

ADAMS GARDENS RESERVOIR AUTOMATED INTAKE GATE

March 02, 2020

APPLICANT:

Harlingen Irrigation District Cameron County No. 1
301 E Pierce
Harlingen, TX 78550



H.I.D.C.C. No.1 Main Canal. Seen ½ mile South of the Adams Garden Reservoir
The proposed gate will check the flow in the Main Canal to Feed the Reservoir

PROJECT MANAGER:

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1. D.2.2.4 EXECUTIVE SUMMARY

March 02, 2020

The Harlingen Irrigation District Cameron County No. 1, hereby the applicant, seeks consideration for approval of Funding Opportunity Announcement (FOA) BOR-DO-20-F006 implement the funds towards a Water Conservation Project. With its main office in Harlingen, Texas, **the Harlingen Irrigation District Cameron County No. 1, hereinafter, the District**, encompasses approximately 56,576 acres of land in the Lower Rio Grande Valley within the east-central portion of Cameron County, Texas; refer to the District's General Location Map Figure 1. The District is an active member of the Rio Grande Regional Water Planning Group, Rio Grande Regional Water Authority (RGRWA), Lower Rio Grande Water District Managers' Association, Texas Irrigation Council, Texas Water Conservation Association, and Lower Rio Grande Water Committee, Inc.

The District proposes the construction of a fully automatic checkgate on the District's Main Canal to improve the deliveries, system efficiency, and add storage capacity to the Adams Garden Reservoir. **The check gate structure is proposed at approximately 4.8 miles south of U.S. Business 83 and 1.8 miles east of FM 506 in Harlingen Texas; refer to Figure 3.** The District proposal meets the eligibility criteria of Section C.3.1 since it will provide flow measurement, SCADA, and capability to operate the Adams Garden Reservoir at higher level resulting in added storage capacity. The District will implement the Federal funding reimbursement amounts towards the total project cost including but not limited to purchase of construction materials and supplies, equipment cost, professional services, and incidentals needed for the completion of the project.

The District proposes to undertake the project in a single phase to reduce administrative and mobilization costs involved with procurement policy and construction respectively. To accomplish the goal, the District will have to begin with the engineering design in early summer of 2020 and follow with construction beginning fall 2020 to complete the project in late 2020. The total estimated project cost is \$ 149,533.00. The District has capability to commit 50% of the of total project cost using funds from the District's Capital Improvements Fund. The District plans to apply \$74,766.50 from grant monies in FY 2020.

The project is located within the District's right of way and complies with all environmental and cultural resources requirements.

2. D.2.2.4 BACKGROUND DATA

The Harlingen Irrigation District Cameron County No. 1, hereinafter, the District, was established May 13, 1914, by the Cameron County Commissioner's Court as Cameron County Irrigation District Number 1, pursuant to Section 13, Chapter 172, Acts of the Regular Session of the 33rd Legislature of the State of Texas. On January 14, 1915, a deed from Harlingen Land and Water Company to Cameron County Irrigation District Number 1, was filed for record and recorded January 29, 1915, Vol. 38, Pages 146 - 158, Cameron County Deed Records, Cameron County, Texas. On May 31, 1919, the District was converted to and renamed Cameron County Water Improvement District Number 1, under existing statutes. In 1945 it was renamed as Cameron County Water Control and Improvement District Number 1. In 1978, under the provisions of Sections 51 and 58 of the Texas Water Code, the District became Harlingen Irrigation District Cameron County Number 1. In 1995, the 74th Texas Legislature established Section 49 of the Texas Water Code and this section now also applies to the operations of the District.

