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**WaterSMART Grants: Small-Scale Water Efficiency Projects for FY 2020  
FUNDING OPPORTUNITY NO. BOR-DO-20-F006**



## **Ysla Lateral Concrete Lining Project (Phase 3)**

**PROJECT CATEGORY: Canal Lining / Piping**

**TOTAL PROJECT COST: \$197,294**

**USBR GRANT REQUEST: \$75,000**

**Applicant**

**El Paso County Water Improvement District No. 1  
13247 Alameda Avenue, Clint, Texas 79836**

**Project Manager**

**Pete Rodriguez, Maintenance Manager  
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## I TECHNICAL PROPOSAL AND EVALUATION CRITERIA

### A. Executive Summary

**Date:** February 28, 2020  
**Applicant Name:** El Paso County Water Improvement District No. 1  
**City, County, State:** El Paso, El Paso County, Texas  
**Project Name:** Ysla Lateral Concrete Lining Project (Phase 3)

**Project Manager:** Pete Rodriguez, Maintenance Manager  
**Telephone:** 915-872-4000  
**E-mail:** [prodriguez@epcwid1.org](mailto:prodriguez@epcwid1.org)

**Project Funding Request:** The total project cost is \$197,294 and the District is requesting \$75,000 in federal funds.

### Project Summary

The Ysla Lateral Concrete Lining Project (Phase 3) consists of constructing 3,700 feet of lined concrete on an earthen-lined section of the Ysla Lateral. The newly concrete lined system will support the efficient management of water resources by conserving approximately 50 acre-feet of water normally lost to seepage. The proposed project is the third phase of multiple planned lining projects for the Ysla Lateral and offers additional benefits to transportation for public schools in the City of Socorro, Texas.

### Estimated Project Schedule

The project will be accomplished within the two-year allowance. The construction of the project will take 20 months from the expected date of funding authorization. Concrete lining will take 6 months beginning on October of 2021 through March of 2022. Construction will occur outside of the irrigation season (typically March 15 to October 15). Evaluation and final report preparation will take an additional month. The project completion date is April 30, 2022.

### Federal Facility

The El Paso County Water Improvement District No. 1 (the District) lies within Reclamation's Upper Colorado Region. The District canal system was constructed as part of Reclamation's Rio Grande Project and relies on Reclamation facilities for water delivery and storage.

### B. Background Data

#### Source of Water Supply and Total Quantity of Water Supply Managed

The District obtains water by annual allocation from the Reclamation's Rio Grande Project. The District's diversion right of water during a full allocation year during the primary irrigation season is 376,960 acre-feet per year.

#### Relationship with Reclamation

The United States Reclamation Act passed on June 17, 1902 initiated formal development of the large-scale irrigation system in the El Paso Valley. The Rio Grande Reclamation Act of February 25, 1905 provided for the construction of Elephant Butte Dam and Reservoir, which was completed in 1916. Major canals and drains were constructed under the Rio Grande Reclamation Project from 1915 to 1925 and a second impoundment, the Caballo Dam and

Reservoir, was completed in 1938. The Reclamation maintained the dams, reservoirs, canals and drains until 1980, when the maintenance responsibilities were assumed by the District. The District assumed actual ownership of all canals, drains, laterals and waterways in the Texas portion of the Rio Grande Project on January 22, 1996.

Rio Grande Project water is released from storage in Elephant Butte Reservoir and regulated through Caballo Reservoir. The methodology for determining diversions for the District, Elephant Butte Irrigation District (EBID) in New Mexico, and the Republic of Mexico is described in the Operating Agreement and Operating Manual that the two districts and Reclamation negotiated and approved in 2008. The 2008 Operating Agreement is included in pending litigation (*State of Texas v State of New Mexico and State of Colorado, No. 220141 Original in the United States Supreme Court and Intervention by the United States*).

The District has worked with Reclamation on many projects over the years since, including:

**Table 1 – Recent Projects Funded by Grants from Reclamation**

<b>Program</b>	<b>Contract</b>	<b>Year</b>	<b>Grant Amount</b>
Riverside Canal Concrete Lining Project Phase II	R18AP00193	2018	\$ 1,000,000
Ysla Lateral Concrete Lining Project	R18AP00261	2018	\$ 75,000
Designing Improvements to the Franklin Canal and Franklin Feeder Canal	R18AP00142	2018	\$ 75,000
La Union East Concrete Lining Project	R19AP00150	2019	\$ 300,000
Montoya Main and Montoya A Lining Project	R19AP00228	2019	\$ 75,000
AMI Upgrades to Well Meters Project	R19AP00207	2019	\$ 75,000
La Union East Canal Concrete Lining Design	R19AP00181	2019	\$ 75,000
Riverside Canal Concrete Lining Project Phase III	R20AP00056	2020	\$ 1,000,000

Total water conservation for these collaborative projects after full implementation (or subsequent construction) is estimated at 9,225 acre-feet per irrigation year (February 15 to October 15) on a full allocation (4 acre-feet per acre).

**Water Rights, Current Water Uses, and Water Users Served**

The District provides water from the Rio Grande for 69,010 acres of water rights lands. Active irrigation users include approximately 325 large farms and 4,500 irrigated tracts of five acres or less. Irrigated crops include cotton, alfalfa, pecan trees, sorghum, chilies, wheat, onions, corn, vegetables, pasture grass, and family gardens.

The City of El Paso currently has water rights for approximately 70,000 acre-feet per year from Rio Grande Project Water in contracts and from leasing water rights from holders. Rio Grande Project water is used to meet municipal demand for a population of over 800,000.

**Agricultural Water Delivery and Distribution System**

The District delivers water to an average of 49,000 acres of cropland using 350 miles of canals, 269 miles of drains, 62 wells, and over 2,200 turnouts. There are approximately 62 miles of concrete lined canals and laterals, 163 miles of unlined canals and laterals, 1.52 miles of enclosed canals and pipelines, and 30 miles of canals and laterals that are lined intermittently. The District currently operates 93 telemetry sites that are monitored by the District’s central dispatch office and is scheduled to bring online 60 additional groundwater well metering telemetry sites starting in 2020. The District also operates a near real-time flow telemetry data

portal using these sites, which can be viewed remotely by farmers and stakeholders at <https://epcwid.org/telemetry>.

### **Current and Projected Water Demand**

Water demand in Texas is determined at the state level by the Texas Water Development Board (TWDB) with input from local water users and historical water use data. The *2017 Texas State Water Plan* estimates that the total water demand in El Paso County is 406,422 acre-feet of water per year. By 2070, water demand is expected to increase to 476,929 acre-feet of water per year. Irrigation currently accounts for over 60% of water use in El Paso County, and approximately 30% of future municipal and industrial water needs are projected to be supplied using increasing amounts of water previously used for irrigation.

### **Potential Shortfalls in Water Supply and Unmet Local Water Demand**

The El Paso region has an arid climate and receives an average annual rainfall of about 8 inches with net evaporation exceeding 70 inches. The region faces unique water challenges characterized by an agricultural system that is a century old, prolonged drought conditions, a growing population and a growing sister city in Mexico with shared groundwater and surface water supplies, interstate and international treaties, and interstate litigation that may impact the District's water supply from the Rio Grande.

The *2017 Texas State Water Plan* estimates that there are 53,202 acre-feet of unmet annual water needs for irrigation in El Paso County. Only a portion of the agricultural land in El Paso County has access to private irrigation wells of which a majority of the wells produce water with Total Dissolved Solids of greater than 1,000 mg/l (many in excess of 2,500 mg/l) with significant sodium content. The high salt content of the groundwater limits the amount of groundwater that can be used to grow irrigated crops. Consequently, many farmers rely on blending surface water from the Rio Grande with groundwater to meet their water quality needs or use Rio Grande Project water exclusively. During years of drought, many agricultural operations are fallowed or deficit irrigated.

A *2013 Review of Observed and Projected Climate Changes* by the U.S. Bureau of Reclamation noted that projected reductions in snowpack, declines in snow water equivalence, and advanced snowmelt will lead to a 10% to 30% reduction of water flow in the Rio Grande in the next 50 to 70 years. The Rio Grande at El Paso observed flows for 2001 through 2010 that were about 23% lower than the period from 1941 through 2000. Consequently, water stakeholders within the Rio Grande watershed will need to continue making investments in water conservation to mitigate projected reductions in surface water supply.

Conservation via concrete lining is one of the most cost effective options to meet El Paso's future water demands compared to other projects proposed in the *2017 Texas State Water Plan*, including meeting municipal water demands via desalination, advanced purification, and the importation of water from outside El Paso County. A 2017 report by El Paso Water Utilities compared drinking water quality treatment costs per acre-foot, determining that treatment costs for Rio Grande Project water are the second least expensive option at \$200-\$300 per acre-foot, while costs for inland desalination are \$508 per acre-foot, costs for advanced purification are \$1,370 per acre foot, and costs for long-distance importation are \$2,840 per acre foot.

As water demand is met by developing a more efficient system, the District will not require using as large of an annual allocation of Rio Grande Project water, thereby allowing storage in Elephant Butte and Caballo Reservoirs to accumulate and provide critical water in drought years when unmet water demands are highest.

