CF1 Turnout Gate – The existing turnout serves Lateral CF and has been reported to be leaking. The existing concrete turnout structure is in good condition with some scale build up from the water which will need to be blasted clean prior to installing a new gate. The proposed improvements are to remove the existing gate and install a new 36" Rubicon SlipMeter gate. The SlipMeter gate will be an improvement to the site by adding the benefit of flow measurement monitoring. Additionally, the Slipmeter gate can be programmed to deliver a constant flow rate. The new gate will reduce spills by solving the leaking gate issue and providing accurate flow rate information to the operators to schedule the deliveries. Although the existing gate can be remotely operated, the district operators commented that their SCADA system is very old and hard to use. The Rubicon Slipmeter gate uses new technology and can be accessed with a smart phone. The existing gate binds up and won't open with the remote actuators so it must be operated manually.

N1A Check Gate – The existing structure is Fullerform crank gate designed for small on farm ditches, it had some additional reinforcement added to it, but it wasn't enough, and the gate has bent from the weight of the water pushing on it. The proposed improvements are to install

a precast U-channel downstream of the existing structure and upstream of an existing drop structure with concrete lining transitions. A new 48" Rubicon Flumegate will be mounted to the U-channel at the invert of the structure to reduce sediment build up. The Rubicon Flumegate comes with flow measurement and remote telemetry for automation and control. With this gate the district operators will be able to remotely monitor and control the flow rate over the Flumegate and the water level upstream to provide consistent deliveries to the users, monitor and reduce the spills.

N50 Check Gate – The existing structure is a trapezoidal concrete spill wall with a 24-inch gate mounted to the front. The gate is heavily corroded and leaking. The proposed improvements are to dowel into the existing concrete structure and pour a concrete face to the front of the structure to mount a Rubicon Slipmeter gate. The existing concrete will need to have the scale and debris blasted away prior to pouring new concrete. The 24" Rubicon Slipmeter gate can be set in level mode to hold a constant water level upstream by opening and closing to let the spill flows go downstream while providing the intended service upstream.

Irrigation and agronomic cultural practices must evolve to meet resource limitations and production challenges to remain economically viable. It is critical that CAIDD irrigation water management improve and grow to match on-farm unit measurement accuracy, controls, and applications that are becoming increasingly more sophisticated. This includes the conversion of irrigation systems from gravity applied flood irrigation to other forms of irrigation like micro-sprinklers, center pivot, linear move systems, or drip irrigation. These modern methods tend to require more advanced sensing of inputs and operate most efficiently when water quantity parameters (flow rate, depth, duration) and controls (on demand and shut off) are accurate.

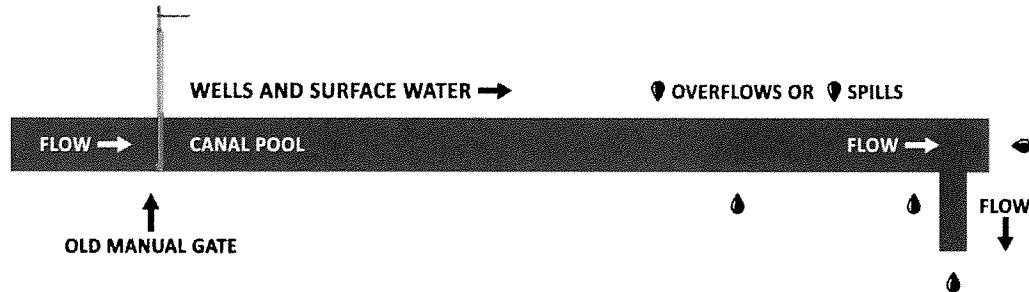
Two pages from the Rubicon Data sheets for the SlipMeter Gate System (in the Appendix Section) have been provided for reference in Section 1.4 Criteria C: Project Implementation and the complete information package from Rubicon has been provided in the Appendix. A schematic (Figure 2) has also been provided below that illustrates the conditions "Before and After" for the installation of the new automated SlipMeter gate system.

This Small-Scale Water Efficiency project is a priority to CAIDD. It has been brought forth and approved by the Board. The District hopes to leverage funding from the WaterSMART program to help complete this multi-phase project, meeting both CAIDD's and USBR's goals to conserve and better manage our water resources and increase efficiency of our system. Stakeholders include farmers and customers in the District, Tohono O'Odham Nation, TOFA and San Lucy Farms, MSIDD, Ak-Chin and the USBR. Further, the entire project area is within the Pinal Active Management Areas (AMA) and is in-line with the goals of the AMA. The District would like to work collaboratively with Native Communities to be good neighbors and stewards to protect the natural environment that we share along our borders. The District economy is primarily agricultural and this project will help preserve this economy for as long as feasible and preserve groundwater resources for future use. CAIDD will accomplish the goals established for the WaterSMART program and President Biden's Executive Orders by leveraging funding to conserve and better manage our water resources and increase efficiency of our system by slowly improving operations via an integrated network of automated Rubicon gates. The District plan to perform pre-construction and construction work anytime between **January**

2023 and December 2023, depending upon NTP. Since the primary use of the water is agricultural, being able to perform pre-construction work to meet the construction schedule in the winter is ideal due to less demand, to reduce impacts to the producers/growers.

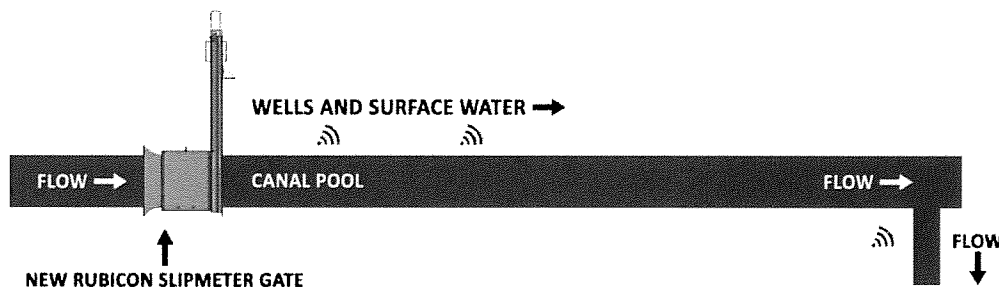
Figure 2 – Schematic Design of Automated System Before and After New Installation

MANUAL GATES (Existing)



- Gate adjustment, ditch rider on-site full-time
- Try to maintain constant flow/elevation – fluctuation +/- 2FT, yields variable, inefficient deliveries
- Must anticipate when to stop pumps and adjust gates to match flows and provide water needed
- Close to soon → inadequate delivery
- Close too late → excess flows carry downstream can cause overflow/flooding or loss (downstream gates open to prevent flooding and system overflow)

AUTOMATED GATES (New Installation)



- Adjusts automatically, ditch rider uses integrated network controls
- Maintains delivery ditch pool constant delivery flow
- Gate adjusts precisely when needed to varying water levels on canal pool
- Yields steady deliveries

List of Materials:

Appurtenances and structures for three new Rubicon Gates: Concrete repair, structural repair, new structure, anchor bolts for new gate frame, epoxy for old bolt anchors, new trash rack, new handrail, walkway, electrical wiring, and safety features.