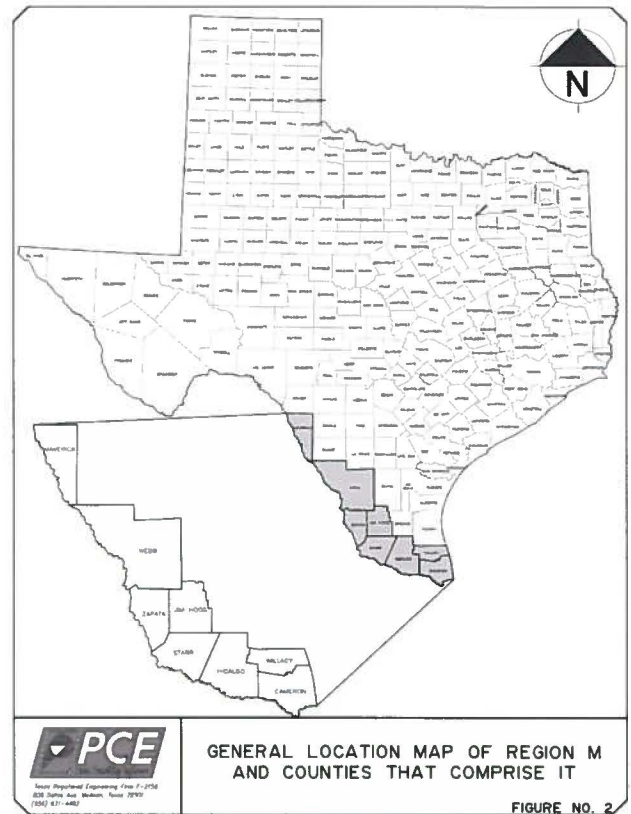
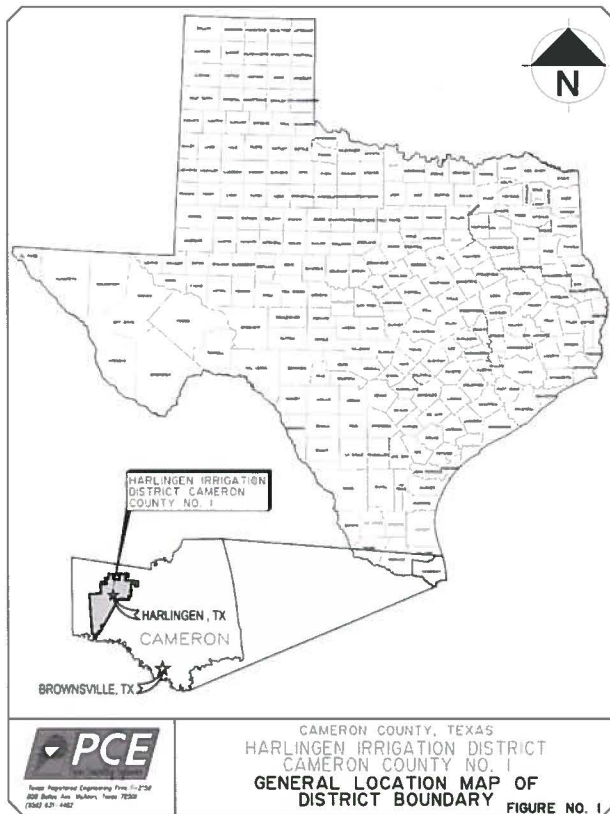
The District is located within the Lower Rio Grande Valley in the east-central portion of Cameron County, Texas; refer to the District's General Location Map Figure 1. Cameron County is one of the eight counties within the Rio Grande Regional Water Planning Group. The State of Texas assigned the letter M to the Rio Grande Regional Water Planning Group also known as Region M corresponding to one of sixteen (16) local bodies established under Senate Bill No. 1 (SB 1) to coordinate long term water supply planning; Figure 2 provides the map of Region M. The District encloses a gross area of 56,576 acres of land around the City of Harlingen; refer to the Service Area Map Figure 3.

The District holds water rights to divert from the Rio Grande 97,484.7 acre -foot per year for irrigation purposes, and 692 acre-foot per year for domestic, municipal, and industrial (dmi) use.

In addition, the District is contracted to deliver 22,920 acre -feet per year of dmi water rights for the City of Harlingen, 429 acres -feet per year of dmi water rights for the City of Combes, 400 acre -feet per year of dmi water rights for the City of Primera, 312 acre -feet per year of dmi water rights for the City of Palm Valley, 350 acre-feet for East Rio Hondo Water Supply Corp and 877 acre-feet for the Military Highway Water Supply Corp.