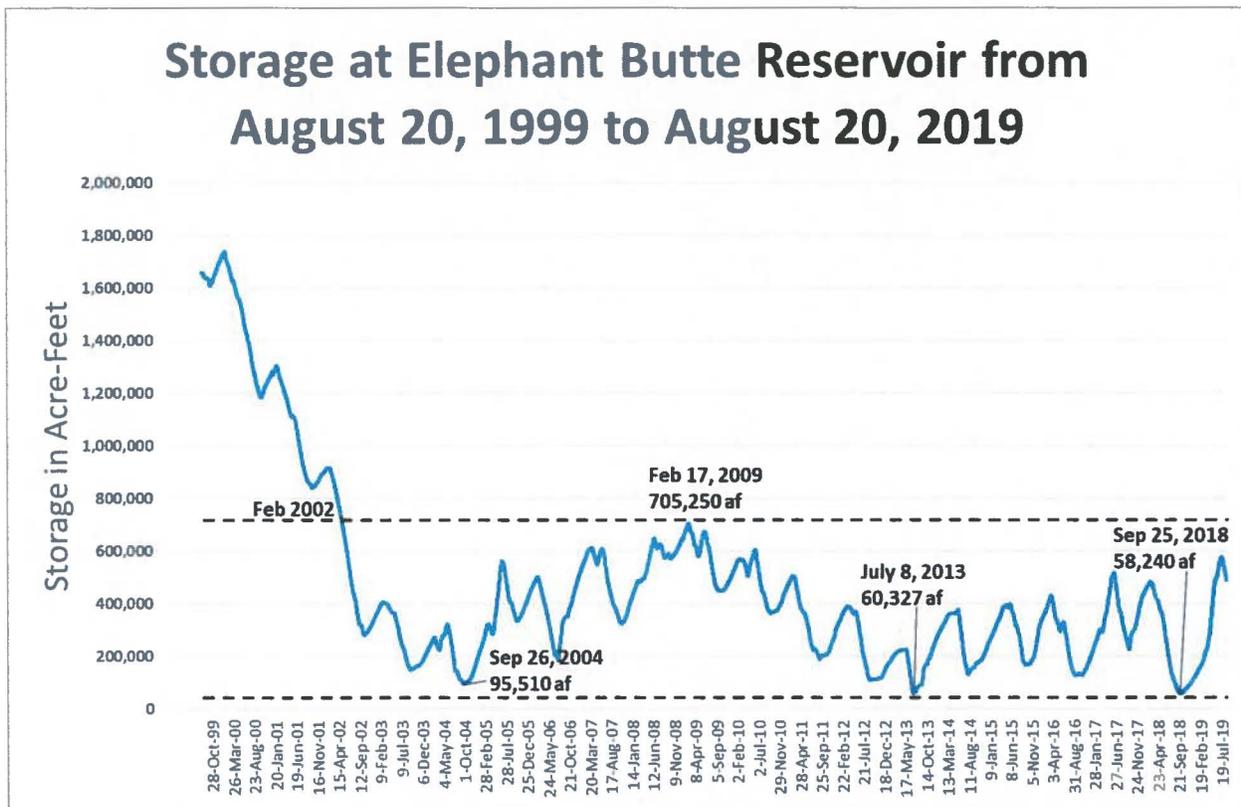
**Prolonged Drought and Near Drought-of-Record Conditions**

In 2018, Elephant Butte Reservoir reached near-record-low levels at about 3% capacity, with just 62,573 acre-feet of water in storage as of September (total conservation capacity is 1,973,358 acre-feet). About 45,000 acre-feet (70%) of the September 2018 storage is attributed to water conserved and carried over by the District in 2017, which was possible due to measures adopted in response to the District’s 2017 Drought Contingency Plan and as the 2008 Operating Agreement.

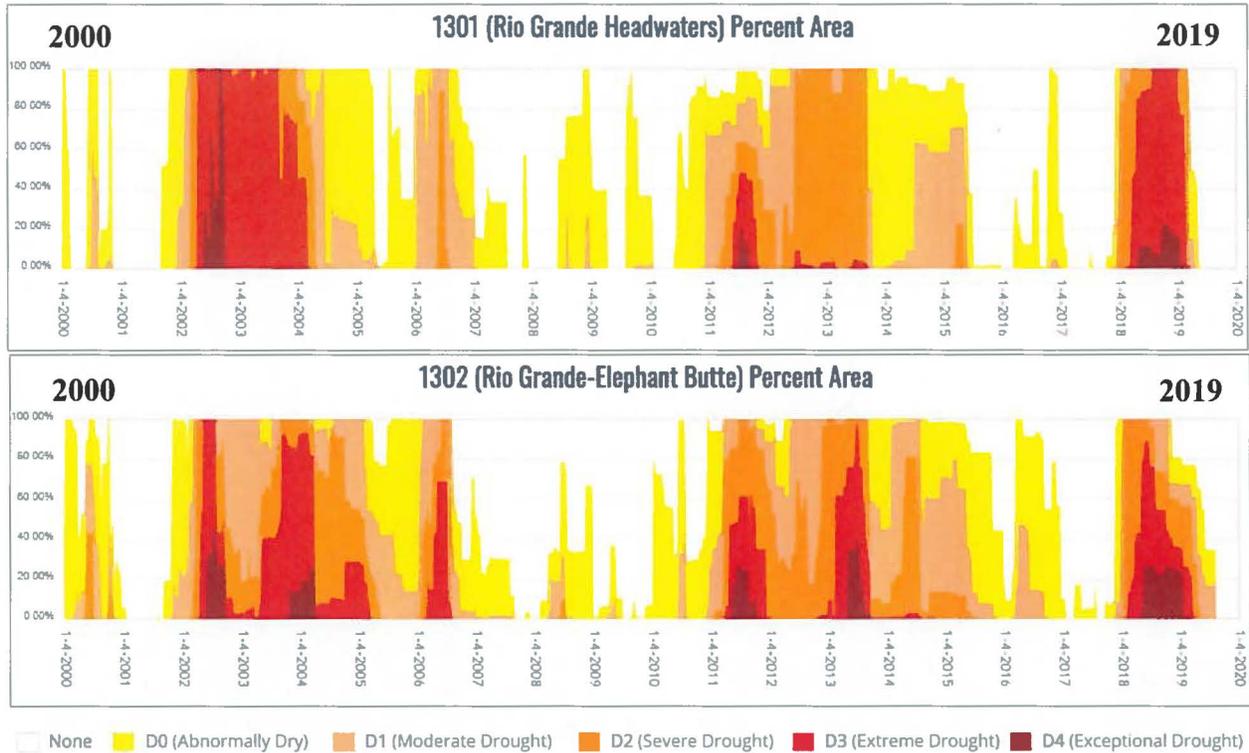
The westernmost part of Texas, as well the headwaters of the Rio Grande in Colorado and New Mexico from which the District’s water supply originates, have been experiencing drought conditions for much of the past two decades, with only 2005, 2008, 2016, 2017, and 2019 experiencing average or above-average spring runoff into Elephant Butte Reservoir. The February 11, 2020 U.S. Drought Monitor Report shows D1-Moderate and D2-Severe drought conditions at the headwaters and tributaries of the Rio Grande and can be referenced in Figure 3.

Elephant Butte and Caballo Reservoirs have been near or below 30% of the combined storage capacity of 2.23 million acre-feet since 2010, also reaching three percent capacity in 2013. 2013 was the shortest irrigation season in El Paso (less than six weeks) and supplied the least amount of water in the almost 100 year history of the Rio Grande Project.

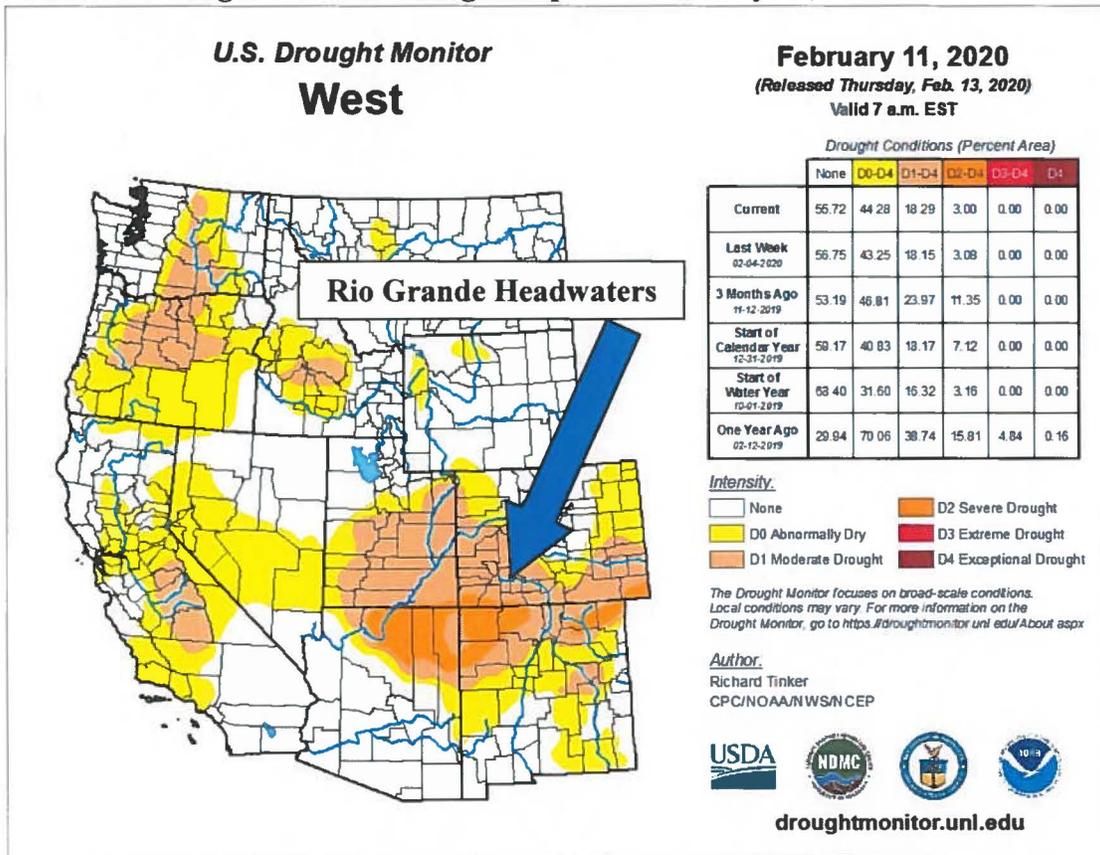
**Figure 1 – Storage and Level Thresholds at Elephant Butte Reservoir from 1999 - 2019**