Safety Supplies: Shade, Coolers, Water/Electrolytes, Gloves, Safety Glasses, Reflective Vests, Hard Hats, Steel-Toed Boots, Signage, Cones, Barricades, COVID 19 Plan and PPE

List of Equipment:

Construction Equipment to be used for this project would include: Boom Truck, Front End Loader John Deere, Dump Truck, Rubber Tired Excavator Gradall, Water Truck, Project Manager Truck, GPS Survey Equipment, Angle Grinder, Torch, and Pressure Washer

Automation, Measurement Devices and Controls:

The SlipMeter includes the following items:

- The SlipMeter is a precision flow control and flow measurement gate that measures fully submerged flows (and partial-full flow in partial-full models) and mounts directly to a turnout headwall with no straight pipe requirements.
- The SlipMeter comes equipped with an internal and external frame complete with stainless steel anchor's, epoxy capsules, and polyurethane sealant.
- Each SlipMeter comes equipped with a separate standalone control pedestal which includes a display and keypad, solar panel power system and a 16 ft mast for mounting of communication antenna, RTUs, radio and antenna by others.
- The SlipMeter comes complete with an integrated power supply comprising an 85W solar panel, a charge controller, and a 48Ah 12-volt deep cycling battery pack.
- Standard Rubicon local controller software, including automatic local/remote flow control mode, local/remote gate position mode and local manual mode.

The FlumeGate includes the following items:

- The FlumeGate is a combination automated overshot control gate and flow measurement device that mounts in new or existing structures, as a complete turnkey installation.
- Each FlumeGate comes equipped with a control pedestal which includes a standard processor and keypad for automation (for remote mounting), solar panel power system and a 16 ft mast for mounting of a communication antenna; one aluminum external mounting frame, complete with stainless steel anchors, Hilti epoxy and SIKA sealant.
- Included is one (or more) each pack includes dual battery 12-volt DC deep cycling batteries
- One set of primary ultrasonic water level sensors (long range)
- Standard Rubicon local flow and level software (level control requires tuning).

1.4 Evaluation Criteria

A. Project Benefits

Description of Expected Benefits to Category A: CAIDD Water Systems:

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

CAIDD's existing water delivery system faces challenges due to drought in the southwestern United States. The **Tier 1 shortage** resulted in a substantial cut to Arizona's share of the Colorado River – about 30% of Central Arizona Project's normal supply; nearly 18% of Arizona's total Colorado River supply. Tier 1 is triggered if Lake Mead falls below 1,075 ft., therefore Arizona must cut its Colorado River water supply by 320,000 AF. Tier 2 is triggered if Lake Mead falls below 1,050 ft., in which case Arizona must cut 400,000 AF. In many ways the District and Central Arizona are like the spear for drought as reductions will fall largely to our agricultural users. Tier 2 cuts would be more widespread among users to shore up levels at Lake Mead. Again, the hardest hit, will be the agriculture industry in Pinal County including CAIDD that needs to install infrastructure to help augment the loss of surface water and optimize water

resources by installing a new SCADA system, wells, pipelines, interconnects, pumping stations, and regulation storage to address water quality issues. With the current state of the districts aging infrastructure and controls, it is difficult to precisely match water supply with demand to prevent mismatched flows and minimize operational spills. At the proposed improvement location, the existing gates are currently leaking unmeasured flows downstream. This project will help improve the **overall water management of the irrigation system by:**

- 1) Reducing Pumping and Energy Costs (Allowing more funding available for improvements)
- 2) Reducing operational losses from spills and overflows (est. 3,500 to 4,000 acre feet/year)
- 3) Reducing risk of crop damage from flooding, uncontrolled releases, or overtopping
- 4) Reducing manual operating costs (Allowing more funding for improvements)
- 5) Reducing delivery level fluctuations (Less water needed with optimum delivery/flow)
- 6) Enhancing the capability to provide remote monitoring and operation to CAIDD staff (Better resource/staff management)
- 7) Providing the ability to identify leaks, seepage, and unauthorized usage utilizing the precise flow rate measurement of the upgraded gate regulator (Timely preventative actions)
- 8) Providing full integration between flow regulation, gate structure, and groundwater pumps (Accurate water quantity delivery – no excess)
- 9) Improving on-farm water use efficiency reduction in fertilizer protecting the groundwater.
- 10) Providing constant supply levels to maintain more constant flow rates through turnouts to improve levels of service to water users (Less water needed with optimum elevation/flow)
- 11) Reducing “Order On” Lead Times to allow water delivery to be more precisely timed to crop needs (Less water needed)
- 12) Reducing “Order Off” Lead Times to allow precise volumes applied to farm (Less water)
- 13) Providing irrigation decision support tools, and digital monitoring of water usage and flow levels for water users (Efficient, timely and convenient)
- 14) Providing the ability to match water supply more precisely to crop (More accurate matching of need/demand with actual water quantity needed).
- 15) Reducing costs from reduction in water quantity delivered and person-hours (Items 1-15).

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

YES, CAIDD currently had an annual shortfall is approximately 46,000 acre-feet on average with more shortfalls anticipated due to drought. Shortage impacts usually occur during periods of above normal temperatures in the growing season when there is high demand, or at the end of the year when the mandated reduced allotment has been used (affected by climate change and drought). The District tries to schedule water deliveries to offset this problem. Unfortunately, CAIDD has to proportionally reduce the water delivery allocation for each farmer moving forward due to water shortage.