The District currently serves 32,500 acres of farmland and has 3,300 active irrigation accounts. The current average annual irrigation water demand is 63,410 acre – foot per year. The current annual domestic, municipal, and industrial water demand is 22,500 acre - foot. The amount of cropland within the District is declining due to the continuous conversion of farmland to residential, commercial, and/or industrial development within the District's boundaries. However, the District does not project a decrease in the demand of irrigation water over the next five to ten years due to the planting of higher water use crops such as sugar cane. The projected irrigation water demand by 2020 is 65,000 acre - foot per year. The population of the Rio Grande Valley is projected to double over the next 50 years; therefore, the District projects an increase in the demand of raw water for municipal and industrial use. The projected municipal and industrial water demand by 2020 is 25,000 acre-foot

Water rights for the Lower Rio Grande were adjudicated by the State of Texas in the late sixties to domestic, municipal, industrial, and agricultural users. Year round, surface water from the Rio Grande is high in demand for domestic, municipal, industries and irrigation (agriculture) use. The



surface water from the Rio Grande is always in **potential for shortfall**. In the mid nineties, and again in 2011 through the present, the State of Texas suffered a state-wide drought. As an alternative to surface water, the municipalities of the Rio Grande Valley became interested in ground water. For the most, ground water in the Rio Grande Valley is brackish. Few municipalities in the Rio Grande Valley have access to a reliable source of ground water. Some municipalities have been able to make use of the brackish water by blending it with surface water to meet the regulating body requirements for drinking water. Though this practice is only performed to meet the seasonal high demands during the summer months. Based on the state approved 2016 Region M's Regional Water Plan, copy of which can be obtained from <http://www.riograndewaterplan.org/> water plan the population within Region M is projected to double by 2070. Therefore, the surface water from the Rio Grande will continue to be in potential for shortfall for years to come.

The primary use of the District's water is for agriculture (irrigation) use. The main crops grown within the District consist of sugarcane, cotton, grain sorghum, corn, specialty crops (fava beans, carinata, garbanzo beans), citrus, and pasture.

The District major facilities consist of the following:

- River Pumping Plant
- Re-Lift Pumping Plant
- 3 Reservoirs
- 20 miles of lined canals
- 40 miles of earthen canals
- +200 miles of pipelines

The District has had the opportunity in the past to work with the U.S. Bureau of Reclamation and is confident the District’s proposal is eligible and satisfies all criteria under Section C. Below is a list of the most recent projects on which the District has had the opportunity to work together with the U.S. Bureau of Reclamation.

<u>Project Name</u>	<u>Status</u>	<u>Project Description</u>
2025 On Farm Metering	Completed in 2007	Installation of on-farm metering devices as well as design and installation of related radio telemetry units.
Canal Automation and Telemetry	Completed in 2011	Installation of automated remote controlled sluice gates at all of the District’s open canal check structures.
System Optimization Review	Completed in 2012	Preparation of map, model, and engineering analysis of the District’s major deliveries.
Piping of the Wyrick Canal	Awarded in 2019 Open	Closure of 6,750 L.F. of open canal using 48” PVC pipe.

