



# **CERTIFICATION AND FINANCING PROPOSAL**

## **LOWER VALLEY WATER DISTRICT WATER AND WASTEWATER PROJECT EL PASO COUNTY, TEXAS**

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## EXECUTIVE SUMMARY

### LOWER VALLEY WATER DISTRICT WATER AND WASTEWATER PROJECT EL PASO COUNTY, TEXAS

**Project:** The proposed project consists of expanding and improving the existing water distribution system, replacing and expanding the wastewater collection system and increasing wastewater treatment capacity for unincorporated communities located in the Lower Valley Water District service area in El Paso County, Texas (the “Project”). Water system improvements include installing 45,830 linear feet of new waterlines and 175 new residential connections. Wastewater works include construction of a new package wastewater treatment plant (WWTP) with an estimated capacity of up to 0.14 million gallons per day (mgd) and installation of 26,448 linear feet of sewer lines and 810 new residential connections.<sup>1</sup>

**Objective:** The purpose of the Project is (i) to provide reliable and sustainable drinking water service by improving the infrastructure for optimal operation of the distribution system and by extending service to unserved areas; and (ii) to increase access to safe and sanitary wastewater collection and treatment services, thereby eliminating exposure to untreated or inadequately wastewater discharges and preventing water pollution. Both components will help reduce human health risks associated with waterborne diseases.

**Expected Outcomes:** The Project is expected to generate environmental and human health benefits related to the following Project outcomes:

- Improve the reliability and sustainability of drinking water services for approximately 3,000 existing residential connections and provide first-time access to 175 homes.
- Provide first-time access to wastewater collection and treatment services for 810 homes.
- Eliminate approximately 0.17 million gallons per day (mgd) of untreated wastewater.<sup>2</sup>

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<sup>1</sup> Based on average residential water use per person in the State of Texas of 89 gallons per day (gpd) estimated by the Texas Water Development Board, wastewater flows from the Mesa del Norte, Lourdes Estates and El Conquistador subdivisions are estimated at 0.09 mgd. The final capacity of the wastewater treatment plant will be defined in the final design.

<sup>2</sup> The flows not treated at the proposed Mesa del Norte package WWTP will be treated at other existing facilities that serve LVWD.

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 EL PASO, TEXAS

**Population Benefitted:** Approximately 9,000 residents.<sup>3</sup>

**Sponsor:** Lower Valley Water District (LVWD or the “District”).

**Borrower** LVWD.

**Project Cost:** US\$23,045,000.

**NADB Loan:** US\$23,045,000.

**Uses and Sources of Funds:**  
(US\$)

Uses	Amount	%
Construction*	\$ 22,871,000	99.2
Financing costs	174,000	0.8
<b>TOTAL</b>	<b>\$ 23,045,000</b>	<b>100.0</b>
Sources	Amount	%
NADB loan	\$ 23,045,000	100.0
<b>TOTAL</b>	<b>\$ 23,045,000</b>	<b>100.0</b>

\* Includes design, land and rights of way, construction and related contingencies, and supervision for both the water and wastewater components.

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<sup>3</sup> The new water mains and looping will benefit mainly residents surrounding the communities of Clint and Fabens. An estimated 525 residents will directly benefit from first-time access to water service and 2,430 residents from first-time access to wastewater service.

# CERTIFICATION AND FINANCING PROPOSAL

## LOWER VALLEY WATER DISTRICT WATER AND WASTEWATER PROJECT EL PASO COUNTY, TEXAS

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### 1. PROJECT OBJECTIVE AND EXPECTED OUTCOMES

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The proposed project consists of expanding and improving the existing water distribution system, replacing and expanding the wastewater collection system and increasing wastewater treatment capacity for unincorporated communities located in the Lower Valley Water District (LVWD) service area within El Paso County, Texas (the "Project"). The improvements to the water distribution system will increase service reliability and sustainability for approximately 3,000 existing residential connections, as well as provide first-time access to 175 homes. Expansion of the wastewater collection and treatment system includes providing first-time access to 810 homes and construction of a new package wastewater treatment plant (WWTP) with an estimated capacity of up to 0.14 million gallons per day (mgd).<sup>4</sup> As a result, the project is expected to collect and treat approximately 0.17 million gallons per day (mgd) of wastewater, thereby preventing the risk of exposure to untreated wastewater discharges and water pollution.<sup>5</sup>

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### 2. ELIGIBILITY

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#### 2.1. Project Type

The Project falls within the eligible categories of water distribution and wastewater collection and treatment.

