



CERTIFICATION AND FINANCING PROPOSAL

DRINKING WATER SYSTEM IMPROVEMENTS IN HIDALGO COUNTY, TEXAS

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INTRODUCTORY NOTE

Military Highway Water Supply Corporation (MHWSC) is a large rural water utility with a service area that covers more than 153,000 acres adjacent to the U.S.-Mexico border and spans the southern region of Cameron and Hidalgo Counties. The utility is responsible for the administration, operation and maintenance of water and wastewater systems serving over 12,000 water connections and more than 6,500 wastewater connections in the southern portion of both counties.

A portion of the MHWSC water distribution system has been experiencing regular water outages and low-pressure incidents due to the deteriorated conditions of two ground storage tanks. In accordance with Texas Commission on Environmental Quality (TCEQ) regulations, the water utility has had to issue boil water notices more than once in the last year.

The proposed project consists of replacing two 150,000-gallon, galvanized steel ground storage tanks located south of Alamo City, Texas. The new storage tanks will ensure reliable drinking water services by providing adequate water storage capacity, which will reduce the risk of water outages, incidents of low pressure and potential cross-contamination problems. As a result, the utility will be able to maintain regulatory compliance for water pressure and quality.

The proposed Project complies with all CAP criteria and the CAP grant is needed to make the Project affordable. To comply with CAP program requirements, MHWSC will fund at least 10% of the total cost of the Project. Finally, since no permits or authorizations are required for tank replacement, MHWSC is ready to initiate procurement once funding has been approved.

EXECUTIVE SUMMARY

DRINKING WATER SYSTEM IMPROVEMENTS IN HIDALGO COUNTY, TEXAS

Project Summary

Project Name:	Drinking Water System Improvements in Hidalgo County, Texas.
Project Type (Sector):	Drinking water.
Objective:	To improve access to sustainable drinking water service by replacing water storage facilities, which will help ensure adequate water supply, service reliability and system redundancy, thus preventing service interruptions, incidents of low pressure, potential cross-contamination of water in the system and the risk of waterborne diseases.
Expected Outcomes:	The Project is expected to generate environmental and human health benefits related to the following Project outcomes: ▪ Improve access to reliable and sustainable drinking water services for 2,377 existing residential connections. ▪ Provide reliable storage capacity for 300,000 gallons of water; and ▪ Maintain full regulatory compliance of the drinking water system.
Population to Benefit:	8,082 residents. ¹
Sponsor:	Military Highway Water Supply Corporation (MHWSC).
Project Cost:	US\$556,000.

Financial Summary

Program:	Community Assistance Program (CAP).
Grant Amount:	US\$500,000
Percentage of Project Cost:	89.9%

¹ Source: Calculation based on 2,377 connections multiplied by 3.4 persons per connection.
<https://www.census.gov/quickfacts/fact/table/hidalgocountytexas/PST045222>

Recipient:	MHWSC
Other Funding Sources:	US\$56,000 from the MHWSC.

CERTIFICATION AND FINANCING PROPOSAL

DRINKING WATER SYSTEM IMPROVEMENTS IN HIDALGO COUNTY, TEXAS

1. PROJECT OVERVIEW AND EXPECTED OUTCOMES

The proposed project consists of replacing two 150,000-gallon, galvanized steel ground storage tanks (GSTs) located south of Alamo City, Texas (the "Project"). The Project sponsor is the local water utility, Military Highway Water Supply Corporation (MHWSC). The purpose of the Project is to ensure reliable drinking water services for 2,377 existing residential connections by providing adequate water storage capacity, which will reduce the risk of water outages, incidents of low pressure and potential cross-contamination problems that increase the risk of waterborne diseases. The improvements will allow the sponsor to maintain regulatory compliance for storage capacity, pressure and water quality.

Approximately 8,082 residents in the Project area in Hidalgo County are expected to benefit from this Project.

2. ELIGIBILITY

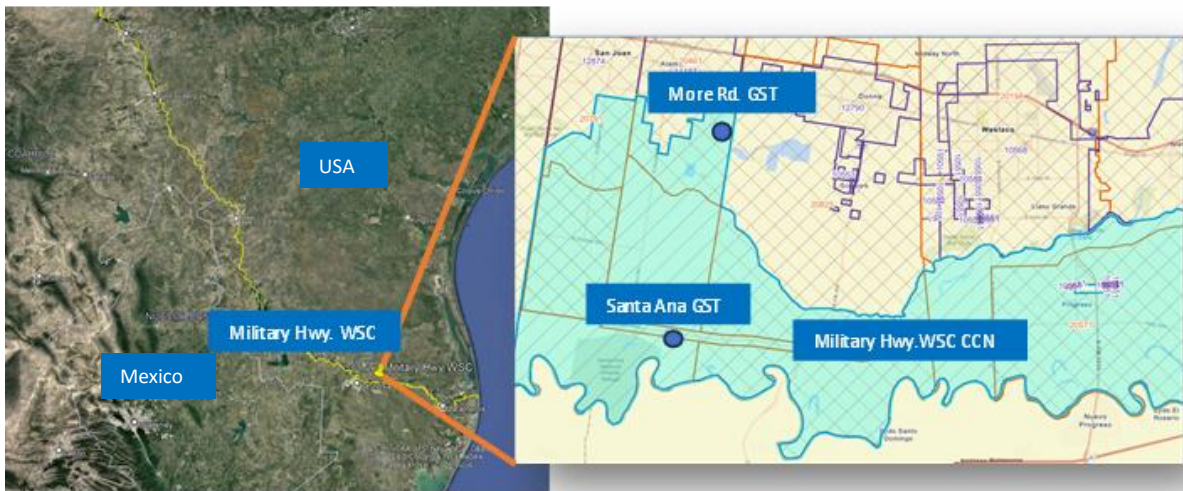
2.1. Project Type

The Project falls within the eligible sector of drinking water.