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

YES, from incidents such as overflows/spills or insufficient delivery that can cause catastrophic crop damage or bacterial contamination on produce causing serious illness or death (*compounded by Climate Change*). In case of severe drought and state imposed mandates, this project’s water savings could prevent an inability to provide for a water call (delivery request). Additionally, eliminating leaking gate spills to conserve water has the potential to prevent a lawsuit from TOFA San Lucy Farms or Ak-Chin, users downstream on the Santa Rosa Canal.

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

The gate will continue to leak wasting surface water in this time of drought. There is also a risk of lawsuit from Ak-Chin as the districts allotment from the CAP continues to diminish and they become the primary user of the canal. Without the grant we would not be able to implement improvements identified to **better manage** and improve water delivery efficiency and improve our groundwater management for drought resiliency. As described above consequences could include catastrophic crop damage, serious illness or death, economic loss, lawsuits, increased costs to growers, as well as a lack of water during severe drought conditions. Economic losses to growers from shortfalls are very high ranging from \$3M to \$4.5M per year.

o ***Are customer water restrictions currently required?***

YES, due to drought, mandatory water restrictions have been imposed on CAIDD. CAIDD handles these shortfalls by proportionally reducing the water delivery allocation for each farmer moving forward due to the District water storage.

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

Potential Shortfalls are a primary concern: If drought continues, surface water supply quantities from the CAP will be reduced so accurate measurement and control are critical to managing the water efficiently. Most droughts occur after several years of little rainfall and produce a cumulative effect. Our strategy is to prioritize and complete step-wise yearly improvement projects to address these effects. This turnout serves an area with restricted groundwater pumping, making the surface water it delivers vital to the water users.

Broader Benefits: Description of Broader Benefits:

• **Will the project improve broader water supply reliability at sub-basin or basin scale?**

CAIDD is located in the Lower Colorado River Basin - Gila River Valley. The District is entirely within the boundaries of Pinal County an area highly affected by Tier 1 reductions. Stakeholders include customers in the District, MSIDD, Tohono O'Odham Nation, TOFA San Lucy Farms, Ak-Chin and the USBR. Local water conservation measures support the local groundwater basin and the larger Lower Colorado River basin. Improving efficiency of delivery to TOFA and Ak-Chin will reduce stress on Lake Mead. Also, less pumping protects local groundwater and sustains ecosystems. Further, the entire District is within the Pinal AMA and supports the goals of the AMA for groundwater. This project will provide a buffer against future state or federal mandated reductions improving reliability and sustainability of our system. It will allow us to save water through better management (automation) and reduction of groundwater removal by reducing pumping, thus improving drought resiliency and contributing to the overall health of this basin and surrounding fragile desert ecosystem. These improvements also will result in improved on-farm efficiency and crop production in the sub-basin.

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

YES, this project demonstrates collaboration between the water districts, Tohono O'Odham Nation, TOFA San Lucy Farm, Ak-Chin, and BOR. Once tied into SCADA it will enhance collaboration and information sharing between the stakeholders. It can be used as an example to other water managers reflecting how assessment, planning, usage, need, coupled with

automation and new technology can be used to better manage water. Especially when operating under various conditions (distance from source, drought and climate change).

- **Will the proposed project positively impacts/benefit various sectors and economies within the applicable geographic area?**

Expected Geographic Scope Benefit: Reduction of ground water removal by reducing pumping, contributes to the overall health of the surrounding fragile desert ecosystem that will improve sustainability and help address drought and climate change issues. Local communities and labor pool will benefit from positive agri-business. Fallowing of less lands due to improved water management reduces dust and pollution affecting human health in Greater Pinal County. Any water conservation measures that support the lower Colorado River basin and Gila River basin will help sustain wetland and riparian ecosystems as well as the Indian Tribes.

Specific Topics (Sectors and Areas) Positive Impacts/Benefits: Economic Positive Impacts/Benefits:

The specific problems CAIDD faces are:

Agricultural – economic (less water needed, less restriction on crop types, less danger of crop damage from overflows/flooding, reduce shortfalls, less energy needed for pumps, less danger of lawsuits, losses from bacterial contamination or flooding). Reduce O&M cost so funding can be used for other deteriorating structures. Enable implementation of On-Farm improvements.

Environmental – Less noxious/invasive weeds, less erosion, conservation support healthier ecosystem (Native plants, habitat, native species and migratory birds). Fallowing of less lands reduces dust and pollution affecting human health in Greater Pinal County.

Recreational/Tourism – Santa Cruz River/Watershed, major washes (Greene Wash, Santa Rosa Wash, Brawley Wash, Blanco Wash, El Tiro Wash, Mammoth Wash, etc.) – Improved camping/hiking/photography/bird watching.

Cultural – Protection and preservation of native gathering sites (plants and clay), ancient trails, village or ceremonial site.

Food Safety – Less danger of catastrophic crop disease or contamination due to better water elevation controls to prevent sedimentation in canals serving fields with food crops.

Public Safety – Less residual flooding from overflow and spillage resulting in unsafe driving conditions and erosion of road and ditch banks. Less dust pollution and airborne illnesses.

- **Will the project complement work being done in coordination with NRCS in the area?**

YES, this project would greatly enhance the local farmers ability to make “On-Farm” water efficiency improvements through the NRCS EQIP program, however, until CAIDD can provide better controlled water delivery systems (flow rate and elevation), it is difficult for them to make these improvements. The NRCS will help the district plan and develop projects that complement each other, improving the overall system. Especially in the Western states where drought, climate change and aging infrastructure are affected.

- **Will the project help address drought conditions at the sub-basin or basin scale?**

- 1) Preventing possible water-related crisis (shortfalls or flooding) – creating resiliency
- 2) Leveraging funding to conserve and better manage the districts water resources and increase efficiency of their system, thus reducing quantities delivered during drought.
- 3) Improving water conservation, efficiency, and effectiveness of water delivery system to reduce water quantities.

- 4) By reducing water quantities allowing water to be used by lower priority users that have shortfalls and mandatory water reductions during drought conditions.
- 5) Reduce groundwater pumping and improve drought resiliency and basin dependence.

B. Planning Efforts and Supporting the Project

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

Our “Water Conservation Plan” mandates that we periodically assess our water delivery system and identify problems or needs as we adapt to meet changing conditions identifying new technologies and strategies. This Small-Scale Water Efficiency project is a priority to CAIDD and is in the final design stage by George Cairo Engineering, Inc. (GCE) who specialize in irrigation district modernization, also receiving input from Rubicon Systems Australia. CAIDD works diligently to improve our irrigation system with very little funding and resources. CAIDD has worked to develop a water delivery system plan to help us prioritize projects to modernize our aging infrastructure with state-of-the-art technology like “tried and tested” Rubicon Gates. The plan will be updated by GCE then continue to update our plan annually.