#### 2.2. Project Location

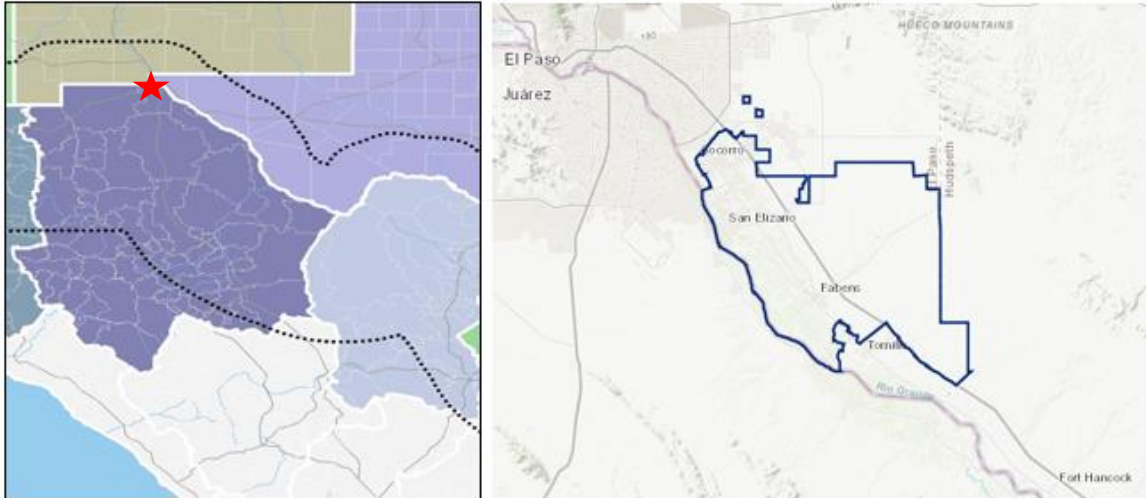
The Project will be implemented in various unincorporated areas within the service area of the Lower Valley Water District (LVWD) in El Paso County, Texas. The district is located east of the city of El Paso and adjacent to the U.S.-Mexico border. As a reference, the geographical coordinates of LVWD offices are approximately 31°35'51.78"N and 106°12'00.04"W. Figure 1 shows the location of the LVWD service area.

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<sup>4</sup> Based on average residential water use per person in the State of Texas of 89 gallons per day (gpd) as estimated by the Texas Water Development Board (TWDB), wastewater flows collected from the Mesa del Norte, Lourdes Estates and El Conquistador subdivisions are estimated at 0.09 mgd. The final capacity of the wastewater treatment plant will be defined in the final design.

<sup>5</sup> The flows not treated at the proposed Mesa del Norte WWTP will be treated at other existing facilities that serve LVWD.

**Figure 1**  
**PROJECT LOCATION MAP AND LVWD GEOGRAPHIC JURISDICTION**



### **2.3. Project Sponsor and Legal Authority**

The public-sector Project sponsor is the Lower Valley Water District (LVWD or the “District”). Its predecessor was the Lower Valley Water District Authority, a conservation and reclamation district established pursuant to Chapter 780 of the state laws of Texas in 1985. On May 23, 1995, the Texas Legislature approved changing the name to Lower Valley Water District. The District operates as a municipal utility district and has legal authority under Chapter 54 and Chapter 49 of the Texas Water Code to provide water, wastewater and solid waste services in an area covering approximately 210 square miles east of the city limits of El Paso. LVWD has legal authority through Certificate of Convenience and Necessity (CCN) P0948 to develop, operate and maintain water and wastewater system infrastructure within its jurisdiction, which includes the cities of Socorro, San Elizario, the town of Clint and several unincorporated areas.

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## **3. CERTIFICATION CRITERIA**

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### **3.1. Technical Criteria**

#### **3.1.1. General Community Profile**

According to U.S. census data, the estimated population of El Paso County was 839,238 in 2019.<sup>6</sup> Most of the population served by LVWD live in the cities of Socorro and San Elizario, as well as unincorporated communities not specifically identified in available census data; nevertheless, it

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<sup>6</sup> Source: U.S. Census, QuickFacts website, <https://www.census.gov/quickfacts>, accessed on May 19, 2021.

is estimated that approximately 54,000 people live within the boundaries of the LVWD service area, representing approximately 6.4% of the county population.<sup>7</sup>

According to the U.S. census, approximately 18.8% of the population of El Paso County, compared to about 13.6% of the state population, was living below the poverty level in 2019.<sup>8</sup> At that time, the median household income (MHI) was US\$46,821 for the county compared to US\$61,874 for the state.<sup>9</sup>

The Project will be implemented at various locations within the LVWD service area. The socioeconomic indicators of the communities within the service area are low when compared to the county and the state averages. For example, the city of Socorro with a population of 34,370 residents has an MHI of US\$38,111, while Clint with a population of 1,112 and located near some of the areas benefitted by the Project, has a MHI of US\$29,750, indicating that they qualify as economically distressed areas.<sup>10</sup> Both communities will benefit from this Project. The objective of the Project is also aligned with the Texas Environmental Justice Collaborative Plan of the U.S. Environmental Protection Agency (EPA), particularly Focus No. 1 (healthy air, water and land) and No. 4 (urban, rural and unincorporated communities).<sup>11</sup>

The status of water and wastewater systems within the LVWD service area is described in the following table.

**Table 1  
 LVWD WATER AND WASTEWATER SERVICES**

Water System	
Coverage	98%
Water supply source	Hueco-Bolson Aquifer and Rio Grande River purchased from El Paso Water (EPW)
Number of residential hookups	17,513
Wastewater Collection	
Coverage	82%
Number of residential connections	14,706
Wastewater Treatment	
Coverage	100% of collected wastewater
Treatment facilities	EPW Roberto Bustamante WWTP Cuadrilla package WWTP

Source: LVWD

<sup>7</sup> Source: LVWD estimate based on its reports to TWDB. Federal and state census data, such as from the American Community Survey, vary significantly from this figure.

<sup>8</sup> Source: Source: U.S. Census, QuickFacts website, <https://www.census.gov/quickfacts>, accessed on May 19,2021.

<sup>9</sup> Source: EPA Environmental Justice tool (<https://www.epa.gov/ejscreen>). Low-income population living within the Project area is 62% compared to 35% in the State of Texas and 33% in the US.