**Figure 2 – U.S. Drought Monitor Intensity for the Upper Rio Grande from 2000 - 2019**



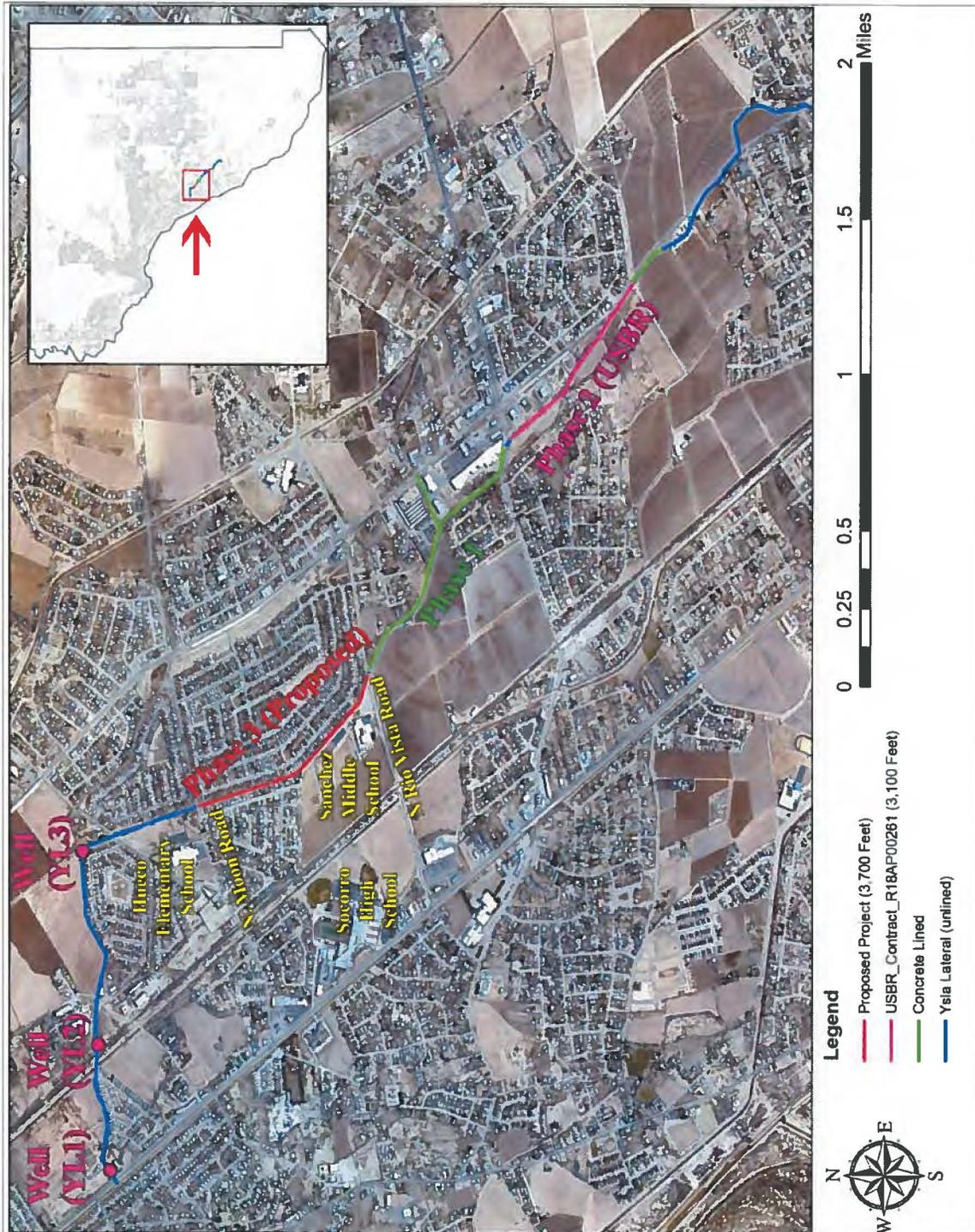
**Figure 3 – U.S. Drought Monitor Drought Report – February 11, 2020**



### C. Project Location

The Ysla Lateral Concrete Lining Project (Phase 3) is located within the City of Socorro, El Paso County, Texas. The project linear length begins at latitude  $31^{\circ}39'56.4''N$  and longitude  $106^{\circ}17'10.2''W$  ( $31.665667, -106.286167$ ) and ends at latitude  $31^{\circ}39'28.1''N$  and longitude  $106^{\circ}16'47.9''W$  ( $31.657806, -106.279972$ ). A location map is available for reference in Figure 4.

Figure 4 – Project Location Map



#### **D. Technical Project Description and Milestones**

The District is requesting a \$75,000 grant from Reclamation to supplement District funding to concrete line 3,700 feet of the Ysla Lateral Canal. We assume that the improvements will have a useful life of 50 years.

##### **Task 1 – Environmental and Cultural Compliance**

The objective of this task is to perform necessary environmental and cultural compliance work. Per Reclamation staff from the Albuquerque Area Office, it is expected that the proposed project will require performing a Categorical Exclusion Checklist in a manner similar to Phase 2 of the Ysla Lateral Lining Project (Contract No. R18AP00261). Environmental and cultural compliance work will be completed prior to any ground-disturbing activities.

##### **Task 2 – Concrete Lining Construction**

The objective of this task is to concrete line 3,700 feet of the Ysla Lateral. The Ysla Lateral is a trapezoidal canal with designed concrete lined dimensions of a 5 foot bottom, 1:1 bank slopes, varying depth, and flow capacity of 50 cubic feet per second. Earthwork and compaction will be completed using District-owned equipment. The concrete will be applied in the field as shotcrete reinforced by pre-manufactured steel panel framework. Previous concrete lining work at the Ysla Lateral maintains these design specifications and will be used in the proposed project.

##### **Task 3 - Grant Administration, Reporting, and Technical Support**

The objective of this task is to perform administrative and grant reporting work necessary to fulfill contractual obligations as required by Reclamation. Work shall include but not be limited to coordinating District resources and staff and developing performance reports and a final report as specified in Sections F.3.1, F.3.2, and F.3.3 of the 2019 WaterSMART Small Scale Water Efficiency Projects FOA.

##### **Problems and Needs**

The proposed project is the third phase of improvements at the Ysla Lateral. In addition to conserving water normally lost to seepage, concrete lining the proposed section of the Ysla Lateral will reduce maintenance operations and reduce the likelihood of spills. Residential development of previously agricultural land adjacent to the Ysla Lateral has increased the need for concrete lining in order to convey irrigation water to water users downstream with increased efficiency. The proposed project will also advance a future expansion of the N. Rio Vista Road crossing, which is currently undersized and is considered a hazard for pedestrians (see cover page). The proposed project will also reduce losses from supplemental groundwater drawn from three upstream wells.

##### **Expected Outcomes**

Concrete lining will provide a more durable canal surface with excellent hydraulic properties that is stable and easier to maintain than earth-lined canals. Concrete lining the proposed section of the Ysla Lateral will improve deliveries of irrigation water to agricultural operations located adjacent and downstream of the project site, increase operational efficiency to avoid costly damages from spills and breaks at surrounding residential and public school properties, and stabilize the lateral to better support future road expansions and traffic.

## E. Evaluation Criteria

### E.1. Evaluation Criterion A – Project Benefits (35 points)

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

***What are the benefits to the applicant's water supply delivery system?***

In addition to conserving water, the benefits of concrete lining the proposed section of the Ysla Lateral are to ensure the continued delivery of irrigation water to agricultural users downstream from the project site, reduce maintenance operations, and reduce the likelihood of spills and property damages to adjacent residential and public properties. The District achieved similar results by concrete lining 7,990 feet of the Ysla Lateral located immediately downstream of the proposed project site of which the lining of 3,100 feet (Phase 2) was funded by Reclamation as part of a FY2018 WaterSMART Grants: Small-Scale Water Efficiency Projects award.

The District uses three shallow (100 feet deep) wells with an average pumping capacity of 3 cubic feet per second (cfs) on sites located along the Ysla Lateral upstream from the proposed project length. Recovered groundwater is used to supplement Rio Grande Project water during drought periods. Currently, groundwater can only be used as a supplement during the irrigation season in conjunction with Rio Grande Project water. Seepage prevents the wells from being used as an independent source of irrigation water. After concrete lining, the use of supplemental groundwater becomes more cost effective since both fuel costs and water losses are reduced.

***Extent to which the proposed project improves overall water supply reliability.***

Based on historical use of the Ysla Lateral and the maximum number of irrigation heads that can be used in an irrigation period, roughly 5 to 9 acre-feet of water are lost per spill event over a 24-hour period. Successful completion of the proposed project would prevent most spill events. Approximately 50 acre-feet of water per year normally lost to seepage can be conserved by concrete lining the proposed section of the Ysla Lateral. The following calculations were used to estimate seepage losses:

$$((78.55+66.50)/2) \text{ acre-feet per mile per year} * 0.7 \text{ miles} = 50.76 \text{ acre-feet per year}$$

Estimated water conservation rates used for the Ysla Lateral are consistent with observations from seepage studies performed across the District's canal system by Texas A&M University (Sheng & Brown 2002). Water loss estimates are derived from studies performed in canals that are proportionally comparable to the Ysla Lateral and have similar hydrologic and hydraulic features and soil profiles.