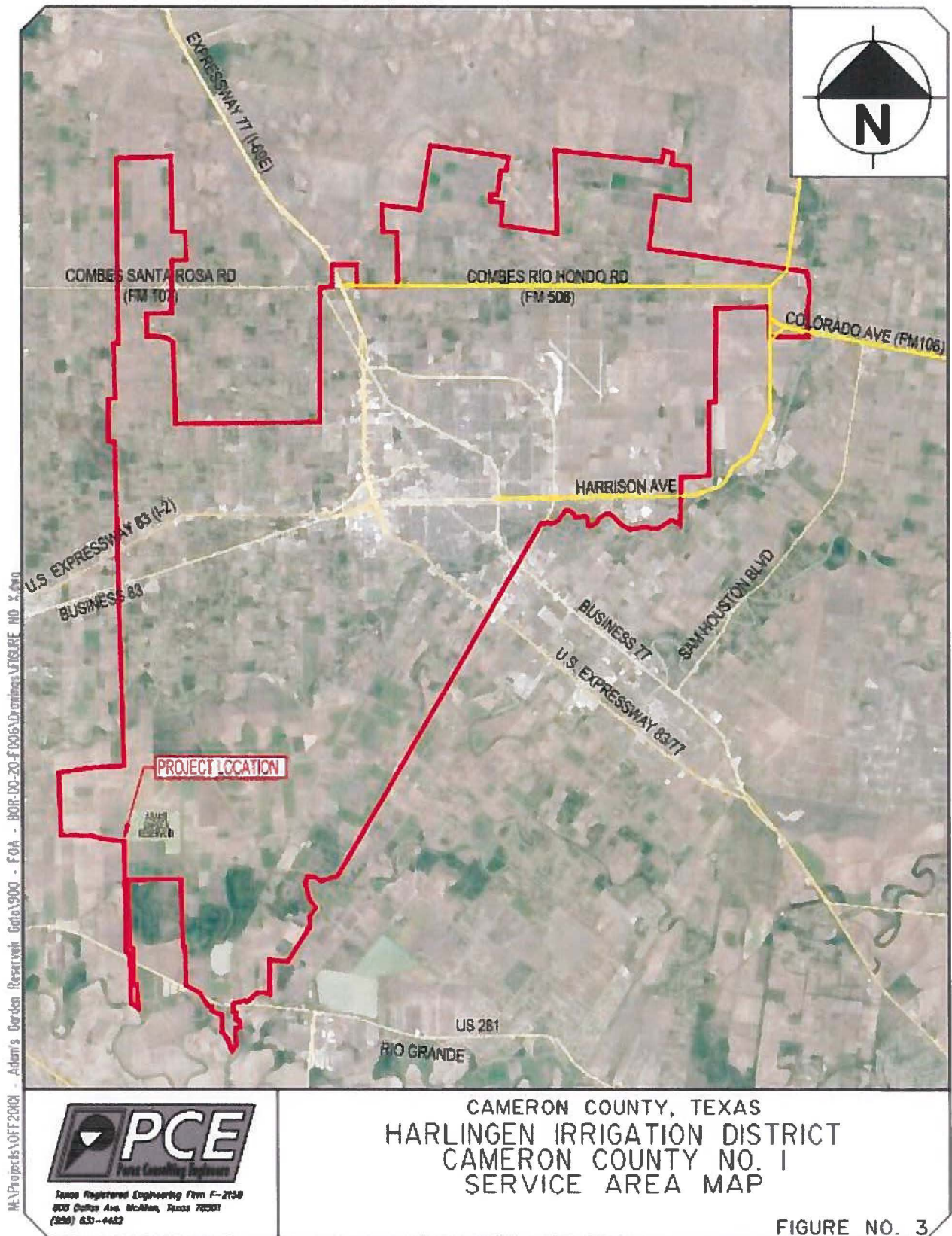
3. D.2.2.4 PROJECT LOCATION

The Adams Gardens Reservoir is located at approximately 4.5 miles south U.S. Business 83 and 1.8 miles east of FM 506. **The automated intake gate is proposed at approximately 4.8 miles south of U.S. Business 83 and 1.8 miles east of FM 506 in Harlingen Texas; refer to Figures 3 and 4.**

4. D.2.2.4 TECHNICAL PROJECT DESCRIPTION

The Adams Gardens Reservoir covers a gross surface area of 387 acres and has a storage capacity of 1,161 ac-ft. Water is fed into the reservoir via the elevated Main Canal located adjacent to the west embankment. At approximately 2,400 linear feet south of the reservoir existing is a check structure on the Main Canal. At said location the operational water surface elevation on the upstream side of the check gate is approximately 4.5 feet higher than the water surface elevation in the downstream side of the check gate. The District proposes to relocate the check gate to the southwest corner of the reservoir. By doing so, the District will have capability to store additional 2 feet of water in the Adams Gardens Reservoir equivalent to 774 acre foot of additional storage capacity.

To accomplish the objective the District will have to construct a reinforced concrete structure to mount two aluminum slide gates including electrical motor actuator, solar panels, batteries, and equipment to automate the two slide gates; see Pictures 1 below. In addition, the District proposes to add SCADA hardware (instrumentation) to control the gates in real time, meter the flows in the Main Canal, and obtain visual of the water surface elevation in both the Main Canal and Adams Gardens Reservoir; see Picture 2.



MC:\Projects\OFF\2008 - Adams's Garden Reservoir Gate\900 - FOA - BOR-DO-20-F 006\Drawings\FIGURE NO. 3.dwg





Picture 1. Dual gate canal check at the diversion to the municipal water supply.



Picture 3. SCADA instrumentation.

5. E.1.1 Evaluation Criterion A-Project Benefits

Describe the expected benefits and outcomes of implementing the proposed project.

- *What are the benefits to the applicant's water supply deliver system?*
The District will be able to store additional 774 acre foot of water in the system. The District will improve pressure in the system and gravity flow downstream the reservoir. As is, the District uses a pump to boost the pressure downstream the reservoir. The project will allow for elimination of the booster pump.
- *If other benefits are expected explain those as well.*
 - The project will improve overall water supply reliability. The District will have additional storage capability that could be implemented during a period of non-charge pumping. In occasions flood waters, as it happened in 2010 by Hurricane Alex, are available at no-charge pumping. No charge pumping is a period designated by the Watermaster and which could be authorized as a result of local rain events on which an upstream local user forgoes the allotted

river water due to wet weather in the respective service area. This free water can be pumped up the District’s system and be stored at the reservoir for later use.