<sup>10</sup>Source: Source: U.S. Census, QuickFacts website, <https://www.census.gov/quickfacts>, accessed on May 19,2021.

<sup>11</sup> Source: EPA, [https://www.epa.gov/sites/production/files/2016-12/documents/texas\\_ej\\_plan\\_8-3-16\\_final.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/texas_ej_plan_8-3-16_final.pdf)

**LVWD Water and Wastewater Systems**

The LVWD water system consists of six water tanks, four chlorinator stations, five booster stations and approximately 1,902,536 linear feet of distribution lines that supply water to 19,442 connections. LVWD currently purchases approximately 5.5 million gallons a day (mgd) of water from El Paso Water (EPW). The water is pumped from the northwest side of El Paso to the district located on the southeast side of the county and passes through two master meters. The first meter is located at Gateway East and Loop 375 and the second at the Jonathan Rodgers Water Treatment Facility. The water distribution system has four additional master meters as backup located at North Loop, Middle Drain, Alameda and Socorro Road.

Several locations, particularly in the south of the LVWD jurisdiction, have been experiencing low-pressure problems, which affects the water distribution. Residents without access to the distribution system currently have water delivered and stored in private on-site tanks. Typically, the water delivered by the hauling companies is not meant for human consumption, so residents also purchase bottled water for drinking and cooking. There are also significant risks for exposure to waterborne diseases due to improper handling or the use of unsanitized water tanks or storage containers. By expanding water mains with adequate controls identified through modeling, the proposed Project will improve water distribution service, as well extend the system to unserved areas.

The wastewater collection system currently has 16 lift stations and approximately 1,141,744 linear feet of sewer lines serving 16,340 connections. An estimated 9,400 residents or 18 of the District's service area, do not have access to a sewer system and are still using some type of on-site septic system. The on-site systems are in poor condition and frequently experience odor problems, back-ups, and risk contaminating the shallow groundwater common to this area. This proposal will help address these problems by expanding and rehabilitating the wastewater collection system and replacing existing on-site septic systems. The cost of completing household connections to the new wastewater collection infrastructure is included in the construction costs.

Most of the wastewater collected goes to the Roberto Bustamante Wastewater Treatment Plant (WWTP), which is owned and operated by EPW, has a daily treatment capacity of 39 mgd and is currently treating an average of 29 mgd. The District has an interlocal agreement with EPW that allows the District to convey its wastewater flows, which currently average about 2.3 mgd, to the Roberto Bustamante WWTP. The flows from the Bejar Estates subdivision, a component of this Project with 344 connections, will be treated at this plant. The wastewater flows from the Cuadrilla subdivision, which has 27 connections and generates about 5,000 gallons a day, goes to a decentralized sewer system (package plant) that is in the process of being replaced with a new 10,000-gallons-a-day decentralized treatment plant. The Cuadrilla subdivision currently receives deficient service because of an aged and deteriorated wastewater collection system.

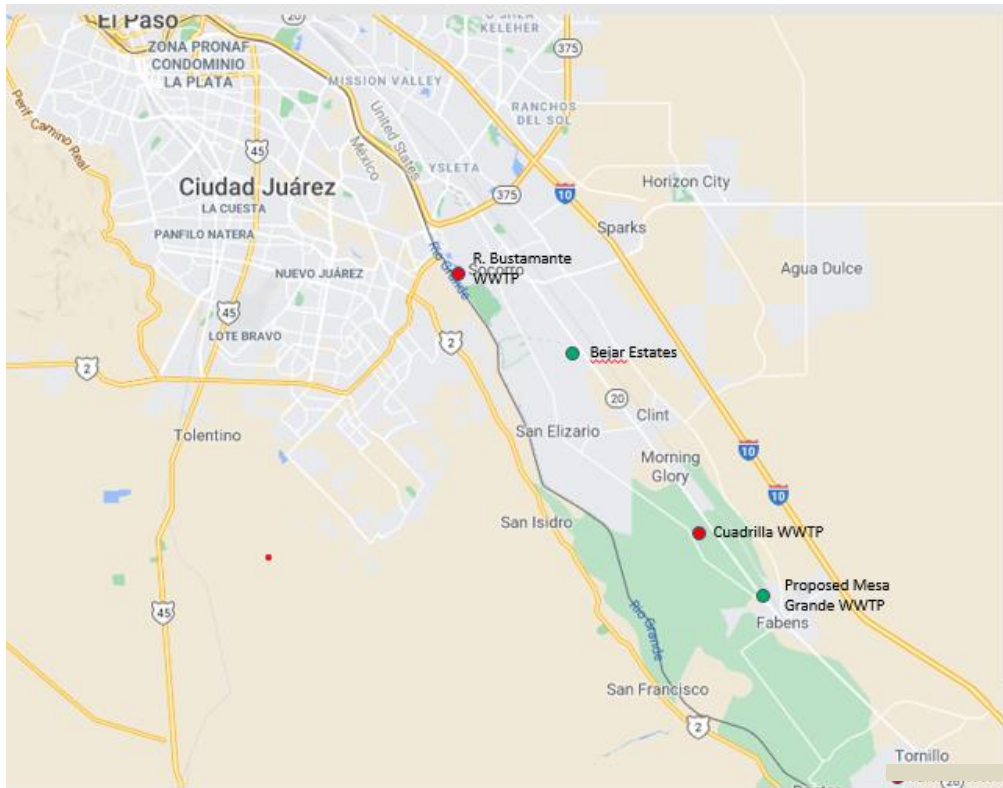
As part of this Project, the District is planning to build a decentralized sewer system (package plant) in Mesa del Norte near the Salitral Arroyo that will serve three residential subdivisions (Mesa del Norte, El Conquistador and Lourdes Estates). The latter two are currently on septic tanks, and Mesa del Norte flows are being treated at the Fabens WWTP. These three areas consist of 439 connections for approximately 1,317 residents or nearly 2.4% of the District's service area.