With a life expectancy of 50 years, the proposed project has a conservation return on investment of \$77.72 per acre-foot of water. The following calculations were used to estimate conservation return on investment:

$$50 \text{ acre-feet per year} * 50 \text{ years} = 2,500 \text{ acre-feet}$$
$$\$197,294 / 2,500 \text{ acre-feet} = \$77.72 / \text{acre-foot}$$

***The expected geographic scope benefits from the proposed project.***

It is expected that the proposed project will lead to local benefits to the District's irrigation system in the form of efficiency improvements and decreased maintenance. Basin-wide benefits are also expected: as irrigation water demand is met by a more efficient system, the District will not require using as large of an annual allocation of Rio Grande Project water, thereby allowing storage in Elephant Butte and Caballo Reservoirs to accumulate and provide critical water in drought years when unmet water demands are highest.

***Extent to which the proposed project will increase collaboration and information sharing among water managers in the region.***

The proposed project was selected as a priority due to cost-effective water conservation benefits and additional benefits to the community. The District works with municipal and irrigation water managers in the region and will showcase the synergistic impact that is made possible through small-scale concrete lining improvements. This approach was effective during Phase 2 of the Ysla Lateral Concrete Lining Project, which was funded by Reclamation.

***Any anticipated positive impacts/benefits to local sectors and economies (e.g., agriculture, environment, recreation, tourism).***

**Local Transportation Benefits**

The project site is located adjacent to Hueco Elementary School and Salvador H. Sanchez Middle School. Socorro High School is located approximately 1,500 feet away from the project site. The project site is surrounded by residential development and students use the Ysla Lateral to walk to and from school. The project site is bordered by North Moon Road and North Rio Vista Road, two roads that serve as major public school bus routes and also connect residents living at the southwestern subdivisions of the City of Socorro to key public services and transportation routes, including the Socorro City Hall and Municipal Court, Texas 20 and Texas 76 State Roads, and Interstate Highway 10. Both North Moon Road and North Rio Vista Road are undersized. Future expansion of these roads by the City of Socorro will require increased right-of-way access at the proposed section of the Ysla Lateral Canal, and concrete lining the lateral would facilitate such expansion. Additional information about the benefits of the proposed project is available for reference in the Resolution of Support provided by the City of Socorro in Appendix B.

**Reducing Liability Exposure from Breaks and Spills**

Estimated costs per spill range from \$15,000 to repair the earthen banks of the Ysla Lateral to as much as \$200,000 for damages to individual properties adjacent or near the Ysla Lateral. Surrounding the proposed section of the Ysla Lateral are 112 residential properties valued at close to \$13.4 million, according to valuations by the El Paso Central Appraisal District. Salvador H. Sanchez Middle School is also located adjacent to the lateral. Concrete lining the proposed section of the Ysla Lateral would reinforce the canal banks, leading to reduced maintenance operations, flood damage mitigation for adjacent properties from breaks and spills, and ensure the continued delivery of irrigation water to approximately 1025 acres of pecan orchards and farmland located downstream from the proposed project site with a total agricultural market valuation of \$7.7 million.

***Extent to which the project will complement work done in coordination with NRCS in the area.***

The District has a history of collaboration with the Natural Resources Conservation Service (NRCS) program and periodically hosts local work group management meetings at the District offices. The Environmental Quality Incentives Program (EQIP) 2020 El Paso District Priorities include practices that can enhance water availability and efficient irrigation systems.

**Cropland Priority 1                      Excess/Insufficient Water - Inefficient use of irrigation water**

As part of the proposed project, the District will adjust headgates currently used to deliver irrigation water to a school and over 22 acres of farmland. The District has informed the office of the local NRCS District Conservationist of the proposed canal lining project and recommended approaching the owners of this agricultural acreage to consider applying to the NRCS EQIP program. Previous concrete lining projects performed by the District facilitated NRCS EQIP-eligible improvements such as the installation of turnout flow meters, the concrete lining of private irrigation ditches, and installing low-cost, on-farm soil moisture sensors.

**E.2. Evaluation Criterion B – Planning Efforts Supporting Project (35 points)**

***Describe how your project is supported by an existing planning effort.***

**2019 Water Conservation Plan**

The proposed lining of the Ysla Lateral is part of the District’s 2019 Water Conservation Plan (WCP) planned efficiency projects and is available for reference at <https://www.epcwidl.org>. The WCP includes an internal System Optimization Review (SOR) summary, a 10-year plan prioritizing conservation and efficiency projects, and historical and current water use data.

**2017 Texas State Water Plan and 2016 Far West Texas Water Plan**

The proposed project is listed under Water Management Strategy (WMS) E-45 in the *2017 Texas State Water Plan*, which is developed at the state level by the Texas Water Development Board (TWDB). Improvements in the District’s delivery system in WMS E-45 are estimated to conserve an aggregated 50,000 acre-feet of water per year. The proposed project is also included as part of a Recommended Water Management Strategy in the *2016 Region E Far West Texas Water Plan*, which is developed by the Far West Texas Water Planning Group (FWTWPG). Projects prioritized in these water plans are eligible for state funding from the TWDB. A Letter of Support from the FWTWPG is included in Appendix B.

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

The proposed project is an investment necessary to efficiently manage the District’s delivery of Rio Grande Project water within a rapidly-urbanizing area with shared municipal and agricultural water users. In addition to conserving water normally lost to seepage, a major goal of the proposed project is to increase operational efficiency by mitigating the risk of spills and reducing maintenance in waterways located in developed areas. Concrete lining will allow the District to address sediment build-up, debris, and water losses from spills that may affect irrigation water deliveries to these and other agricultural operations that depend on Rio Grande Project water conveyed via the Ysla Lateral. The proposed project is listed among several projects needed to address these issues and are described in greater detail in the aforementioned water plans.

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

The District has limited sources of revenue and cannot immediately fund the majority of its planned water conservation and efficiency projects. District revenues decrease significantly during droughts. As such, the District proactively seeks to partner with other public entities to cost-share concrete lining projects when possible. The District has worked with Reclamation on a number of such projects and has received financial support from the Texas Water Development Board to implement projects prioritized in the State Water Plan. The District also cost-shares concrete lining projects with the Texas Department of Transportation (TxDOT) to facilitate the expansion of roadways at crossings and has engaged in three of such projects in the two years.

The proposed project was selected as a priority as part of the District's internal SOR process due to the rapid development of land adjacent to the Ysla Lateral. The values of properties surrounding the Ysla Lateral have increased and, consequently, potential liabilities and costs in the case of a spill event. The District believes that Reclamation's Small-Scale Water Efficiency Projects program is ideal to cost-share the concrete lining of the Ysla Lateral to conserve water and increase operational efficiency while bringing additional public benefits and simultaneously contributing to the reliability of the supply of Rio Grande Project water.

### **E.3. Evaluation Criterion C – Project Implementation (10 points)**

***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 proposed project will be completed 20 months upon receiving funding authorization by the expected date described in the WaterSMART: Small-Scale Efficiency Projects FOA. The project completion date is April 30, 2022. A project timeline can be referenced in Figure 5.

#### **Task 1: Environmental and Cultural Compliance**

Environmental and cultural compliance work will be performed prior to the beginning of construction activities. It is expected that 6 months will be sufficient to complete this task. An additional 6 months are available as contingency.

#### **Task 2: Concrete Lining Construction**

Concrete lining work will need to take place outside of the irrigation season (typically March 15 to October 15) and is expected to be completed by March of 2022. Work includes but is not limited to:

- 2.1 Performing earth work, including fleet mobilization, excavation, dirt hauling, soil compaction, grading, and alignment; and
- 2.2 Performing concrete lining work, including installing the geofabric liner, laying steel panel framework, spraying and curing shotcrete, final grading, and fleet demobilization.

#### **Task 3: Grant Administration, Reporting, and Technical Support**

Grant administration and reporting work will be completed as specified in Section F.3.1, F.3.2 and F.3.3 of the 2020 WaterSMART Small Scale Water Efficiency Projects FOA and in an award agreement with Reclamation. Water savings evaluations and final report preparation will take an additional month.

**Figure 5 – Project Timeline**

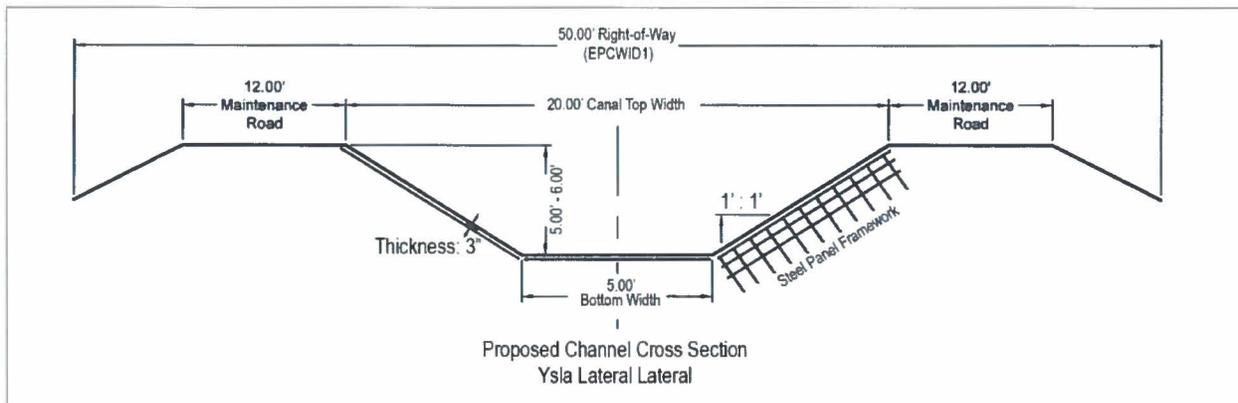
Task No.	Dates	Duration	2020												2021												2022											
			O	N	D	J	F	M	A	M	J	J	A	A	S	O	N	D	J	F	M	A	M	J	J	A	A	S	O	N	D							
Project Funding Award	Oct 2020-																																					
Task 1: Environmental and Cultural Compliance	Nov 2020 - Mar 2021	6 months																																				
Task 2: Concrete Lining Construction	Oct 2021 - Mar 2022	6 months																																				
Task 3: Grant Administration, Reporting, and Technical Support	Nov 2020 - April 2022	20 months																																				

*Describe any permits that will be required, along with the process for obtaining such permits.*  
 The District owns, operates, and maintains the project site and right-of-way. There are no required permits or approvals necessary for this project.