- The geographic benefits will be local as well as basin. The implementation of SCADA allows for a more efficient use of the water resources. Less spills and better management of the water resources. Water conserved results in more water available for local and basin users.
- The use of SCADA also allows for recording and documenting historical data. With this information on hand it is possible to track water use and conveyance losses. If losses in the system are identified these can be fixed. Water management techniques can be shared to others and that is how other water managers can benefit. Additional storage capacity is also beneficial to local municipal demand as in dry years push water is a serious concern in the Rio Grande Valley.
- Water is fundamental for all local economical sectors.

6. E.1.2. Evaluation Criterion B – Planning Efforts Supporting the Project

- *Does the proposed project implement a goal or address a need or problem identified in the existing planning effort?* The District’s project is consistent with the 2016 approved TWDB 2016 Rio Grande Regional Water Plan. Water storage improvements is one of the recommended water management strategies to meet current and future water needs in the region.
- *Explain how the proposed project has been determined as a priority in the exiting planning effort as opposed to other potential projects / measures.* The project will yield significant benefits for small capital investment. Other conservation projects as canal enclosures require higher capital investment.

7. E.1.3 Evaluation Criterion C – Project Implementation

- *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.*

The District stands ready to proceed. Preliminary engineering design and concepts have been explored. The tentative project schedule is as follows:

June 1, 2020 to June 3, 2020	Filed Survey.
June 8, 2020 to July 15, 2020	Engineering Design and Preparation of Construction Plans, Material and Supplies Purchase Contract and Agreement Documents.
July 27, 2020 to August 28, 2020	Order Supplies (Fabricated Gates, SCADA hardware, and pipe material)

August 29, 2020 to September 18, 2019	Receive Materials & Supplies and mobilize equipment to project site.
September 21, 2020 to September 25, 2020	Construct canal by-pass to isolate construction area.
September 28, 2020 to October 29, 2020	Construct reinforce concrete structure.
November 2, 2020 to November 6, 2020	Install aluminum slide gates, SCADA, and gate automation equipment.
November 9, 2020	Demobilize

- *Describe any permits that will be required, along with the process for obtaining such permits. All work will be performed within the District's canal right of way; therefore, no necessary permits or easements will be required for completion of the work.*
- *Identify and describe any engineering or design work performed specifically in support of the proposed project. Preliminary engineering design and concepts have been explored by the District's engineer consultant. The District sought engineering consulting services in early January 2020 to develop the concept. A field visit was performed on January 9, 2020.*
- *Describe any new policies or administrative actions required to implement the project. None.*
- *Described how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office? The environmental compliance estimate was developed from recent projects. In addition, the local Reclamation office was contacted to confirm the amount proposed in the budget. The District will solicit services from the local Reclamation office to assist with environmental compliance.*

8. E.1.4 Evaluation Criterion D – Nexus to Reclamation

- Is the proposed project connected to Reclamation project activities? If so, how?
Please consider the following:
 - *Does the applicant receive Reclamation project water?* No
 - *Is the project on Reclamation project lands or involving Reclamation facilities?* No
 - *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

- *Will the project benefit any tribe(s)?* Yes. In a form the District will be able to conserve basin water. This will be at the time no-charge water is available in the diversion. Free water flows to the Gulf of Mexico if is not captured. Since the conserved water from the project will remain in the Lower Rio Grande basin, the project will benefit the Rio Grande Basin users. One of these indirect beneficiaries could be the Kickapoo Traditional Tribe of Texas in Eagle Pass, Maverick County, Texas encompassed by Region M. The waters of the Rio Grande are the main source of water for this community.

9. E.1.5 Evaluation Criterion E – Department of the Interior and Bureau of Reclamation Priorities

1. *Creating a conservation stewardship legacy second only to Teddy Roosevelt*
 - a. Utilize science to identify best practices to manage land and water resources and adapt to changes in the environment.

State funded and Federal funded entities as the Texas A&M University Irrigation Technology Center, Texas Cooperative Extension, Texas Water Resource Institute, RGRWPG, RGRWA, and U.S.D.A. have invested and funded investigation projects to identify water conservation practices. Reservoir improvements to increase storage capacity is one of the recommended water management practices and is also documented in the 2016 Rio Grande Regional Water Plan.