It is a priority for the District to replace the existing systems to prevent the environmental and human health risks caused by the current operating conditions.

Figure 2 shows in red dots, the location of wastewater treatment facilities in reference to the Project components.

**Figure 2**  
**WATER AND WASTEWATER FACILITIES SERVING LVWD**



### 3.1.2. Project Scope

LVWD evaluated and considered various alternatives to address the infrastructure needs in the Project area. The Project and its components are based on the recommendations in a Master Water Plan and a Master Wastewater Plan, both of which were developed by Alan Plummer Associates, Inc., in 2010 and 2013, respectively.

The proposed Project is consistent with the recommendations of these studies and will expand and improve the existing drinking water distribution system, replace and expand the wastewater collection system and increase wastewater treatment capacity.

The Project components are:

- Drinking water distribution system:
  - 15,790 linear feet of 8-inch PVC waterline,
  - 30,040 linear feet of 12-inch PVC waterline,
  - 96 valves,
  - 78 fire hydrants and
  - 175 service connections.
  
- Wastewater collection system:
  - Installation of 22,123 linear feet of 8-inch new gravity lines,
  - Installation of 1,645 linear feet of 12-inch new gravity lines
  - Rehabilitation of 2,680 linear feet of 8-inch of gravity lines.
  - Construction of 9,000 linear feet of pressurized force mains with diameters ranging from 4 to 10 inches,
  - 3 lift stations and
  - 810 service connections.
  
- Construction of a package WWTP: with an estimated capacity to treat up to 0.14 mgd of residential wastewater in compliance with the discharge permit to be issued by the Texas Commission on Environmental Quality (TCEQ) and discharges authorized by El Paso County Water Improvement District # 1 (EPCWID#1).<sup>12</sup>

Project works include design, construction and related contingencies, construction management, dewatering, repaving when required and crossings, as well as land and rights of way acquisition and permitting.

Water system improvements will benefit approximately 3,000 households located mainly in the southern part of the District. These works will also improve sectorization and water pressure, particularly in the distribution system's remotest areas. Wastewater collection rehabilitation and expansion work includes installation of yard-line connections for 810 households to redirect the wastewater disposal from on-site systems to the new infrastructure.

Table 2 and Figure 3 below indicate where the Project components will be implemented.

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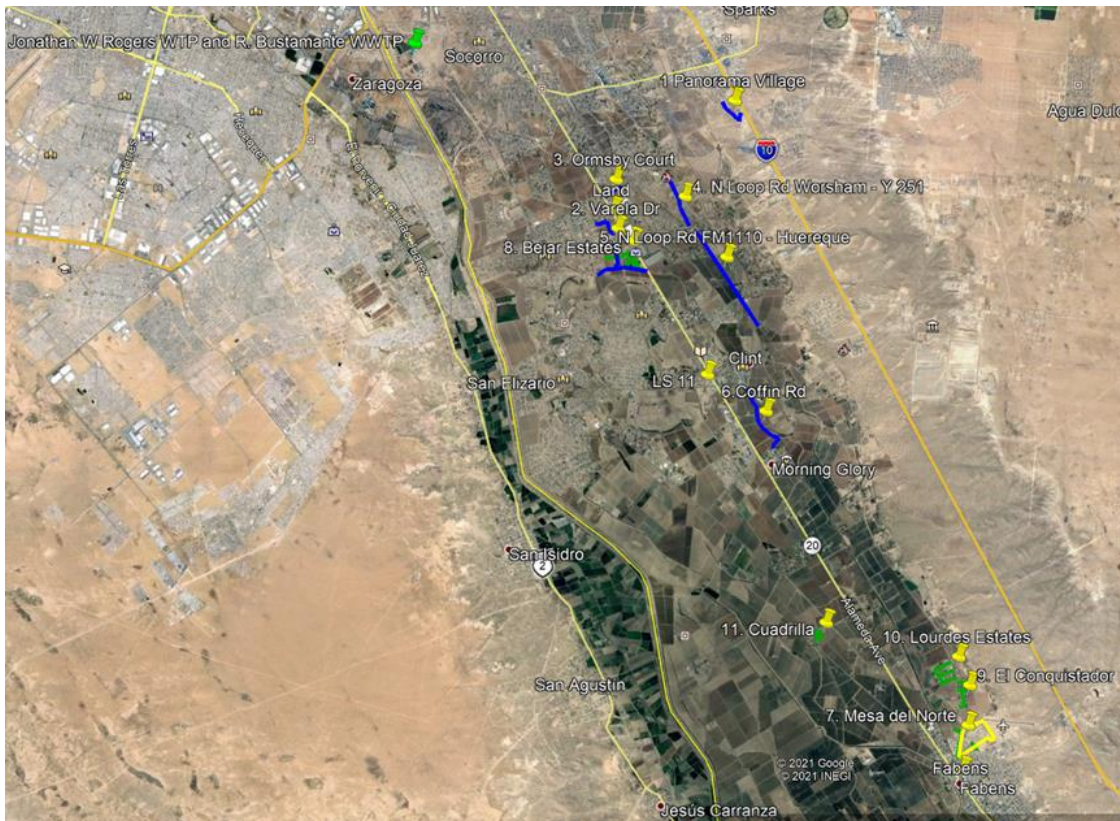
<sup>12</sup> The final capacity of the wastewater treatment plant will be determined in the final design.