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

Each year, the district identifies and prioritizes their system needs and problems, projects not addressed in the previous year are added. Their criteria include the following:

- 1) Is the project (components) listed as a priority on their Capital Improvement Plan and Water Conservation Plan. **YES**
- 2) Can the problem or need be remedied with existing resources and funds? **NO, need the USBR match**
- 3) What benefits will occur from the corrective action taken (water/monetary savings, efficiency, sustainability, annual maintenance, crop losses, shortfalls, acre foot savings). **ALL**
- 4) Are additional resources and funds available if the existing funds are not available? **NO**
- 5) Recommendations from SOR. **IN PROGRESS**

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

The proposed project is ranked high in our current plan for water management due to its location, leaking volume, and prioritization indexing. This Small-Scale Water Efficiency project has also been approved by the CAIDD Board. The board and the CAIDD Users are **100% supportive of this priority project** to slowly improve the irrigation system. See letters of support in the Appendix.

C. Implementation and Results

- **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.**

Once the Categorical Exclusion is completed and the district receives the NTP, they will begin initial planning. An Action Plan will be developed that lists each task, scheduled interval, responsible party, comments/notes and when the activity or task is completed and by whom. A work plan will also be completed. Major phases will include:

Engineering/Design Work Required for Project (5 months) Allows for plenty of time for review.

This technical support will be performed by GCE with input from Rubicon both have provided professional services for installation of automated Rubicon gates.

- Design and Fabrication of 2 Rubicon SlipMeter Gates and 1 Rubicon FlumeGate, Controls and Framework - Rubicon
- Design of Concrete and Structures Modifications and Gate Installation Site Area and Appurtenances – GCE, Inc.
- Order Gates & Materials – CAIDD (Long Lead Item, 6 months lead time for fabrication)

Pre-Construction/Site Preparation for Project (4 Weeks) One site

- On-site support/final planning and safety/COVID 19 meetings – GCE and Rubicon, concrete and civil works contractor.
- Mobilization of Employees and Equipment
- Disconnect existing electrical facilities for the existing gate

Construction and Installation (4-6 Weeks) Three sites

- Implementation of all safety measures and COVID 19 requirements
- Removal of existing gates and demolition/removal of any required structure elements – Contractor and CAIDD
- Continue to Coordinate/schedule with affected water user(s) – CAIDD
- Final Site Preparation and Structure Modification – CAIDD and Contractor
- Installation of the SlipMeter Gate (mount to concrete structure) – Rubicon and Contractor, GCE and Rubicon (Oversee)

Post-Construction (1 Week):

- Installation/testing of automation systems/controls (all activities not requiring dry-out)
- Commission gates and certify accurate measurement and operation
- Postmortem to discuss lessons learned

Closeout/Reports:

As required (Progress Reports - Quarterly or Semi-Annual).

Document final installation

Final report with documentation

SlipMeter Gate Specifications are provided in the Appendix

Table 1, the Tentative Milestone/Task Schedule is provided in the following page.

- Describe any permits that will be required, along with the process for obtaining such permits. NONE.
- Identify and describe any engineering or design work performed specifically in support of the proposed project.

Design by GCE and Fabrication of SlipMeter Gates and FlumeGate, Controls and Framework by Rubicon. Design of Structure Modification, Concrete Repair, Aprons, Walkway, Safety Handrails, Electrical Wiring, Lighting and Appurtenances by GCE. If environmental compliance work is required, GCE will work to meet the requirements.

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

None. No new policies or actions, CAIDD always gets prior approval from their board and coordinates improvement projects with the water users to minimize impact to their operations.

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

YES, all work will comply with Federal environmental and cultural resource laws and other required regulations. Our engineer, GCE met with the local USBR Office Environmental and Cultural Resource staff to understand the potential requirements for this project. The facility is less than 50 years old. The project area is all within USBR ROW. All work and staging will stay within the already disturbed area within the USBR ROW with no new ground disturbance.

Table 1 – Tentative Milestone/Task Schedule

Milestone/Task	Planned Start Date	Planned Completion Date
USBR Notice of Award	01/01/23	01/01/23
USBR Notice to Proceed and Contract Execution <i>Can take up to 6 months for Rubicon to fabricate gate and ship gate from Australia. May order with USBR approval before contract execution.</i>	01/01/23	01/31/23
USBR Categorical Exclusion/Environmental Compliance Review CAIDD & GCE to work closely with USBR Environmental & Cultural Resources	02/01/23	03/31/23
Pre-Construction Contractor/Vendor Procurement: Engineering/Design, Site Area Prep. and Gates with associated structures, Contractor	02/01/23	10/14/23
Construction/Installation Coordinate/schedule with affected water user(s), Site Preparation, Removal of Existing Gates, Structure Modifications, Installation of SlipMeter Gates and FlumeGates, Cleanup and Debris Removal	10/15/23 ¹	11/30/23 ¹
Completion Closeout/Final Report	12/01/23	12/31/23

¹ Construction and Installation will take about 4-6 weeks in the late winter between these two dates. CAIDD will schedule the work to accommodate producers/growers. Ideally, construction will start as soon as possible with procurement late 2022 or early 2023, but unless NTP is received by December 2022 or January 2023 from USBR, this is unlikely.

D. Nexus to Reclamation

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

YES, this project is hydraulically connected to the CAP and the Lower Colorado River Basin and Reclamation goals of improving efficiency and conservation of water systems supporting resiliency and basin drought water management.

- **Does the applicant receive Reclamation project water?**

YES, the District, Ak-Chin, & TOFO receives Colorado River surface water via the CAP. The surface water from the CAP is delivered through a system of canals, pipelines and

appurtenances beginning at the Santa Rosa Canal, Central Main, and South Main turnout off the CAP Canal.

o ***Is the project on Reclamation project lands or involving Reclamation facilities?***

YES, CAIDD as a recipient of surface water from the CAP a project funded and built as part of Arizona Water Settlement and the Colorado River Basin Act we involve Reclamation facilities.

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

YES, there is Reclamation activity since it is the tip of the spear dealing with drought impacts in the Colorado River basin. Reclamation is heavily involved in the basin with the application of the latest science and technology through competitive funding of water conservation projects.