- b. Examine land use planning processes and land use designations that govern public use and access;
- c. Revise and streamline the environmental and regulatory review process while maintaining environmental standards.
- d. Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity;

A recent law suit between Texas, New Mexico, Colorado, and the U.S. over the Rio Grande Compact serves as clear sign of the importance of water conservation efforts. The District's project will ease tension in the Rio Grande Basin and help expand the water resources.

- e. Foster relationships with conservation organizations advocating for balanced stewardship and use of public lands;

The District's project will foster the relationship with federal, state, and local conservation organizations. The District has available several deliveries available for U.S. Fish and Wildlife service in a wildlife corridor south of the District's reservoir. The District also deliver water to municipal parks for irrigation and recreational use.

Water conserved within the river basin assures sustainability for balanced stewardship and use of public land.

- f. Identify and implement initiatives to expand access to DOI lands for hunting and fishing;
- g. Shift the balance towards providing greater public access to public lands over restrictions to access

2. *Utilizing our natural resources*

- a. Ensure American energy is available to meet our security and economic needs;

Energy efficiencies are expected to result from the project. A pump station will be decommissioned as presented in Section E.1.1 Evaluation Criterion A above. Energy savings can be quantified upon request.

- b. Ensure access to mineral resources, especially the critical and rare earth minerals needed for scientific, technological, or military applications;
- c. Refocus timber programs to embrace the entire ‘healthy forests’ lifecycle.
- d. Manage competition for grazing resources.

3. *Restoring trust with local communities*

- a. Be a better neighbor with those closest to our resources by improving dialogue and relationships with persons and bordering our lands;
- b. Expand the lines of communication with Governors, state natural resource office, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.

The District is an active member of the Rio Grande Regional Water Planning Group, Rio Grande Regional Water Authority, Texas Irrigation Council, Texas Water Conservation Association, Lower Rio Grande Committee, Inc., Rio Grande Watermaster Advisory Committee, and the Lower Rio Grande Water District Manager’s Association. The District promotes stewardship, leadership, and maintains a good working relationship with all water groups, customers, water conservation groups, and political subdivisions of the state including municipalities, county, state, and federal.

4. *Striking a Regulatory Balance*

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

The District conducts business in a as practical and efficient manner to reduce burden on clients, privates, and political subdivisions of the state. Privates may consist of land developers, private utility companies, or others that in some form or fashion require approval from the District to complete their interests.

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

5. *Modernize our infrastructure*

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

SCADA addition to control the system remotely in real time will modernize the Adams Gardens Reservoir. District's project is consistent with the White House Public/Private Partnership Initiative to modernize U.S. infrastructure.

- b. Remove impediments to infrastructure development and facilitate private sector efforts to construct infrastructure projects serving American needs;

The District will exercise its rights as a political subdivision of the state to, advertise, procure, and solicit bids from material suppliers and local vendors. The District will specify American made equipment and materials and select the equipment and supplies meeting the specified requirements offered at the most advantageous price. The project will bring opportunity to the private sector and the final product will be available to service America's needs.

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

10. D.2.2.5. PROJECT BUDGET

Funding Plan and Letters of Commitment

The District will perform the construction activities in-kind. The District owns the power equipment, tools, and has in its payroll qualified personnel that will provide the needed labor.

The District has capability to commit 50% of the total project cost using resources from the District's Capital Improvements Fund. The Board of Directors will consider, and act, on a Letter of Commitment during Regular Board Meeting to be held on March 11th, 2020 at the District's office in Harlingen, TX. A copy of the approved Letter of Commitment will be mailed by the District separately as soon as it becomes available.

The District does not have any pending funding requests that have not yet been approved.

Table 4 below provides a summary of the funding sources.

Budget Proposal

The District proposes to undertake the project in a single phase to eliminate administrative and mobilization costs involved in subsequent phases. The estimated construction duration is **60**

calendar days with completion in late 2020. To accomplish this task the District will have to begin with the engineering design in late spring/early summer 2020 and follow with its construction beginning in fall 2020 with completion date November 2020.

Table 4. Total Project Cost.

SOURCE	AMOUNT
Costs to be reimbursed with the requested Federal funding	\$ 74,766.50
Costs to be paid by the applicant	\$ 74,766.50
Value of third party contributions (NONE)	\$ 0.00
TOTAL PROJECT COST	\$ 149,533.00

The itemized budget proposal can be found in page 15. The budget proposal identifies all items of cost. The District will implement the Federal funding reimbursement amounts towards the total project cost including but not limited to purchase of construction materials and supplies, equipment cost, professional services, and incidentals needed for the completion of the project.