**Table 2**  
**PROJECT COMPONENTS**

WATER	
1	Panorama Village water distribution system
2	Varela Rd water distribution system
3	Ormsby Court from Middle Drain Rd. to Alameda Ave.
4	North Loop Rd. from Worsham Rd. to the Y-251 lateral canal
5	North Loop Rd. from FM1110 to Huereque Dr.
6	Coffin Rd from San Elizario to Connington Rd
WASTEWATER*	
7	Mesa del Norte Subdivision, sewer system and WWTP
8	Bejar States Subdivision, sewer system
9	El Conquistador Subdivision sewer system
10	Lourdes States Subdivision sewer system
11	Cuadrilla Subdivision sewer system

\* Mesa del Norte, Lourdes Estates and El Conquistador (439 connections) will be treated at the new package WWTP. Bejar Estates (344 connections) will be treated at Roberto Bustamante WWTP and Cuadrilla (27 connections) at the existing on-site package WWTP.

**Figure 3**  
**PROJECT COMPONENTS**



The Project cost is US\$23.05 million, of which approximately 63% relates to wastewater and 37% to water investments.

### **3.1.3. Technical Feasibility**

#### **Design Criteria**

All feasible water improvements alternatives require connection to the existing LVWD water distribution system. The no-action alternative was rejected, since it failed to address the health risks associated with using hauled water stored in individual private tanks, as well as the lack of adequate wastewater collection and treatment services, which poses a risk for ongoing surface and groundwater contamination.

The Project must conform to the standards defined in LVWD's Design Standards since the water system, wastewater collection system and wastewater treatment plant will be operated by LVWD, and design and development process of the Project components are reviewed and approved by LVWD.

The design standards related to the water systems meet or exceed the Rules and Regulations for Public Water Systems established by TCEQ under Chapter 290, subchapter D. Some of the water criteria covered by TCEQ and LVWD include minimum pipe cover, flow velocities, allowable pipe diameters, looping requirements, allowable water pressures and standards for valves, hydrant spacing, and connections. Since the water improvements related to this Project will be connected to the LVWD distribution system, impacts beyond their limits were considered in the hydraulic modeling of the Project.

The design of the wastewater collection system conforms to TCEQ standards as set forth in Chapter 217: Design Criteria for Domestic Wastewater Systems, August 28, 2008, and Chapter 317: Design Criteria for Sewerage Systems, January 6, 2005. The TCEQ sets standards for design, submittals, operations, maintenance, construction and safety. The applicable design standards include sewer sizing, pipe slopes, minimum pipe cover, manhole sizing and spacing, pipe materials, pipe bedding, etc. The TCEQ standards were developed to ensure that the sewage will flow through the system at adequate velocity, as well as to minimize operation and maintenance requirements.

The same design criteria will be followed for the package WWTP, and performance standards for treatment will be set based on the anticipated effluent quality required by TCEQ.<sup>13</sup> LVWD is preparing the design-build procurement package to assure that the performance standards are aligned with the applicable laws and regulations for discharge into an irrigation canal. The discharge permit applications will be submitted once design is complete.

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<sup>13</sup> TCEQ typically sets discharge standards during the permitting process, and the standards depend on a variety of factors, such as the quantity and source of the wastewater and the discharge site or use (irrigation vs rivers). For this Project, the plant will likely need to meet a discharge requirement of 20 parts per million (ppm) for both biochemical oxygen demand (BOD) and total suspended solids (TSS).

**Selected Technology**

For both the water and wastewater components, existing infrastructure was surveyed and incorporated into a model with the input for supply and demand scenarios, in order to simulate current and future operational conditions. In particular, the water system model was calibrated to optimize pressure in the distribution system, taking into consideration its efficient operation. A series of capital investments were recommended to ensure piping and related infrastructure are sized and prioritized to maintain normal operating pressure and fire-flow availability as the population in the service area grows. The wastewater system model was designed to minimize pumping and optimize the use of gravity lines, as well as considered non-sanitary inflows (infiltration, rain) and regulation capacity for the sizing of the proposed infrastructure. The results from this modeling served as the basis to propose the capital investments associated to provide optimal wastewater service under current and future conditions.

The material selected for both water distribution and wastewater collection system infrastructure and residential yard-line connections was PVC, which has proven to be reliable. Valves, fire hydrants, pumps, clean-outs and vents are provided in accordance with standard practice and building code requirements.

With the implementation of the Project, the existing wastewater collection system will be abandoned in place and replaced with a conventional gravity collection system using PVC pipes, which were selected based on proven reliability, as well as familiarity and ease of operation. Final pipe diameters will be selected using appropriate slopes and velocities to prevent pipe silting and clogging, septic conditions, over-excavation or the need for pumping facilities that could increase project costs.

Construction of a new package WWTP is the lowest cost solution. LVWD preferred this alternative because it would provide access to wastewater infrastructure in the unserved subdivisions of Lourdes Estates and El Conquistador and incorporate the Mesa Grande subdivision into the LVWD system. This option requires the construction of three lift stations and approximately 9,000 linear feet of force main.