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

YES, Lower Colorado River Basin and it is a Reclamation Project.

E. Presidential and Department of the Interior Priorities

Sub-criterion No. E1. Climate Change

Combating the Climate Crisis

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

CAIDD uses a “Best Practices” model by **conserving, protecting, and restoring** their natural resources (water and subsequent watersheds and habitats) by a variety of water conservation activities as previously discussed. The districts partnership with farmers/producers enables them to work together to develop strategies to address the climate crisis through new and innovative agricultural conservation activities. Regarding the 30 by 30 initiative, with NCRS and USDA they are identifying On-Farm projects to reduce carbon emissions and promote circular biodiversity, especially in the riparian and watersheds that border the district.

Reducing climate pollution: Agricultural Greenhouse Gas Emissions (10% of total in US)

1) Reduce carbon emissions through use of solar powered SCADA units and reduced O&M time requiring less travel of on-site vehicles.

Protecting public health: According to the CDC effects from Climate Change include increased incidence of respiratory and cardiovascular disease, injury and death due to extreme weather events, heat wave, droughts and floods causing losses to property, crops and change in food distribution, water-borne illnesses and mental health (CDC). This is especially true in rural, underserved, low-income populations such as those in the District area. This project will:

- 1) Improve air quality by reducing carbon emissions through use of solar powered SCADA units and reduced O&M time requiring on-site vehicles and dust generated from dirt roads.
- 2) Reduce risk of biological contamination by automating controls to reduce incidence of spills, overflows and flooding.
- 3) Reduce cumulative effects from poor health (Type 2 Diabetes, Respiratory and Cardiovascular diseases) and reduce fugitive dust from fallowed lands.

Conserving our lands, waters, oceans, and biodiversity:

By conserving water, we promote biodiversity, endangered species in this desert habitat rely on the Lower Colorado River and its backwaters, riparian areas and natural lakes and the marshy

habitat it supports for nesting, spawning and daily life. It also is part of the migration pathway for many bird species. Their habitat was greatly affected by the dams constructed along the Colorado River and then by the increased demand for water by towns and farming. During drought conditions this is intensified, and their critical habitat threatened. Particularly during the summer when water demands are increased. Numerous washes, riparian and marshy areas form a perimeter between the agricultural fields and the canals, the Gila River (North) as well as the mountains (West, South and East) that divert runoff from rainfall into natural riparian areas.

- **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, it improves efficiency of the delivery system preventing leakage/seepage, overflows/flooding/spills, constant/reliable water flow, improve quantity (water elevation) and water quality. This will help address any shortfalls, as well as helping with future adverse conditions caused by drought and climate change.

The proposed action helps conserve water by reducing demands for surface water and future pumping thereby it contributes to the overall resiliency of the communities that share these limited resources to survive and thrive. This project is in-line with President Biden and DOI objectives and drought resiliency for the Lower Colorado River Basin.

Sub-criterion No. E2. Disadvantaged or Underserved Communities

- **Will the proposed project serve or benefit a disadvantaged or historically underserved community?**

YES, the project is located in Pinal County Eloy a disadvantaged and historically underserved area. Economic Growth Opportunities – reduced farming costs allow for more employment and help create 2nd tier producers (value added products).

Public Health and Safety as related to:

Water Quality: Improve due to more efficient groundwater use. See page 13, 3rd paragraph.
 Economic Growth Opportunities – reduced farming costs allow for more employment and help create 2nd tier producers (value added products).

- **Please describe in detail how the community is disadvantaged based on a combination of variables.**

Without these improvements consequences include: shortfalls during severe drought conditions adversely effecting Tribal income from farming and land leases as well as tourism and recreation, additional groundwater pumping and energy consumption, and loss of riparian or watershed areas for traditional gathering and as habitat for native species.

Table 2 – CAIDD Disadvantaged Community Variables

Central Arizona Irrigation and Drainage District Disadvantaged Community Variables			
Variable	Eloy	Coolidge	Tohono O’Odham
Population	15,635	13,218	10,494
Median Household Income	\$37,405	\$52,361	\$35,971
Poverty Rate	29%	18.4%	43.5%
Racial and ethnic distribution	61.7% White 56% Hispanic	63.5% White 48.6% Hispanic	79% Native American

	9.1% Black 1.5% Asian 3.2% Native	9.2% Black 0.4% Asian 5.6% Native	12% Hispanic 7% White
Linguistic Spoken	English/Spanish Speaking	English/Spanish Speaking	English/Spanish/O'odham/local Native speaking
High housing cost burden and substandard housing	\$108,700	\$122,400	\$61,200
High transportation cost burden and/or low transportation access	Limited Public Transportation	Limited Public Transportation	Limited Public/Tribal Transportation
Disproportionate environmental stressor burden and high cumulative impacts	Poverty Level Magnify	Poverty Level Magnify	Poverty Level Magnify 50% Type 2 Diabetes
Water Quality	Safe to drink, CCR 2020	Safe to drink, CCR 2020	Safe to drink with some deficiencies
Disproportionate impacts from climate change	Poverty Level Magnify	Poverty Level Magnify	Poverty Level Magnify
High energy cost burden and low energy access	Utility Rates High	Utility Rates High	Utility Rates High
Access to healthcare	Limited, small clinic	Limited, small clinic	IHS for BIA registered

- **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.**

See Table 2. Population includes majority of Hispanics and Native American, they reside in a sparsely populated rural area, with little or no tax base to support their infrastructure. They are isolated by historically being considered less than equal as agricultural workers. The nearby Indian Reservations are also an underserved community and share the water resources.

Sub-criterion No. E3. Tribal Benefits

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

YES, this project will benefit three local Indian Tribes and directly serves Ak-Chin and the Tohono O'odham Nation San Lucy Farm helping to improve water management for them.

- **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?**

Since these Tribes reside in a similar area the answers to these questions are the same as on pages 13 and 14. It will improve the *Tribal* delivery system to prevent leakage/seepage, overflows/flooding/spills, constant/reliable water flow, improve quantity (water elevation) and water quality. This will help address any shortfalls, as well as helping with future adverse conditions caused by drought and climate changes. These improvements also will result in improved on-farm efficiency and crop production creating economic opportunities and reduce air pollution improving general public health due to fugitive dust levels and contaminants.

2. Project Budget

2.1 Funding Plan and Letters of Funding Commitment

The **Federal share** is **48.37%** and the **Non-Federal share** is **51.63%**.