Budget Narrative

Salaries and Wages

The District counts with the support of experienced personnel. The District plans on utilizing a single construction crew made of two laborers, one crew leader, a construction superintendent, a designated equipment operator upon piece of heavy equipment required for each construction task, and a project manager. All crew members are employees of the District. The estimated needed labor time was derived from estimated net work days required to complete construction of the proposed improvements. Equipment operator times vary upon needed piece of equipment. The project status will be under the supervision of the project manager Mr. Randy Horkman a full-time employee of the District who will report to the District General Manager, Mr. Tom McClemore.

Fringe Benefits

Fringe benefits are identified in the budget proposal and correspond to 20% of wage rate to cover for various state and federal benefits, health insurance, and retirement fund.

Travel

None anticipated.

Equipment

The District owns the heavy equipment required for the construction of the proposed improvements. The District anticipate utilizing a wheeled excavator, wheeled loader, backhoe, dump truck, and tractor truck with lowboy trailer to mobilize and demobilize the various pieces of heavy equipment demanded upon construction task. The estimated needed equipment time was derived from estimated net work days required to complete the construction task. Equipment rates were obtained from the United States Army Corps of Engineers (USACE) Construction Equipment Ownership and Operating Expense Schedule manual for Region VI, EP 1110-1-8 Volume 6, Dated November 2016. The itemized budget proposal provides reference to the USACE id. Number as published for Region VI, EP 1110-1-8 Volume 6, Dated November 2016.

A portable toilet will be required. The service will be obtained for local vendor. The estimated service time was derived from estimated net work day required for duration of the construction activities.

Materials and Supplies

The District will purchase the needed construction materials and supplies by publicly soliciting competitive seal bids following the State of Texas competitive procurement law. Interested vendors will submit their bid and the District will select the most qualified vendor that proves to have capability to furnish the specified material meeting specified standards. The unit price used to estimate the construction materials and supplies cost were obtained from various sources including recent budgetary figures submitted by established vendors, and listed manufacturer prices. **Sources of unit price can be furnished upon request.** The unit price includes material and associated freight costs for delivery to the District's yard in Harlingen TX. or project site.

Contractual

The District retains engineering professional services from local qualified local civil engineering consultant. Procurement and solicitation methods abide to state and professional engineering solicitation practices. Fees presented under table row titled Professional Services are estimates from past similar projects that required the listed services. The itemized budget proposal separates engineering and other needed professional services for transparency. The District will solicit and review a proposal from the retained civil engineer consultant for the needed services inclusive of field surveying services and services required to clear the project with the Texas Historical Commission for Section 106 Review. Geotechnical and material testing services will be solicited from local professionals and will be awarded to the most qualified professional.

Third Party In Kind Contributions

None anticipated.

Environmental and Regulatory Compliance Costs

The District will contact the local Reclamation Office to solicit assistance with Environmental and Regulatory Compliance. Fees in connection to environmental and regulatory compliance are estimates for cost associated to achieve completion of this task.

11. D.2.2.6. ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

All work will be performed within the District's canal right of way. There is no anticipated impact to the surrounding environment, Federal threatened or endangered species, wetlands, or disturbance to the integrity of the existing canal structure. The District will solicit assistance from the local Reclamation Office to assure all work activities abide to Environmental and Regulatory Compliance.

12. D.2.2.7. REQUIRED PERMITS OR APPROVALS

All work will take place within District right of way. There are no required permits or approvals.

13. D.2.2.8. OFFICIAL RESOLUTION

The Board of Directors will consider, and act, on the Official Resolution during Regular Board Meeting to be held on March 11th, 2020 at the District's office in Harlingen, TX. A copy of the Official Resolution will be mailed by the District separately as soon as it becomes available.