LVWD has the technical capacity to operate a package WWTP. A design-build procurement process is expected to be used for this component, as this type of facility is usually a standard design provided by the manufacturer based on capacity and performance standards. The design for site work will be minimal, and the design-build approach will allow construction activities related to the wastewater collections system and site work to advance in parallel with the completion of the design and acquisition of the package WWTP from the manufacturer.

LVWD has engaged engineering firms through an open request for qualifications to develop the specific engineering report, which includes probable cost estimates for the design, construction, purchase and acquisition of improvements and additions thereto, and incidental expenses connected with such improvements and the issuance of bonds. These firms will help the District review and update planning documents, finalize the designs and perform construction management.

### **3.1.4. Land Acquisition and Right-of-way Requirements**

All work will be carried out within easements and utility rights-of-way except for the wastewater treatment plant in Mesa del Norte and lift stations, where the land will be purchased. Right of entry forms will be formalized with each homeowner to allow the contractor to have temporary easements for the works to be completed inside the property line when a connection is installed. Works within El Paso County rights of way or cities within the LVWD service area will require traffic control during construction.

El Paso County Water Improvement District No. 1 (EPCWID#1) owns and manages all canals, laterals, and drains for the purpose of irrigating farmland and crops. Whenever a canal, lateral or drain is crossed, a permitting fee of US\$1,000 and a right-of-way fee of US\$0.10/square foot/year is assessed. Dewatering discharge fees are also assessed at a rate of US\$150 per acre-foot for the first 1,000 acre-feet of groundwater discharge and at a rate of US\$40 per acre-foot thereafter for groundwater discharge. All these costs have been identified and included in the Project budget.

### **3.1.5. Project Milestones**

On November 5, 2019, the District held a bond election for authorization to issue and sell bonds for the Project in a principal amount not to exceed US\$27.50 million. On November 18, 2019, the District approved a resolution declaring the results of the bond election. In effect, the District levied property taxes related to the Project in the current fiscal year, which runs from October 1, 2020 to September 30, 2021, with Project construction expected to initiate during the fiscal year.

Financial closing is targeted for July 2021, and the first interest debt service payment related to the Project will occur in September 2021. Because the District has levied property taxes in the current fiscal year, it is crucial that the District issue and pay debt service related to the Project during the 2021 fiscal year.

From the date of approval and execution of the loan agreement, LVWD will have up to five years to construct the Project. NADB will provide a principal grace period to match the construction period. Each of the subdivision components will take between 6 to 12 months to build.

Four out of the eleven components have final designs and are shovel ready. Lourdes Estates and El Conquistador wastewater collection systems are currently being bid and expected to start construction by the end of July 2021. Panorama Subdivision water distribution system and Cuadrilla wastewater collection system can be procured to start construction once NADB funding is approved. The District also has selected several engineering firms to provide planning, design and construction management services for the Project. The firms were selected through a request for qualifications (RFQ) process. Additionally, with the support of these external engineering firms, the District is expected to develop in-house designs to expedite the design process of the remaining seven components of the Project.

Project procurement and implementation will start once funding is approved. Procurement and construction management will be consistent with NADB policies. NADB will coordinate all these

activities with the LVWD. Table 3 shows the proposed schedule for Project implementation milestones.

**Table 3**  
**PROJECT MILESTONES**

Key Milestones	Status
Procurement	Anticipated: 3rd quarter of 2021
Discharge permit	Pending; to be issued prior to operation
Project completion	Up to five years from bond issuance

The bond proceeds will be deposited into the Project Fund and drawn down to make payments to the contractors and consultants as the work is performed. Disbursements from this fund will be made directly to contractors and consultants designated by the LVWD against invoices, receipts or other written documentation certified by its Project Manager and Construction Supervisor, as applicable in each case, in accordance with NADB policies and with the agreed disbursement scheduled.

### **3.1.6. Management and Operation**

The construction, operations and management of the proposed Project will be the responsibility of LVWD. The District provides both water distribution and wastewater collection services and has established procedures for the operation and maintenance of both systems. Interlocal agreements between LVWD and EPW have been established that allow LVWD to purchase potable water from EPW and to convey collected wastewater flows to EPW for treatment.

LVWD was established in 1985 as a municipal water district and has worked to expand its water and wastewater systems to provide service throughout its jurisdiction. Its operations are managed through a sustainable approach, where the intent of the governing body is to finance or recover the costs, including depreciation, of providing services to the general public on an ongoing basis primarily through user fees. All activities necessary to provide such services are accounted for: administration, operation, maintenance, financing and related debt service, and billing and collection.

The Board of Directors of the District is elected by the public and approves the budget on an annual basis. For the period October 1, 2020 to September 30, 2021, the Board approved an operational budget of US\$15.4 million, of which 5% is allocated to repairs and maintenance.

LVWD has 121 full-time employees. To ensure the proper operation of its systems for its customers the District maintains a highly trained operations and engineering staff, including three certified wastewater operators.

LVWD is constantly applying for grant and loan funding from local, state and federal agencies to expand and improve its water and wastewater systems. NADB has a good and long-standing working relationship with LVWD that dates to 1998. To date, NADB has authorized grant financing

for four previous projects of the District. Three of those projects were successfully implemented with grants from the Border Environment Infrastructure Fund (BEIF) for water, wastewater collection and residential hookups, and another is in the process of being implemented with funding from the Community Assistance Program (CAP). In the case of the fifth project proposed for wastewater collection and treatment in the community of Cuadrilla, the District decided to change the approach and scope of the project and implemented it with other funding. Overall, NADB has successfully provided grants to the LVWD for \$14,489,625, of which 96.6% has been disbursed and the works completed.