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

Proposed concrete lining work at the Ysla Lateral will be based on design specifications developed for and used in concrete lining work performed in other sections of the Ysla Lateral located immediately downstream of the proposed section. The Ysla Lateral is a trapezoidal canal with a 5 foot bottom, 1:1 bank slopes, varying depth, and flow capacity of 50 cubic feet per second. Alignment, grade, and elevation are based on engineering specifications originally developed by Reclamation as part of the Rio Grande Project. Sediment has accumulated over time throughout sections of the Ysla Lateral and has impacted the conveyance capacity of the lateral. On-site surveying will re-establish grade and elevation necessary for efficient gravity flow. The proposed cross-section specifications are included in Figure 6 below:

**Figure 6 –Cross-Section Specifications at the Ysla Lateral (Not to Scale)**



**Figure 7 – Steel-Panel Reinforced Shotcrete in Phase 2 of the Ysla Lateral Lining Project**



***Describe any new policies or administrative actions required to implement the project.***  
No new policies or administrative actions are required.

***Describe how the environmental compliance estimate was developed. Have the compliance costs been discussed with the local Reclamation office?***

Environmental compliance cost and time estimates were developed via email exchange in February 18, 2020 with staff from Reclamation’s Albuquerque Area Office and support from staff from the El Paso Field Division Office. An estimated allocation of \$1,000 of total project costs were determined adequate for environmental compliance work for small waterways such as the Ysla Lateral. This was the same cost for Phase 2 of the Ysla Lateral Concrete Lining Project (Contract No. R18AP00261).

**E.4. Evaluation Criterion D – Nexus to Reclamation (10 points)**

***Is the proposed project connected to a Reclamation Project or activity? Does the applicant receive Reclamation project water?***

The District obtains water by annual allocation from the United States Bureau of Reclamation’s Rio Grande Project.

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

Significant major canals and drains were constructed under the Rio Grande Reclamation Project, and Reclamation maintained the dams, reservoirs, canals and drains until 1980, when the maintenance responsibilities were assumed by the District, and then subsequent ownership in

1996. The District has worked with Reclamation on several improvement projects over the years since.

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

The proposed project lies within the Rio Grande Basin.

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

The proposed project will contribute water via conservation and efficiency improvements to delivery operations for Rio Grande Project water users. The El Paso region is considered by Reclamation to be of “Substantial Potential for Conflict” as defined in Reclamation’s 2011 Technical Memorandum 86-68251-11-01.

***Will the project benefit any tribe(s)?***

Water conserved as a result of the proposed project will benefit all Rio Grande Project water users in El Paso County, including the Ysleta del Sur Pueblo, a federally recognized tribe. The District delivers water to the Ysleta del Sur Pueblo Reservation for agriculture and for two of the Ysleta del Sur Pueblo’s most important ceremonial processions: *St. Anthony of Padua Feast Day* and *Dia de Los Santos Reyes*.

**E.5. Evaluation Criterion E – DOI Priorities (10 points)**

***1. Creating a conservation stewardship legacy second only to Teddy Roosevelt***

***(d) Review DOI water storage, transportation, and distribution systems to identify opportunities to resolve conflicts and expand capacity***

The proposed project will modernize a part of a water distribution system previously constructed and operated by Reclamation. The proposed project will also conserve water and will support continued irrigation operations amidst rapid urbanization, changes in land use, competing water use priorities, and drought conditions.

**Texas v New Mexico Federal Litigation regarding the Rio Grande Compact**

As previously stated, the District is located in an area considered by the Reclamation to be of “Substantial Potential for Conflict.”

***3. Restoring Trust with Local Communities***

***(b) Expand the lines of communication with Governors, state natural resources offices, Fish and Wildlife offices, water authorities, county commissioners, Tribes, and local communities.***

Congressman Will Hurd (TX-23) and the City of Socorro, Texas issued statements of support for the proposed project and these can be referenced in Appendix B. The process of requesting support from political subdivisions and elected officials advances evaluation Criterion D.3.B and includes explaining project details and water conservation benefits to leadership (e.g., elected officials and staff, County Judge and Commissioners, City Council, Board of Trustees), informing leadership of any resulting awards from funding agencies such as Reclamation and completed projects, and working with respective administrations and staff to make necessary

arrangements to complete projects and coordinate site visits and educational workshops. Informing political subdivisions of water conservation projects often leads to increased communication and project information dissemination with their respective constituents and the general public. The District regularly informs local political subdivisions and elected officials of the multiple projects funded by Reclamation and their achieved water savings and benefits to both agricultural and municipal water supplies.

Upon completing the concrete lining construction work, the City of Socorro, Texas can make improvements to the pedestrian bridge used by students of Salvador H. Sanchez Middle School to cross the Ysla Lateral at North Rio Vista Road. North Rio Vista Road is a highly trafficked school bus route and is undersized, making the bridge the only pedestrian access point. The bridge is located at the tail end of the proposed project site and an image of the bridge can be referenced in the cover page of this document.

## **Reclamation Priorities**

### ***4. Address Ongoing Drought***

As previously described in 1.B., surface water users in El Paso County have been experiencing drought conditions for much of the past two decades. The proposed project conserves approximately 50 acre-feet of water normally lost to seepage. As water demand is met by developing a more efficient system, the District will not require using as large of an annual allocation of Rio Grande Project water, thereby allowing storage in Elephant Butte and Caballo Reservoirs to accumulate and provide critical water in drought years when unmet water demands are highest.

### ***6. Improve Water Supplies for Tribal and Rural Communities***

As previously stated, water conserved as a result of the proposed project will benefit all Rio Grande Project water users in El Paso County, including the Ysleta del Sur Pueblo, a federally recognized tribe. The City of Socorro, where the Ysla Lateral is located, must balance the needs of the longstanding agricultural community and a rapidly-urbanizing constituency. Additional details are available in the Resolution of Support in Appendix B. The proposed project advances the City of Socorro's goals by supporting agricultural water users (reducing sediment levels, and thereby associated costs and maintenance), reducing liability exposure from possible canal breaks in adjacent residences, and facilitating the development of transportation infrastructure for the benefit of all Socorro residents.

## II PROJECT BUDGET

### A. Funding Plan and Letters of Commitment

The total project cost is \$197,294. The District will contribute \$122,294 to the project, which is 62% of the total project costs. The District is requesting a \$75,000 grant from Reclamation, which is 38% of the total project costs. There are no additional funding partners for this project.

EPCWID Funding	\$122,294	=	62%
Reclamation Funding	\$75,000	=	38%
<b>Total Project Funding</b>	<b>\$197,294</b>	<b>=</b>	<b>100%</b>

The proposed project includes budgeted costs that are representative of actual construction costs for other sections of the Ysla Lateral. The District has sufficient revenues and staff to provide a 62% cost share for the project. The District's funding commitment is established via a Resolution from the District Board of Directors voted and approved on November 20, 2019 and is available for reference in Appendix A.

There are no additional funding partners for this project. Environmental and cultural compliance work is expected to be minimal based on findings in previous concrete lining projects performed on the Ysla Lateral. As such, there are no costs incurred before the anticipated proposed project start date.

### B. Budget Proposal

**Table 2. Total Project Cost Table**

<b>FUNDING SOURCES</b>	<b>AMOUNT</b>
<b>Costs to be reimbursed with requested Federal funding</b>	<b>\$ 75,000</b>
<b>Costs to be paid by the applicant</b>	<b>\$ 122,294</b>
<b>Value of third party contributions</b>	<b>\$ 0</b>
<b>TOTAL PROJECT COSTS</b>	<b>\$ 197,294</b>