CAIDD Staff will be utilized for specific tasks during the approximate one-year project duration (including a 4-6 week construction phase (Mid-Oct. – End of Nov.)). For In-Kind, CAIDD will utilize our labor resources and staff, equipment/vehicles. The installation and commissioning will be overseen by a Rubicon representative and GCE, but CAIDD’s responsibilities will include project management, site preparation, some demolition, fill/compaction, concrete work, gate installation, dust control, cleanup and removal of debris and material at completion. By using District staff costs will be greatly reduced because less hours will be required, and District equipment will be used.

CAIDD Staff will include 7 personnel to assist with the project, preconstruction, construction, and close out activities. Their responsibilities and duties are provided on the following page.

Costs incurred before start date: None (May need to place order for Rubicon Slip Meter Gates since they take 6 months of lead time to fabricate and are shipped from Australia).

2.2 Budget Proposal

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal Funding	\$100,000.00
Costs to be paid by the Applicant	\$119,398.40
Value of third-party contributions	\$0.00
TOTAL PROJECT COSTS	\$219,398.40

Project Costs Breakdown:

Federal Funding

BUDGET ITEM DESCRIPTION	AMOUNT
Materials: 2 Rubicon SlipMeter Gates & 1 Rubicon FlumeGate	\$73,015.00
Construction: Rubicon Installation & Commissioning 3 Gates @ \$ 1,500 Each	\$4,500.00
Construction: Contractor Civil Work & Gate Installation (Partial)	\$22,485.00
TOTAL FEDERAL FUNDING	\$100,000.00

Non-Federal Funding (CAIDD) – In Kind and Cash

BUDGET ITEM DESCRIPTION	AMOUNT
Salaries and Wages: <i>In Kind</i>	\$18,146.52
Fringe: <i>In Kind</i>	\$6,674.60
Equipment: <i>In Kind or Cash</i> if rented	\$10,288.28
Contractual: Engineering GCE	\$29,624.00
Construction: Contractor Civil Work & Gate Installation (Partial)	\$46,665.00
Environmental Compliance	\$8,000.00
In Direct Costs – De Minimus In-Kind	\$0.00
TOTAL NON-FEDERAL FUNDING	\$119,398.40

BUDGET ITEM DESCRIPTION	COMPUTATION		UNIT	TOTAL COST
	Rates	Quantity		
Salaries and Wages (CAIDD)				
Project Manager/General Manager	\$106.00	60	HR	\$6,360.00
Water Superintendent	\$65.16	22	HR	\$1,433.52
Project Assistant	\$40.00	88	HR	\$3,520.00
Accounting Clerk II	\$31.75	44	HR	\$1,397.00
Maintenance Supervisor	\$30.65	56	HR	\$1,716.40
Operator & Foreman/Fabricator	\$31.30	64	HR	\$2,003.20
Operations Supervisor	\$30.65	56	HR	\$1,716.40
Total		390	HR	\$18,146.52
Fringe Benefits (CAIDD)				
Project Manager/General Manager	\$25.69	60	HR	\$1,541.40
Water Superintendent	\$18.78	22	HR	\$ 413.16
Project Assistant	\$17.93	88	HR	\$1,577.84
Accounting Clerk II	\$12.65	44	HR	\$ 556.60
Maintenance Supervisor	\$10.78	56	HR	\$ 603.68
Operator & Foreman/Fabricator	\$17.16	64	HR	\$1,098.24
Operations Supervisor	\$15.78	56	HR	\$ 883.68
Total		390	HR	\$6,674.60
Equipment (CAIDD)				
Caterpillar Loader 996E	\$120.15	8	HR	\$ 961.20
Excavator Gradall G660E	\$143.19	24	HR	\$3,436.56
Dump Truck	\$130.03	8	HR	\$1,040.24
Water Tanker Trailer 5,000 Gal	\$160.19	12	HR	\$1,922.28
Crew Truck 1/2 Ton 2000 Ford	\$48.94	36	HR	\$1,761.84
Project Manager Pickup Truck	\$48.59	24	HR	\$1,166.16
Total		112	HR	\$10,288.28
Materials and Supplies				
Rubicon 1 FlumeGate & 2 SlipMeter Gates	\$73,015	1	LS	\$73,015.00
Total				\$73,015.00
Contractual				
Engineering and Design 3 Gates	\$29,624.00	1	LS	\$29,624.00
Total				\$29,624.00
Construction				
Contractor	\$69,150.00	1	LS	\$69,150.00
Installation Supervision & Commissioning	\$4,500.00	1	LS	\$4,500.00
Total				\$73,650.00
Environmental and Regulatory Compliance				
Environmental Compliance	\$8,000.00	1	LS	\$8,000.00
Total				\$8,000.00
TOTAL DIRECT COSTS				\$219,398.40
Indirect Costs – De-Minimus Fixed	\$0.00	0	%	\$0.00
TOTAL ESTIMATED PROJECT COSTS				\$219,398.40

2.3 Budget Narrative

Salaries and Wages:

CAIDD Employee Hours Explanation

CAIDD Employee	Grant Compliance & Bid Procurement Process & Reporting (~ 12 months)	Pre-constr. Activities: Environmental Compliance, Contractor/Vendor, Procurement, Engineering/Design, Preconstruction Work, etc. (~ 8 Months)	Constr./ Installation: Coord. & Sched. w/ affected Water Users, Site Prep., Concrete Struct. Work, Gates Installation, Cleanup & Debris Removal (~ 4-6 Weeks)	Post-Construction: Installation & Testing of Automation & Controls, Commissioning Work, Grant Close-Out Work (~ 1 Month)	Sub-Total
Project Manager/General Manager: Overall project management, coordination with Engineers, Manufacturer, and Contractor Installation of Rubicon Gate/Associated Controls/Structures, Scheduling of Staff and Equipment, etc.	Assume 4 months, Approx. 4 hr/month = 16 hrs	Assume 3 months, Approx. 4 hr/month = 12 hrs	Assume 1 month, Approx. 16 hr/month = 16 hrs	Assume 1 month, Approx. 16 hr/month = 16 hrs	= 60 hrs
Water Superintendent: Assist Project Manager, coordination on water scheduling and coordination with water users.	0 hr	Assume 1 months, Approx. 8 hr/month = 8 hrs	Assume 1 month, Approx. 10hr/month = 10 hrs	Assume 1 month, Approx. 4 hr/month = 4 hrs	= 22 hrs
Project Assistant: Assist Project Manager and help with managing project financials and reporting.	Assume 2 months, Approx. 4 hr/month = 8 hrs	Assume 2 months, Approx. 8 hr/month = 16 hrs	Assume 1 month, Approx. 24 hr/month = 24 hrs	Assume 1 month, Approx. 40 hr/month = 40 hrs	= 88 hrs
Account Clerk II:	Assume 1	Assume 2 months,	Assume 1	Assume 1	= 44