## **3.2. Environmental Criteria**

### **3.2.1. Environmental and Health Effects/Impacts**

#### **A. Existing Conditions**

Deficient water distribution systems experiencing pressure problems pose a risk for backflow and cross-contamination problems. The risks of contamination associated with transporting water and individual storage tanks are also significant. Typically, hauled water is not tested to determine if it meets any primary drinking water standards and is not considered adequate for human consumption. It is suitable for irrigation, household cleaning and construction. Moreover, residents need to follow several guidelines for proper water storage, such as:

- Storage containers need to be constructed of smooth, non-porous, non-corrosive, non-reactive materials that are resistant to chlorine and large enough to clean thoroughly.
- A regular cleaning schedule must be followed, and a chlorine residual must be maintained.
- Hoses need to be properly stored and kept at least one foot above the ground to prevent contamination and containers must be reserved for water storage only.

The conditions of private storage tanks are unknown and not monitored, but it is unlikely that all on-site systems meet ideal conditions. Most residents are aware of the storage issues and that the hauled water is not potable. Many of them also purchase bottled water for drinking and cooking.

Residents in the subdivisions without access to a sewer system, use substandard on-site septic systems as their only means to manage wastewater. The on-site systems are in poor condition, prone to cause back-ups and odor problems, and pose a risk for contaminating the shallow groundwater common to the area.

Waterborne diseases are caused by pathogenic microorganisms that are transmitted because of inadequate wastewater disposal practices and unsafe water supplies. An individual may become ill after drinking water that has been contaminated with these organisms; eating uncooked foods that have been in contact with contaminated water; or through poor hygiene habits that contribute to the dissemination of diseases by direct or indirect human contact with



contaminated water or untreated wastewater. Table 4 shows waterborne statistics for El Paso County, Texas.

**Table 4**  
**WATERBORNE DISEASE STATISTICS FOR EL PASO COUNTY, TEXAS**

Disease	Number of Cases/Year				
	2012	2013	2014	2015	2016
Intestinal amoebiasis	1	4	1	4	3
Campylobacteriosis	45	51	58	71	63
Cryptosporidiosis	2	1	3	2	3
Shigellosis	60	31	23	24	39

**Source:** Texas Health and Human Services Automated Epidemiological Surveillance System, accessed May 9, 2019 (<https://www.dshs.texas.gov/idcu/default.shtm>).

**B. Project Impacts**

The Project will help protect the health of residents and the local aquifer by collecting the wastewater generated in these subdivisions for proper treatment. The wastewater pertaining to the Bejar Estates subdivision will be conveyed to the Roberto Bustamante WWTP for treatment, a facility with a solid record of meeting all regulatory requirements, while wastewater generated by Mesa del Norte, Lourdes Estates and El Conquistador subdivisions will be conveyed and treated at the decentralized package wastewater treatment plant that is part of this Project.

Water system improvements will also help protect the health of residents by improving system sectorization and water pressure, thus preventing the risk of backflows and cross-contamination in the distribution lines. Additionally, the system will be extended to provide first-time service to unserved areas, eliminating the health risks associated with hauled water.

Specifically, the Project is expected to generate environmental and human health benefits related to the following outcomes:

- Improve the reliability and sustainability of drinking water service for approximately 3,000 existing residential connections and provide first-time access for 175 homes.
- Provide first-time access to wastewater collection and treatment services for 810 homes.
- Eliminate approximately 0.17 mgd of untreated wastewater.

The Project will also help improve water resource management and conservation by protecting surface and groundwater from inadequately treated sewage discharges, by correcting the existing non-compliant conditions of the on-site wastewater disposal systems regulated by Title 30, chapter 285 of the Texas Administrative Code. The new wastewater treatment facilities will also be fully compliant with discharge permit requirements. The new wastewater collection system will be designed for energy efficiency to minimize the need for external energy inputs for conveyance of flows to the WWTPs, in accordance with similar performance standards applicable to the selected package WWTP.

### **C. Transboundary Impacts**

No direct impacts from the Project are likely to be detected in Mexico; however, the Project will cause a slight increase in demand on EPW's water supply, which is drawn from the binational water sources used by El Paso, Texas, and Ciudad Juarez, Chihuahua. The primary shared water sources are the Hueco and Mesilla Bolson aquifers and the Rio Grande River. Given the small size of the Project, along with EPW's strategies for diversifying its water sources and its conservation programs, the transboundary impact of the Project is expected to be negligible.

On the other hand, due to the proximity of these communities to the cities of El Paso and Ciudad Juarez, Mexico, and the frequent border crossings between those cities, the proposed Project will have a positive impact on the health of residents in communities surrounding El Paso and Ciudad Juarez, and the entire region, since it will help reduce the risk of waterborne diseases caused by exposure to surface ponding of untreated or inadequately treated discharges or potential contamination of the local drinking water or irrigation wells. Additionally, the implementation of the proposed Project will reduce the potential for contamination of local and shared water bodies, such as the Rio Grande/Rio Bravo River.

No other transboundary impacts are anticipated for the Project.