**Table 3. Budget Proposal**

BUDGET ITEM DESCRIPTION	COMPUTATION		Quantity Type	EPCWID#1 Funding	Reclamation Funding	TOTAL COST	
	\$/unit	Quantity					
<b>Salaries and Wages</b>							
Maintenance Supervisor	\$31.11	/hour	180	Labor	\$ 5,600	\$ - \$ 5,600	
Equipment Operator I / Labor	\$13.46	/hour	240	Labor	\$ 3,229	\$ - \$ 3,229	
Equipment Operator II	\$18.74	/hour	200	Labor	\$ 3,749	\$ - \$ 3,749	
Equipment Operator III	\$20.20	/hour	180	Labor	\$ 3,637	\$ - \$ 3,637	
Equipment Operator III (2)	\$20.98	/hour	180	Labor	\$ 3,776	\$ - \$ 3,776	
Welder	\$20.22	/hour	40	Labor	\$ 809	\$ - \$ 809	
						<b>Subtotal \$ 20,800</b>	
<b>Fringe Benefits</b>							
Maintenance Supervisor	\$7.61	/hour	180	Labor	\$ 1,370	\$ - \$ 1,370	
Equipment Operator I / Labor	\$5.10	/hour	240	Labor	\$ 1,224	\$ - \$ 1,224	
Equipment Operator II	\$5.81	/hour	200	Labor	\$ 1,162	\$ - \$ 1,162	
Equipment Operator III	\$6.04	/hour	180	Labor	\$ 1,087	\$ - \$ 1,087	
Equipment Operator III (2)	\$6.16	/hour	180	Labor	\$ 1,109	\$ - \$ 1,109	
Welder	\$6.02	/hour	40	Labor	\$ 241	\$ - \$ 241	
						<b>Subtotal \$ 6,193</b>	
<b>Equipment (Rates from 2016 US-ACE USACE EP1110-1-8 District VI Expense Schedule)</b>							
Pickup (2)	\$21.71	/hour	40	Equipment	\$ 868	\$ - \$ 868	
Dump Truck (12/15 CY)	\$30.68	/hour	80	Equipment	\$ 2,454	\$ - \$ 2,454	
Dump Truck (6 CY)	\$21.48	/hour	80	Equipment	\$ 1,718	\$ - \$ 1,718	
Excavator 1	\$42.64	/hour	80	Equipment	\$ 3,411	\$ - \$ 3,411	
Excavator 2	\$42.64	/hour	80	Equipment	\$ 3,411	\$ - \$ 3,411	
Welding Rig (2)	\$5.76	/hour	40	Equipment	\$ 230	\$ - \$ 230	
Dozer	\$37.70	/hour	40	Equipment	\$ 1,508	\$ - \$ 1,508	
Grader	\$54.30	/hour	40	Equipment	\$ 2,172	\$ - \$ 2,172	
Sheeps Foot Roller	\$65.59	/hour	40	Equipment	\$ 2,623	\$ - \$ 2,623	
Water Truck (2)	\$25.66	/hour	80	Equipment	\$ 2,053	\$ - \$ 2,053	
Rubber Tire Excavator	\$42.90	/hour	40	Equipment	\$ 1,716	\$ - \$ 1,716	
Steel Roller Compactor	\$55.27	/hour	40	Equipment	\$ 2,211	\$ - \$ 2,211	
Loader	\$32.10	/hour	60	Equipment	\$ 1,926	\$ - \$ 1,926	
Shotcrete Machine (2)	\$22.00	/hour	80	Equipment	\$ 1,760	\$ - \$ 1,760	
Compressor (2)	\$9.74	/hour	80	Equipment	\$ 779	\$ - \$ 779	
Telescopic Boom 2	\$40.98	/hour	80	Equipment	\$ 3,278	\$ - \$ 3,278	
						<b>Subtotal \$ 32,119</b>	
<b>Supplies and Materials</b>							
Shotcrete	\$110.00	/cy	720	cubic yards	\$ 5,200	\$ 74,000 \$ 79,200	
Curing Compound	\$4.50	/gal	300	gallons	\$ 1,350	\$ 1,350	
GeoFabric Liner	\$0.06	/sf	59200	square feet	\$ 3,552	\$ - \$ 3,552	
Steel Panel Framework (unit size varies)	\$13.90	/lf	3700	square feet	\$ 51,430	\$ - \$ 51,430	
Wattle Pins	\$0.22	/ea	7500	each	\$ 1,650	\$ - \$ 1,650	
						<b>Subtotal \$ 137,182</b>	
<b>Environmental and Regulatory Compliance</b>							
Environmental and Regulatory Compliance	\$1,000.00	/total	1	project	\$ -	\$ 1,000 \$ 1,000	
						<b>Subtotal \$ 1,000</b>	
<b>TOTAL ESTIMATED PROJECT COSTS</b>					<b>\$ 122,294</b>	<b>\$ 75,000</b>	<b>\$ 197,294</b>

## C. Budget Narrative

### *Salaries and Wages (in-kind)*

The following District personnel will be involved in this project. Their respective roles and actual salaries and fringe rates (Fiscal Year 2020) are described below:

- **Maintenance Supervisor** will be responsible for project supervision, quality control, safety, operating of equipment, other labor contributions to construction work, and generating cost and equipment use records necessary for reporting. It is estimated that the Maintenance Supervisor will contribute 180 hours to the project at a loaded rate of \$38.72 per hour consisting of \$31.11 per hour in wages and \$7.61 per hour in fringe costs.
- **Equipment Operator I** will be responsible for the operation of construction equipment and various manual labor tasks. It is estimated that the Equipment Operator I will contribute 240 hours to the project at a loaded rate of \$18.56 per hour consisting of \$13.46 per hour in wages and \$5.10 per hour in fringe costs.
- **Equipment Operator II** will be responsible for the operation of construction equipment and various manual labor tasks. It is estimated that the Equipment Operator II will contribute 200 hours to the project at a loaded rate of \$24.55 per hour consisting of \$18.74 per hour in wages and \$5.81 per hour in fringe costs.
- **Equipment Operator III** will be responsible for the operation of construction equipment and various manual labor tasks. It is estimated that the Equipment Operator III will contribute 180 hours to the project at a loaded rate of \$26.24 per hour consisting of \$20.20 per hour in wages and \$6.04 per hour in fringe costs
- **Equipment Operator III (2)** will be responsible for the operation of construction equipment and various manual labor tasks. It is estimated that the Equipment Operator III (2) will contribute 180 hours to the project at a loaded rate of \$27.14 per hour consisting of \$20.98 per hour in wages and \$6.16 per hour in fringe costs
- **Welder** will be responsible for off-site and on-site metalwork and various manual labor tasks. This includes cutting pre-fabricated steel reinforcement panels on-site to accommodate changes in elevation. It is estimated that the Welder will contribute 40 hours to the project at a loaded rate of \$26.24 per hour consisting of \$20.22 per hour in wages and \$6.02 per hour in fringe costs

### *Certification of Labor Rates*

The labor rates of identified personnel included herein represent the actual labor rates of personnel bearing the same title. Additional verification is available as needed pursuant to an award contract with Reclamation.

### *Fringe Benefits (in-kind)*

The in-kind fringe benefits for District personnel involved in this project were computed on a “Fringe” basis and were derived by subtracting the hourly salary rate for designated District personnel from the loaded value per hour.

### ***Equipment***

The District owns all of the equipment that will be used in the proposed project. The included equipment usage time estimates are based on similar concrete lining projects at the Ysla Lateral. Equipment stand-by time is not included. The proposed usage cost rates are based on costs outlined by the 2018 United States Army Corps of Engineers (USACE) Construction Equipment Ownership and Operating Expense Schedule (EP1110-1-8) for District VI, which includes the State of Texas. Equipment cost rates can be referenced in Table 4 in the following page. The equipment use rate structure included in this application was negotiated with Reclamation staff as part of Contract No. R18AP00261 (Phase 2 of the Ysla Lateral Concrete Lining Project).

Much of the soil compaction needed for the proposed concrete lining of the Ysla Lateral was completed as part of maintenance activities during the last two years. The District has historically prioritized maintenance and upkeep of this section of the Ysla Lateral because it is used by elementary and middle school students walking to and from school. Overall, this section of the lateral is in better shape than laterals in more rural areas. For these reasons, the proposed equipment use is slightly less than what has been proposed for other concrete lining projects with Reclamation.

### ***Materials and Supplies***

The proposed costs and itemization for materials and supplies are representative of costs and quantities used for Contract No. R18AP00261 with Reclamation and materials and supplies procured in Fiscal Year 2020. The use of pre-manufactured steel panel framework reduces the amount of staff time needed to complete the construction project (i.e., the process is less labor intensive).

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

The proposed costs for environmental and regulatory compliance costs are representative of costs from concrete lining projects at the Ysla Lateral. Per Reclamation staff in the Albuquerque Area Office, it is estimated that completing a Categorical Exclusion Checklist (CEC) and allocating \$1,000 for Reclamation's costs is sufficient to meet environmental and cultural compliance requirements. Costs for any additional environmental activities will be determined pursuant to an award contract with Reclamation.

### ***Indirect Costs***

Indirect costs are not included as part of the project. As demonstrated in Table in Section B of this document, the District has ample experience in managing grant-funded projects with Reclamation and has developed a grant administration process that streamlines reporting and reimbursements.

### ***Total Amount of Project Costs***

The total cost of the project is \$197,294. The Bureau of Reclamation requested share is \$75,000. The District contribution will be \$122,294 as in-kind contributions and material costs.