Assist Project Manager and help with managing project financials and reporting.	months, Approx. 4 hr/month = 4 hrs	Approx. 8 hr/month = 16 hrs	month, Approx. 8 hr/month = 8 hrs	month, Approx. 16 hr/month = 16 hrs	hrs
Maintenance Supervisor: Supervise field staff, site initiation work, manage and handle all equipment during construction activities, etc.	0 hr	Assume 2 months, Approx. 8 hr/month= 8 hrs	Assume 1 month, Approx. 40 hr/month = 40 hrs	Assume 1 month, Approx. 8 hr/month = 8 hrs	=56 hrs
Operator & Foreman/Fabricator: Site initiation work, handle all equipment during construction activities, construction activities, etc.	0 hr	Assume 2 months, Approx. 16 hr/month= 16 hrs	Assume 1 month, Approx. 40 hr/month = 40 hrs	Assume 1 month, Approx. 8 hr/month = 8 hrs	=64 hrs
Operator Supervisor: Supervise field staff, site initiation work, handle all equipment during construction activities, construction activities, fabrication, etc.	0 hr	Assume 2 months, Approx. 8 hr/month= 8 hrs	Assume 1 month, Approx. 40 hr/month = 40 hrs	Assume 1 month, Approx. 8 hr/month = 8 hrs	=56 hrs

CAIDD certifies that the labor rates included in the budget proposal represent the actual labor rates of the identified personnel.

Equipment: Will use USACDOE equipment (EP 1110-1-8 30 November 2018)
 Rate = (Average Hourly Rate + Fuel) * 10% → Multiple by 10% since USACE rates are from 2018

Caterpillar Loader 996E – Site preparation, cofferdam/pipe plug and gate removal and installation and final cleanup

Excavator Gradall G660E – Site preparation, cofferdam/pipe plug and gate removal and installation and final cleanup

Dump Truck – Haul off materials

Water Truck – Dust Control

Service Truck – Used in support of CAIDD Crew on-site

Project Manager Truck – Project management at site

Materials and Supplies:

Safety (Level D) and Construction:

Shade, Coolers, Water/Electrolytes, Gloves, Safety Glasses, Reflective Vests, Hard Hats, Steel-Toed Boots, Signage, Cones, Barricades

One 36" Rubicon SlipMeter Gate, one 48" FlumeGate, & one 24" SlipMeter Gate - the costs for each gate were quoted and provided by Rubicon System America, Inc., which includes furnishing and installation. Gate commissioning costs will be under Construction.

Gate No.	Gate Location ID	Rubicon Gate Model	Sub-Total
Gate 1	CF1 Headgate	36" SlipMeter Gate SMB-900-2400C	\$27,430.00
Gate 1	N1A Check Gate	48" FlumeGate FGB-1050-0866	\$26,095.00
Gate 1	N50 Gate	24" SlipMeter Gate SMB-600-1500C	\$19,490.00
		Total	\$73,015.00

Contractual:

Engineering and Design of Concrete support structures. Refer to GCE's Quote.

The engineering cost quote was provided by George Cairo Engineering, Inc. for the design and survey of the 3 gates. The scope of work includes the following:

- Periodic project coordination meetings with CAIDD and Contractor, inclusive of project kick-off meeting
- Data collection and field design and hydraulic survey work
- Design site plan and structural sheets for the 3 Gates and one precast concrete structure
- 60% submittal and Final submittal
- Pre-services during construction activities and gate installation supervision

Construction:

Refer to Innova's Quote and Rubicon's Quote.

Gate Installation: This work will be performed by the Contractor and Rubicon staff and augmented by CAIDD Personnel & Equipment inclusive of mobilization, removal of existing gates, preparation for site work, installation of new U-channel check structure and new gates, commission gates support, clean-up, and demobilization. Include Safety (Level D) and Construction: Shade, Coolers, Water/Electrolytes, Gloves, Safety Glasses, Reflective Vests, Hard Hats, Steel-Toed Boots, Signage, Cones, Barricade, concrete support structure, etc.

Other:

Environmental Regulatory Compliance Costs: Potentially an assessment of potential affect will be needed for the new gates, and some costs to coordinate and support the environmental compliance have been accounted for. GCE met with the local USBR Office Environmental and Cultural Resource staff ahead of the grant submittal to understand the potential requirements for this project. The facility is less than 50 years old. The project area is within USBR Easement. All work and staging will stay within already disturbed areas within the USBR Easement. The new U channel check structure with the Rubicon FlumeGate will be installed at grade and the two SlipMeter gates for the turnouts will be installed in the existing structures.

See responses to Environmental Compliance Questions on page 19 to determine what may be needed and preparation of Environmental compliance documents as required.

3. Environmental and Cultural Compliance

- 3.1 Impact to Surrounding Environment** **NONE**
No significant impact, all earth-disturbing work will occur within existing canal O&M road and existing USBR easement.
- 3.2 Threatened or Endangered Species, or Designated Critical Habitat** **NONE**
This area is greatly disturbed and in constant agricultural use. There are no threatened or endangered species present or critical habitat. *See page 14 last paragraph for description of surrounding biomes.*
- 3.3 Wetlands or Other Surface Waters (CWA) – Waters of the United States** **NONE**
There are no wetlands within the project boundary.
- 3.4 Water Deliver System Date of Construction**
The Santa Rosa Canal was constructed in 1987. The Central Main and laterals were constructed around 1988 and the South Main and laterals were constructed around 1989.
- 3.5 Modifications or Effects to Individual Features of a Delivery System (i.e., head gates, canals, or flumes)** **YES - ONE**
Three deteriorated canal gates will be replaced by three Rubicon gates.
- 3.6 Features in the Central Arizona Irrigation and Drainage District Listed or Eligible for Listed on the National Register of Historic Places** **NONE**
No known historical places nearby, but 5-30 miles away, there may be Picacho Peak, Picacho Reservoir, Museum of Casa Grande, and Casa Grande Ruins National Monument.
- 3.7 Archaeological Sites in Proposed Project Area** **NONE**
There are no archaeological sites in the project area, but 5-30 miles away, there may be Picacho Peak, Picacho Reservoir, Museum of Casa Grande, and Casa Grande Ruins National Monument.
- 3.8 Disproportionately High or Adverse Effects on Low Income or Minority Populations** **NONE**
No disproportionally high or adverse effects on low income or minority populations. If anything, this will have the opposite effect economically.
- 3.9 Limit Access to and Ceremonial Use of Indian Sacred Sites or Impact on Tribal Lands** **NO**
No limited access to or ceremonial use of sacred sites or impact Tribal lands.
- 3.10 Contribution to Introduction, Continued Existence, or Spread of Noxious Weeds or Non-Native Invasive Species** **NO**
If anything, this project will have the opposite effect, reducing noxious weeds and non-native invasive species, including aquatic vegetation by reducing spills.