### **3.2.2. Compliance with Applicable Environmental Laws and Regulations**

TCEQ is responsible for monitoring drinking water systems and issuing enforcement actions in those cases where systems are not in compliance. TCEQ monitors and inspects all point discharges to verify compliance with requirements set by utility permit requirements.<sup>14</sup>

#### **A. Environmental Clearance**

Due to the nature of the proposed water and wastewater components of the Project, and since no federal funding is involved, the Project is not subject to the National Environmental Policy Act (NEPA) environmental clearance process (42 USC §§4321-4370f).

All proposed water and wastewater pipelines will be installed in urban roadways within the LVWD, in areas that have been previously impacted and that are not part of protected natural areas or regions considered a priority due to biodiversity. As a result, no significant environmental impacts associated with the construction, operation and maintenance of the Project are anticipated.

However, the proposed Mesa del Norte decentralized WWTP requires a discharge permit from TCEQ. The District will initiate the permitting process once the land is acquired, which is expected to happen in no more than 60 days for a lot that will be discharging to the Salitral arroyo. As part of its disbursement process and in compliance with its policies, NADB will ensure that a condition precedent prior to disbursement is included in the loan agreement that will allow NADB to verify that the land and permits for any Project component, as applicable, are in good order and obtained prior to authorizing disbursements for construction from the Project Fund.

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<sup>14</sup> Source: TCEQ, <https://www.tceq.texas.gov/permitting/wastewater>.

## **B. Mitigation Measures**

Although Project implementation will have no significant adverse impact on the environment, mitigation measures have been established to address temporary and minor adverse impacts during the construction and operation of the Project. Typical mitigation measures to be implemented include:

- Application of water to reduce the emission of dust particles and soil erosion.
- Construction will normally occur between 8 a.m. and 5 p.m. to avoid extended disturbances from noise.
- Vehicle tune-ups to reduce emissions and noise.
- Placement of warning signs to prevent potentially hazardous situations.
- Appropriate measures will be taken to prevent any surface flow from entering any open excavation at any time, including flows from any defined watercourse or overland flow during or following a rainfall event or storm.
- All spillage and debris will be removed from the site and disposed of at an appropriate waste management facility in accordance with applicable regulations.

By following these best management practices, the temporary impacts due to construction will be minimized. Moreover, the long-term results from implementation of the proposed Project will be positive overall.

## **C. Pending Environmental Tasks and Authorizations**

There are no environmental authorizations pending. As mentioned previously, the WWTP discharge permit will be obtained before operation of this part of the project.

## **3.3 Financial Criteria**

The total cost of the Project is estimated at US\$23.05 million for construction and other related costs. The Project Sponsor has requested a NADB loan for up to US\$23.05 million. Table 5 presents a breakdown of the estimated Project costs and proposed source of funding.

**Table 5**  
**SOURCES AND USES OF FUNDS**  
(US\$)

<b>Uses</b>	<b>Amount</b>	<b>%</b>
Construction*	\$ 22,871,000	99.2
Financing costs	174,000	0.8
<b>TOTAL</b>	<b>\$ 23,045,000</b>	<b>100.0</b>
<b>Sources</b>	<b>Amount</b>	<b>%</b>
NADB Loan	\$ 23,045,000	100.0
<b>TOTAL</b>	<b>\$ 23,045,000</b>	<b>100.0</b>

\*Includes design, land and rights of way, construction and related contingencies, and supervision for both the water and wastewater components.

The loan payment mechanism is consistent with the well-established municipal bond market in the United States. The loan will be in the form of unlimited tax bonds, series 2021 debt instrument (the "Loan"). The source of payment for the Loan will be a levy and pledge of annual ad valorem taxes on all taxable property in the District sufficient, without limit as to rate or amount, to pay debt service requirements.

NADB's preliminary analysis verified that the Project Sponsor has the legal authority to contract the financing and levy an ad valorem tax on taxable property for the payment of financial obligations. It also has the legal and financial capacity to operate and maintain the Project.

Considering the Project's characteristics and based on the financial and risk analysis performed, the proposed Project is considered to be financially feasible and presents an acceptable level of risk.

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## **4. PUBLIC ACCESS TO INFORMATION**

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### **4.1 Public Consultation**

NADB published the draft certification and financing proposal for a 30-day public comment period beginning May 27, 2021. The following Project documents are available upon request:

- LVWD Notice of intent to issue a bond, August 19, 2019; and
- Resolution declaring the results of the bond election, November 18, 2019.

## 4.2 Outreach Activities

On August 19, 2019, the LVWD Board of Directors issued and publicized a Notice of Intent to its residents and electors, calling for a bond election to issue general obligation bonds in the amount of US\$27,500,000 for water and wastewater works and levy a tax for its payment.<sup>15</sup>

In a meeting open to the public and held in accordance with Chapter 551 of Texas Government Code, the bond election was called on November 18, 2019 and a resolution was voted, passed and approved by the majority of qualified District voters, authorizing the issuance of the bond. All public meeting records are available on the District website ([www.lvwd.org](http://www.lvwd.org)).

Additionally, public procurement processes will be carried out in accordance with LVWD practices and NADB procurement policies.

A media search related to the Project was conducted by NADB to identify potential public opinion about the Project. No articles were found related to the development of the Project, and no opposition to the Project has been detected either.

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<sup>15</sup> Of this amount, the Sponsor has requested that NADB finance up to US\$23,045,000 for the proposed Project and plans to explore other financing options, such as grants or additional debt, for the remaining US\$4,455,000.