Table 4. Equipment Costs

EPI110-1-8 Equipment (2018)	Category Number	EPI110-1-8 ID No	Page No.	Horsepower/ Specification	District Vehicle	Year	EPI1101-1-8 Rates (average hr)	DEPR	FCCM	Ownership Rate (DEPR+FCCM)	Age Mult	Adjusted Ownership Rate	(Final) Adjusted Hourly
Pickup (x5)	T50	T50XX004	231	4x4, 1/2 ton, gas pickup	F-350 / 2500 HD	Varies	\$21.71	\$3.34	\$0.45	\$3.79	1	\$3.79	\$21.71
Dump Truck 1	T50	T50XX032	232	10-13 CY Dump	2017 PETERBILT 348 T-10 (12/15 YD Dump)	2017	\$30.52	\$7.03	\$1.18	\$8.21	1.02	\$8.37	\$30.68
Dump Truck 2	T50	T50XX032	232	10-13 CY Dump	2017 PETERBILT 348 T11 (12/15 YD Dump)	2017	\$30.52	\$7.03	\$1.18	\$8.21	1.02	\$8.37	\$30.68
Dump Truck 3	T50	T50XX032	232	10-13 CY Dump	2001 FREIGHLINER T6 (12/15 YD Dump)	2001	\$30.52	\$7.03	\$1.18	\$8.21	0.66	\$5.42	\$27.73
Dump Truck 4	T50	T50XX032	232	10-13 CY Dump	2001 STERLING T7 (12/15 TD Dump)	2001	\$30.52	\$7.03	\$1.18	\$8.21	0.66	\$5.42	\$27.73
Dump Truck 5	T40	T40OX002	222	8 CY Dump Option	2008 FORD F750 6YD DUMP TRUCK T9	2008	\$1.99	\$1.11	\$0.12	\$1.23	0.84	\$1.03	\$1.79
	T50	T50XX026	232	32,000 GVW Truck			\$21.31	\$4.75	\$0.82	\$5.57	0.87	\$4.85	\$20.59
Dump Truck 6	T40	T40OX002	222	8 CY Dump Option	2008 FORD F750 6YD DUMP TRUCK T8	2008	\$1.99	\$1.11	\$0.12	\$1.23	0.84	\$1.03	\$1.79
	T50	T50XX026	232	30,000 GVW Truck			\$21.31	\$4.75	\$0.82	\$5.57	0.87	\$4.85	\$20.59
Dump Truck 7	T40	T40OX002	222	8 CY Dump Option	2007 FORD F750 6YD DUMP TRUCK T2	2007	\$1.99	\$1.11	\$0.12	\$1.23	0.81	\$1.00	\$1.76
	T50	T50XX026	232	30,000 GVW Truck			\$21.31	\$4.75	\$0.82	\$5.57	0.87	\$4.85	\$20.59
Dump Truck 8	T40	T40OX002	222	8 CY Dump Option	2006 F750 6YD DUMP TRUCK T-1	2006	\$1.99	\$1.11	\$0.12	\$1.23	0.79	\$0.97	\$1.73
	T50	T50XX026	232	30,000 GVW Truck			\$21.31	\$4.75	\$0.82	\$5.57	0.72	\$4.01	\$19.75
Dump Truck 9	T40	T40OX002	222	8 CY Dump Option	1997 GMC 6YD DUMP TRUCK T-5	1997	\$1.99	\$1.11	\$0.12	\$1.23	0.66	\$0.81	\$1.57
	T50	T50XX026	232	30,000 GVW Truck			\$21.31	\$4.75	\$0.82	\$5.57	0.72	\$4.01	\$19.75
Dump Truck 10	T40	T40OX002	222	8 CY Dump Option	1995 GMC 6YD DUMP T-4	1995	\$1.99	\$1.11	\$0.12	\$1.23	0.66	\$0.81	\$1.57
	T50	T50XX026	232	30,000 GVW Truck			\$21.31	\$4.75	\$0.82	\$5.57	0.72	\$4.01	\$19.75
Excavator 1	H25	H25CA022	120	153 HP / 1.56 CY bucket	EC210BLR-1 VOLVO EXCAVATOR (159 HP, 1.5yd bucket, long-stick)	2008	\$44.97	\$14.84	\$3.12	\$17.96	0.87	\$15.63	\$42.64
Excavator 2	H25	H25CA022	120	153 HP / 1.56 CY bucket	EC210BLR-2 VOLVO EXCAVATOR (159 HP, 1.5yd bucket, long-stick)	2008	\$44.97	\$14.84	\$3.12	\$17.96	0.87	\$15.63	\$42.64
Excavator 3	H25	H25CA041	119	Cat 320DL	320DL-EXC CATERPILLAR E-9 (148 HP, 80 CY, long-stick)	2008	\$51.17	\$17.78	\$3.73	\$21.51	0.87	\$18.71	\$48.37
Excavator 4	H25	H25CA041	119	Cat 320DL	320DL-EXC CATERPILLAR E-10 (148 HP, 80 CY, long-stick)	2008	\$51.17	\$17.78	\$3.73	\$21.51	0.87	\$18.71	\$48.37
Excavator 5	H25	H25CA041	119	128 HP, 80 CY bucket	320A -EXC CATERPILLAR E-7 (138 HP, 1 CY, long-stick)	2008	\$51.17	\$17.78	\$3.73	\$21.51	0.87	\$18.71	\$48.37
Welding Rig (x2)	W35	W35XX022	243	(250 amp)	Utility Truck + Ranger 250 GTX (250 amp)	2012	\$5.81	\$0.59	\$0.09	\$0.68	0.93	\$0.63	\$5.76
Dozer	T15	T15JD007	213	JD 650K / 101 HP	JOHN DEERE 700K XLT DOZER (97 HP)	2017	\$37.44	\$10.88	\$2.13	\$13.01	1.02	\$13.27	\$37.70
Grader	G15	G15JD010	103	JD 770G	2009 JD 770D MOTOR GRADER G-6 (160 HP)	2009	\$58.20	\$15.78	\$1.96	\$17.74	0.78	\$13.84	\$54.30
Sheeps Foot Roller	R45	R45CA010	188	145 HP / D-off	CAT CP563 ROLLER RL-2 (145 HP)	2007	\$71.27	\$22.84	\$3.00	\$25.84	0.78	\$20.16	\$65.59
Water Truck	T50	T50XX026	232	32,000 GVW Truck	2007 Freightliner	2007	\$21.31	\$4.75	\$0.82	\$5.57	0.77	\$4.29	\$20.03
	T40	T40RS003	224	4,000 gal tank	4000 gal Water Tank Add-on	2007	\$9.60	\$4.88	\$0.59	\$5.47	0.79	\$4.32	\$8.45
Water Truck	T50	T50XX026	232	32,000 GVW Truck	1995 GMC W2	1995	\$21.31	\$4.75	\$0.82	\$5.57	0.72	\$4.01	\$19.75
	T40	T40RS002	224	3,000 gal tank	3000 gal Water Tank Add-on	1995	\$7.60	\$4.11	\$0.22	\$4.33	0.61	\$2.64	\$5.91
Rubber Tire Excavator	H30	H30CA001	134	141 HP, .69 CY bucket	EW170B VOLVO EXCAVATOR (145 HP 3/4 bucket)	2001	\$53.04	\$23.89	\$3.51	\$27.40	0.63	\$17.26	\$42.90
Steel Roller Compactor	R50	R50WG001	192	132 HP, 83" wide, 21.1 ton	DYNAPAC CA2500 D ROLLER RL-1 (130 HP, 83" wide, 13 ton)	2015	\$55.35	\$13.69	\$18.08	\$2.70	0.97	\$2.62	\$55.27
Loader	L40	L40CA019	147	CAT 924H	924H CAT LOADER L1 (128 HP, 2 YD bucket)	2010	\$34.23	\$12.16	\$2.07	\$14.23	0.85	\$12.10	\$32.10
Shotcrete Machine (x2)	P45	P45AF010	172	60 HP / 50 CY/HR	SHOTCRETE PUMP REED B50 (50 CY/HR, 110 HP)	2013	\$22.26	\$7.75	\$0.93	\$8.68	0.97	\$8.42	\$22.00
Compressor (x2)	A15	A15DP001	25	Doosan P185	DOOSAN AIR COMPRESSOR P185 AC2 (185 CFM 49 HP)	2013	\$9.81	\$1.59	\$0.26	\$1.85	0.96	\$1.78	\$9.74
Telescopic Boom 1	P40	P40TE022	168	Genie S105 / 500 lbs / 110 ft	GENIE S-120 2002 LF1 (126 ft telescopic boom, 750 lbs, 78 hp)	2002	\$78.66	\$38.28	\$4.36	\$42.64	0.73	\$31.13	\$67.15
Telescopic Boom 2	P40	P40TE021	168	500 lbs / 64 ft	JLG 600S SKYPOWER 2008 LF2 (66 ft boom, 750 lbs 78 hp)	2008	\$43.47	\$20.28	\$2.38	\$22.66	0.89	\$20.17	\$40.98

### III ENVIRONMENTAL AND CULTURAL RESOURCES COMPLIANCE

***Will the proposed project impact the surrounding environment?***

Post-construction environmental impacts will be positive. The project will reduce potential suburban flooding by protecting the Ysla Lateral from breach and spills. District maintenance activities will be reduced by approximately 80%, thereby reducing dust generation, equipment noise and fuel consumption.

Special attention will be given to the following items during the construction phase:

- Dust abatement
- Noise impacts
- No clearing will be done except clearing brush within right-of-way of the District
- Mechanical compaction of the earth to prevent any damage to adjacent property from earth movement

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

There are no anticipated impacts to threatened and endangered species by the proposed project.

***Are there wetlands or other surface waters inside the project boundaries that fall under CWA jurisdiction as “waters of the United States?”***

There are no surface waters inside the project boundaries that fall under CWA jurisdiction.

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

Major canals and drains in the District’s water delivery system were constructed under the Rio Grande Reclamation Project from 1915 to 1925. The Ysla Lateral was constructed in 1919.

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

Irrigation system features such as headings and turnouts are continuously modified as part of maintenance operations. Consequently, no adverse impacts to individual features of the irrigation system are anticipated as part of the proposed project.

***Are any buildings, structures, or features in the irrigation district listed or eligible for listing on the National Register of Historic Places?***

The El Paso County Water Improvement District Number One (the District) is listed in the National Register of Historic Places under National Register Information System ID 97000885. There are no anticipated adverse effects of features listed in the National Register of Historic Places as a result of the proposed project. The District has an agreement with the Texas Historical Commission (THC) in regards to which facilities within the District can be concrete lined or placed underground. The THC issued a determination of No Adverse Effects / No Historic Properties Present or Affected in Phase 2 of the Ysla Lateral Concrete Lining Project (contract no. R18AP00261 with Reclamation). The District expects a similar determination for the proposed project.

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

There are no known archeological sites in the proposed project area.