April 26, 2022

Normark Farms
Mark Hamilton
PO Box 1448
Arizona City, AZ 85123

**RE: United States Bureau of Reclamation Funding No. R22AS00195
WaterSMART Small-Scale Water Efficiency Projects
CAIDD – Phase 1A Installation of 3 Automated Rubicon Gates Project**

To Whom It May Concern,

I am pleased to write this letter in support of the Central Arizona Irrigation and Drainage District (CAIDD) – Phase 1A Installation of 3 Automated Rubicon Gates Project application to the USBR for the Funding Opportunity No. R22AS00195 WaterSMART Small-Scale Water Efficiency Projects. As a farmer in the District, I support the District's application for this grant to obtain funding for the multiple gate replacements with new automated gates. I strongly believe that this will help the District's water conservation goal to reduce water loss, reduce pumping, and help prevent over watering. As the District is able to optimize and modernize their system, they will be able to provide more reliable water supplies and provide future drought resiliency for our own farm.

Thank you for accepting this letter of support for the grant consideration.

Sincerely,



Mark Hamilton

Letter of Support

April 26, 2022

River Bush Farms
Daniel F. Shedd
2948 E. River Bush Rd
Eloy, AZ 85131

**RE: United States Bureau of Reclamation Funding No. R22AS00195
WaterSMART Small-Scale Water Efficiency Projects
CAIDD – Phase 1A installation of 3 Automated Rubicon Gates Project**

To Whom It May Concern,

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Thank you for accepting this letter of support for the grant consideration.

Sincerely,



Daniel F. Shedd

Letter of Support

April 26, 2022

Donley Farms
John Donley
10475 W Quartz Dr
Casa Grande, AZ 85193

**RE: United States Bureau of Reclamation Funding No. R22AS00195
WaterSMART Small-Scale Water Efficiency Projects
CAIDD – Phase 1A Installation of 3 Automated Rubicon Gates Project**

To Whom It May Concern,

I am pleased to write this letter in support of the Central Arizona Irrigation and Drainage District (CAIDD) – Phase 1A Installation of 3 Automated Rubicon Gates Project application to the USBR for the Funding Opportunity No. R22AS00195 WaterSMART Small-Scale Water Efficiency Projects. As a farmer in the District, I support the District's application for this grant to obtain funding for the multiple gate replacements with new automated gates. I strongly believe that this will help the District's water conservation goal to reduce water loss, reduce pumping, and help prevent over watering. As the District is able to optimize and modernize their system, they will be able to provide more reliable water supplies and provide future drought resiliency for our own farm.

Thank you for accepting this letter of support for the grant consideration.

Sincerely,

John Donley



Letter of Support

April 26, 2022

CMK Harvesting LLC
Nathan Killian
4445 E. Holmes Ave, Suite 102
Mesa, AZ 85206

**RE: United States Bureau of Reclamation Funding No. R22AS00195
WaterSMART Small-Scale Water Efficiency Projects
CAIDD – Phase 1A Installation of 3 Automated Rubicon Gates Project**

To Whom It May Concern,

I am pleased to write this letter in support of the Central Arizona Irrigation and Drainage District (CAIDD) – Phase 1A Installation of 3 Automated Rubicon Gates Project application to the USBR for the Funding Opportunity No. R22AS00195 WaterSMART Small-Scale Water Efficiency Projects. As a farmer in the District, I support the District's application for this grant to obtain funding for the multiple gate replacements with new automated gates. I strongly believe that this will help the District's water conservation goal to reduce water loss, reduce pumping, and help prevent over watering. As the District is able to optimize and modernize their system, they will be able to provide more reliable water supplies and provide future drought resiliency for our own farm.

Thank you for accepting this letter of support for the grant consideration.

Sincerely,



Nathan Killian

Letter of Support

RESOLUTION 2022-02

**RESOLUTION OF THE
BOARD OF DIRECTORS
OF
CENTRAL ARIZONA IRRIGATION
AND DRAINAGE DISTRICT**


WHEREAS, Central Arizona Irrigation and Drainage District (the "District") desires to improve District facilities for the purpose of improved efficacy of water deliveries, sustainable water management; and

WHEREAS, the District wishes to apply for grant funding opportunities to reduce the financial burden on the District customers through these grant programs.

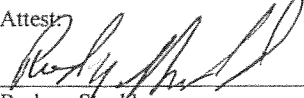
NOW, THEREFOR, be it resolved by the Board of Directors (the "Board") of Central Arizona Irrigation and Drainage District (the "District") as follows:

1. That the application for a United State Department of the Interior Bureau of Reclamation WaterSMART grant for Small-Scale Water Efficiency Projects pursuant to Funding **Opportunity Number** BOR-DO-20-F006 (the "Grant") by the General Manager for the District to install automated Rubicon gates in a restructured box (the "Project") is hereby approved.
2. That General Manager Ron McEachern is hereby authorized to submit the application for the Grant and to execute any and all documents, instruments, and reports necessary or appropriate to apply for, obtain, and use the Grant.
3. That General Manager Ron McEachern is hereby authorized to expend up to \$200,000 of District monies for the Project, which monies the Board finds are available for this purpose, and to apply the Grant to the costs of the Project.
4. That the District will work with the United States Bureau of Reclamation to meet established deadlines for entering into a grant or cooperative agreement.

ADOPTED, this 26 day of April 2022



Daniel F. Shedd
President of the Board

Attest:


Rodney Shedd
Secretary