A. SALARIES AND WAGES							
Item No.	Description	Wage Rate	Fringe Rate	Total Rate	Unit	Quantity	Total Amount
A 1.	Crew Laborer	12	2.4	\$ 14.40	HR	184	\$ 2,649.60
A 2.	Crew Laborer	12	2.4	\$ 14.40	HR	184	\$ 2,649.60
A 3.	Crew Leader	18.8	3.76	\$ 22.56	HR	184	\$ 4,151.04
A 4.	Backhoe Operator	12.5	2.5	\$ 15.00	HR	184	\$ 2,760.00
A 5.	Excavator Operator	18	3.6	\$ 21.60	HR	184	\$ 3,974.40
A 7.	Construction Superintendent	25.83	5.17	\$ 31.00	HR	184	\$ 5,704.00
A 8.	Project Manager	24.8	4.96	\$ 29.76	HR	56	\$ 1,666.56
TOTAL ITEM A							\$ 23,555.20
B. EQUIPMENT							
Item No.	Description	USACE ID.	No	Avg Rate	Unit	Quantity	Total Amount
B 1.	Freightliner 120SD Highway Tractor Truck	T50XX031		\$ 43.49	HR	14	\$ 608.86
B 2.	Lowboy Trailer 50 Ton	T45EA007		\$ 11.61	HR	14	\$ 162.54
B 3.	Doosan Wheel Excavator Model DX 190W	H30CA005		\$ 53.74	HR	132	\$ 7,093.68
B 4.	CASE Wheeled Loader Model DX 721G	L40CS013		\$ 62.32	HR	132	\$ 8,226.24
B 5.	Mack 77 Dump Truck 10 CY	T50XX032		\$ 28.73	HR	24	\$ 689.52
B 6.	CASE Backhoe Model 580 SN WT	L50CS008		\$ 34.08	HR	24	\$ 817.92
B 7.	350 Highway Crew Truck 4X2 Gas 1Ton	T50XX009		\$ 18.83	HR	184	\$ 3,464.72
B 8.	350 Highway Crew Truck 4X2 Gas 1Ton	T50XX009		\$ 18.83	HR	184	\$ 3,464.72
B 9.	Portable Toilet (RENTAL)	N/A		\$ 100.00	Week	5	\$ 500.00
TOTAL ITEM B							\$ 25,028.20
C. SUPPLIES & MATERIALS							
Item No.	Description	Unit Price	Unit	Quantity	Total Amount		
C 1.	Class III Pipe Embedment.	\$ 4.50	CY	168	\$ 756.00		
C 2.	48" PVC Closed Profile ASTM F1803/ ASTM D3212	\$ 105.00	LF	175	\$ 18,375.00		
C 3.	48" X 45 Degree Manufactured PVC BEND.	\$ 5,700.00	EA	2	\$ 11,400.00		
C 4.	Earthen Fill Material for Cofferdam Construction.	\$ 4.00	CY	465	\$ 1,860.00		
C 5.	Grade 60 ASTM A615 Steel Reinforcement.	\$ 1.00	LB	3,645	\$ 3,645.00		
C 6.	4000 psi Portland Cement Concrete Ready Mix.	\$ 117.00	CY	30	\$ 3,510.00		
C 7.	4' X 8' X 3/4" Common Pine Plywood Sheet.	\$ 35.00	Sheet	40	\$ 1,400.00		
C 8.	2" X 4" X 8ft Long Common Pine Wood Stud.	\$ 3.50	EA	100	\$ 350.00		
C 9.	16 D Nail 30 lb Box.	\$ 535.00	Box	1	\$ 535.00		
C 10.	Sikaflex Control and Expansion Joint Sealant 10 oz.	\$ 100.00	Box	1	\$ 100.00		
C 11.	ADEKA Ultra Seal P201 Hydrophilic Paste 11 oz Tube.	\$ 310.00	Box	1	\$ 310.00		
C 12.	Fabricated Aluminum Slide Gate.	\$ 15,000.00	EA	2	\$ 30,000.00		
C 13.	SCADA Hardware	\$ 9,750.00	EA	1	\$ 9,750.00		
C 14.	Chain Link Fence with Security Wire	\$ 18.50	LF	60	\$ 1,110.00		
TOTAL ITEM C							\$ 83,101.00
D. PROFESSIONAL SERVICES							
D 1.	Surveying Services			Lump Sum	\$ 1,000.00		
D 2.	Consulting Engineering Services			Lump Sum	\$ 13,099.00		
D 3.	Environmental and Regulatory Compliance			Lump Sum	\$ 2,500.00		
D 5.	Construction Materials Testing			Lump Sum	\$ 1,250.00		
TOTAL ITEM D							\$ 17,849.00
TOTAL DIRECT COST (ITEMS A,B,C, and D)							\$ 149,533.40
Indirect Costs							0
Type of Rate							0
TOTAL ESTIMATED PROJECT COSTS							\$ 149,533.40