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

There are no anticipated negative impacts on minority populations or low-income communities. The proposed project is likely to have a beneficial impact on residential and public properties in the City of Socorro, Texas.

**Table 5. Comparison of Average Household Median Income (AHMI) (U.S. Census American Community Survey 2013-2017 5-Year Estimates)**

<b>Boundary</b>	<b>AMHI</b>	<b>% of Texas</b>	<b>% of U.S.</b>
City of Socorro	\$34,339	57.64%	59.56%
El Paso County	\$44,597	74.86%	77.35%
State of Texas	\$59,570	100.00%	103.33%
United States	\$57,652	96.78%	100.00%

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

There are no anticipated limits to access to and ceremonial use of Indian sacred sites or adversely impact tribal lands.

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

There are no anticipated contributions to the introduction, continued existence, or spread of noxious weeds or non-native invasive species.

**IV REQUIRED PERMITS OR APPROVALS**

The District owns, operates, and maintains the project site and right-of-way. There are no required permits or approvals necessary for the proposed project.

**V UNIQUE ENTITY IDENTIFIER AND SYSTEM FOR AWARD MANAGEMENT**

**System for Award Management (SAM) Registration**

The El Paso County Water Improvement District No. 1 maintains an active SAM registration and all information is up to date.

**EIN Number:** 74-1505167

**Department of Treasury Automated Standard Application for Payments (ASAP)**

The District is currently enrolled in ASAP and is ready to engage in active financial assistance agreements with Reclamation.

**DUNS Number:** 128044773

**VI APPENDIX**

**A. Official Resolution**

**RESOLUTION OF THE BOARD OF DIRECTORS**

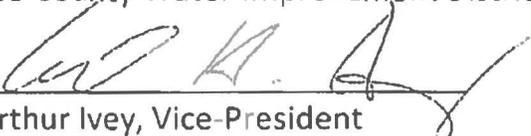
**El Paso County Water Improvement District No.1**

El Paso County Water Improvement District No. 1 resolves to authorize the General Manager or the District Engineer to submit and take any Administrative Action required to complete an application to the United States Bureau of Reclamation Fiscal Year 2020 WaterSMART Small-Scale Water Efficiency Program for a Grant totaling \$75,000 to conserve water and improve the District's water use efficiency by concrete lining a section of the Ysla Lateral.

**Whereas**, the El Paso County Water Improvement District No.1 (the District) is a political subdivision of the State of Texas and was organized under Chapter 59, Article 16 of the Texas Constitution and operates under Chapter 55 and Chapter 49, in part, of the Texas Water Code;

**Now Therefore**, the Board of Directors of the District hereby resolve to support the District's application for a Grant and authorizes the General Manager or the District Engineer to submit and take any administrative action required to complete applications to the United States Bureau of Reclamation, including working with Reclamation to meet established deadlines for entering into a grant or cooperative agreement, and if the District is selected to receive a Grant, to negotiate an agreement to be approved by the District's Board of Directors. The District has the capability to provide the amount of funding and/or in-kind contributions specified in the Funding Plan in the application.

El Paso County Water Improvement District No.1

  
By: Arthur Ivey, Vice-President

## B. Letters of Project Support

### Letter of Support from Congressman Will Hurd (US TX-23) for the proposed project

<p>WILL HURD 28th District, Texas</p> <p>COMMITTEE ON APPROPRIATIONS SUBCOMMITTEE ON MILITARY CONSTRUCTION AND VETERANS AFFAIRS</p> <p>SUBCOMMITTEE ON TRANSPORTATION, HOUSING AND URBAN DEVELOPMENT</p> <p>PERMANENT SELECT COMMITTEE ON INTELLIGENCE</p> <p>RANKING MEMBER, SUBCOMMITTEE ON INTELLIGENCE MODERNIZATION AND RE-ADDRESS</p> <p>SUBCOMMITTEE ON DEFENSE INTELLIGENCE AND WARFIGHTER SUPPORT</p>	<p><b>Congress of the United States</b> <b>House of Representatives</b> <b>Washington, DC 20515-4323</b></p> <p>February 28, 2020</p>	<p>317 CANNON HOUSE OFFICE BUILDING WASHINGTON, DC 20515 (202) 225-4511</p> <p>SAN ANTONIO FEDERAL BUILDING 727 E. CERRAS CHAVEZ BLVD. SAN ANTONIO, TX 78208</p> <p>1104 WEST 10TH DEL. RID, TX 78840 (830) 422-2840</p> <p>124 SOUTH HORNBEIN SOCORRO, TX 79027 (915) 338-6421</p> <p>300 SOUTH MONROE STREET EAGLE PASS, TX 78852 (210) 784-0023</p> <p>PERDUE COUNTY COURTHOUSE 160 WEST CALLAHAN FERRY STATION, TX 79735 (210) 246-1548</p>
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Ms. Robin Graber  
United States Bureau of Reclamation  
Water Resources and Planning Division  
P.O. Box 25007, MS 84-51000  
Denver, CO 80225

Dear Ms. Graber,

I am writing to express my support for the El Paso County Water Improvement District No. 1 (EPCWID1) application for the WaterSMART Grants: Small-Scale Water Efficiency Projects. If awarded, EPCWID1 plans to install a concrete line in a section of the Ysla Latera Canal that will conserve water that is lost to seepage and facilitate the expansion of an undersized bridge located next to Salvador Sanchez Middle School in Socorro, Texas.

Because of its arid climate, the El Paso Region only receives an average rainfall of about 8 inches each year. Irrigation, municipal and industrial water use as well as international and interstate treaties all place significant demands hindering the current water supply. The Ysla Latera Canal lining will help meet the area's growing water demand by managing water sources and conserving approximately 50-acre feet of water as water seepage has become a central concern for the wellbeing of the El Paso Region.

Upon completing phase 3 of the Ysla-Latera Canal lining, the City of Socorro plans to make improvements to the pedestrian bridge used by students of Salvador H. Sanchez Middle School to cross the Ysla Lateral at North Rio Vista Road. North Rio Vista Road is a highly trafficked school bus route and is the only pedestrian access point. Renovations to the pedestrian bridge will alleviate traffic and result in a safer walkway for the students at the Salvador H. Sanchez Middle School.

I am proud of EPCWID1 and its continued efforts to better the economic prosperity of the City of Socorro. I appreciate your swift and thoughtful consideration of the El Paso County Water Improvement District No. 1 WaterSMART Grants: Small-Scale Water Efficiency Projects application. Should you have any questions, please contact my office at (202) 225-4511.

Sincerely,  
  
WILL HURD  
Member of Congress

PRINTED ON RECYCLED PAPER

**Resolution of Support from the City of Socorro, Texas, for the proposed project**

*Elia Garcia*  
Mayor

*Rene Rodriguez*  
At Large

*Cesar Nevarez*  
District 1 / Mayor Pro-Tem



*Ralph Duran*  
District 2

*Victor Perez*  
District 3

*Yvonne Colon - Villalobos*  
District 4

*Adriana Rodarte*  
City Manager

**RESOLUTION 595**

**WHEREAS**, El Paso County has an arid climate, only receives an average annual rainfall of about 8 inches, and irrigation, municipal, and industrial water use place significant demands on the limited water resources in the area; and

**WHEREAS**, The City of Socorro supports projects that conserve water and support the local agricultural economy; and

**WHEREAS**, The City of Socorro also supports projects with benefits to recreation, tourism, and business development; and

**WHEREAS**, The El Paso County Water Improvement District No. One (EPCWID) is seeking funding from the United States Bureau of Reclamation WaterSMART Small-Scale Efficiency Program for Fiscal Year 2020; and

**WHEREAS**, The project proposed by EPCWID for improvements to the Ysla Lateral Canal will lead to water conservation and will benefit the residents and agricultural businesses of the City of Socorro; and

**NOW, THEREFORE, BE IT RESOLVED** that the City Council of the City of Socorro supports the water conservation project proposed by the El Paso County Water Improvement District No. One to the United States Bureau of Reclamation WaterSMART Program.

PASSED and APPROVED this 6<sup>th</sup> day of February, 2020

CITY OF SOCORRO

  
Elia Garcia  
Mayor

ATTEST:



Olivia Navarro  
City Clerk



## Letter of Support from the Far West Texas Water Planning Group



January 9, 2020

Mr. Matthew Reichert  
Financial Assistance Support Section  
United States Bureau of Reclamation  
P.O. Box 25007, MS 84-27814  
Denver, CO 80225

**RE: Support for the Ysla Lateral Concrete Lining Project – Phase 3**

Dear Mr. Reichert:

The El Paso County Water Improvement District No. 1 (EPCWID1) is applying for funding under the WaterSMART Small-Scale Water Efficiency Projects program for fiscal year 2020. EPCWID1 is proposing to make canal lining improvements to the Ysla Lateral that will help the District conserve water lost to seepage.

The Far West Texas Water Planning Group pursuant to the State of Texas Water Code §16.05 is designated to develop the Region E Far West Texas Regional Water Plan with support from the Texas Water Development Board (TWDB). The Far West Texas Water Planning Group is composed of voting members from 7 counties in West Texas representing 15 water use interest categories and non-voting representatives of public stakeholder agencies, including the U.S. Bureau of Reclamation.

The Region E Far West Texas Regional Water Plan includes water management strategies that, when implemented, would develop, deliver, or treat additional water supply volumes or conserve water. The project proposed by EPCWID1 is a recommended water management strategy in the 2017 Texas State Water Plan and can be referenced using Water Management Strategy ID E-45.

As such, the Far West Texas Water Planning Group supports the water conservation project proposed by the El Paso County Water Improvement District No. 1 and recommends its funding.

Scott Reinert, P.E., P.G.  
Vice-Chair  
Far West Texas Water Planning Group