2.2. Project Location

The MHWSC service area covers the southern portions of Cameron and Hidalgo Counties in the state of Texas. The Project consists of improvements located south of Alamo City at the Santa Ana Booster Station (510 East US Highway 281, Alamo, TX 78516) and at the Moore Road Booster Station (148 E Moore Road, Alamo, TX 78516). The geographic coordinates of each booster station are as follows: Latitude 26°05'05.95" N and Longitude 98°07'44.23 W for the Santa Ana station; and Latitude 26°09'43.42" N, and Longitude 98°06'06.43 W, for the Moore Road station. Figure 1 shows the service area of MHWSC and the location of the Project components.

Figure 1
PROJECT LOCATION MAP



Source: MHWSC, Certificate of Convenience and Necessity (CCN), which grants the holder the exclusive right to provide retail water or sewer utility service to an identified geographic area.

2.3. Project Sponsor and Legal Authority

The Project sponsor is the Military Highway Water Supply Corporation (MHWSC or the “Sponsor”). The Sponsor is a member-owned, non-profit corporation organized to provide water supply for general rural and domestic purposes in Cameron and Hidalgo Counties in Texas. MHWSC was incorporated on May 21, 1971, under the provision of Articles 1434a of the Revised Civil Statutes of Texas of 1925, as amended, supplemented by the Texas Non-profit Corporation Act, Articles 1.01 et seq., as amended. MHWSC is further authorized by its present charter, as amended on July 12, 1982, to provide water and sewer services to individuals, towns and corporations and to provide other community services that are beneficial to its general membership. MHWSC holds Certificate of Convenience and Necessity No. 10551 to provide water services and Certificate of Convenience and Necessity No. 20571 to provide sewer services.²

3. CERTIFICATION CRITERIA

Technical Criteria

3.1.1. General Community Profile

The Project is expected to benefit residents in Hidalgo County, Texas. According to the 2020 U.S. Census, Hidalgo County has a population of 888,367 people or about 308,412 households. The median household income (MHI) for the county is US\$44,666, while the

² Source: MHWSC, <https://www.militaryhighwaywsc.org/welcome>

state MHI is US\$67,321. The poverty rate in Hidalgo County is 28.8% compared to the state poverty rate of 14.2%.³

Although the proposed Project will be implemented in Hidalgo County, the service area of MHWSC spans the southern areas of both Hidalgo and Cameron Counties. Table 1 shows the status of basic public services and infrastructure provided by the MHWSC.

Table 1
BASIC PUBLIC SERVICES AND INFRASTRUCTURE MHWSC

Water System			
Coverage	98%		
Supply source	Groundwater wells with alluvial influence from the Rio Grande River		
Number of connections	12,391		
Water Treatment			
Treatment facilities	Plant	Type	Capacity
	Las Rusias WTP	Reverse osmosis	2.10 mgd
	Las Rusias WTP	Conventional	1.60 mgd
	Progreso WTP	Reverse osmosis	1.00 mgd
	Joines Road WTP	Reverse osmosis	1.44 mgd
Wastewater Collection			
Coverage	52%		
Number of connections	6,502		
Wastewater Treatment			
Coverage	100% of collected wastewater		
Treatment facilities	Plant	Type	Capacity
	Progreso WWTP	Activated sludge	0.75 mgd
	Balli Road WWTP	Activated sludge	0.51 mgd
	Joines Road WWTP	Activated sludge	0.51 mgd
Source: MHWSC MGD= million gallons per day; WTP = Water treatment plant; WWTP = Wastewater treatment plant			

Local Drinking Water System Profile

MHWSC provides water services to 12,391 active water accounts. While the utility plans to extend access to wastewater collection infrastructure in its service area, currently only about half of the water customers receive wastewater service.

The MHWSC drinking water system includes four water treatment plants, nine groundwater wells, seven booster pump stations, eight elevated storage tanks, 11 ground storage tanks (GST) and approximately 251 miles of waterlines.

MHWSC's service area, which covers more than 153,000 acres, runs adjacent to the U.S.-Mexico border to the south and spans the southern region of two counties. This unique condition requires the utility to operate six looped distribution areas with pressure zones supported by one or more elevated storage tanks or one of the seven booster pump stations

³ Source: U.S. Census, Quick Facts, Hidalgo County, Texas,
<https://www.census.gov/quickfacts/fact/table/hidalgocountytexas/PST045222>

to provide adequate drinking water service. Each booster pump station requires at least one GST that meets capacity requirements for its relevant service demand and, ideally, includes two GSTs to provide redundancy and better maintenance capabilities.⁴ MHWSC meets the standards when all its infrastructure is in service.

The Santa Ana and Moore Road Booster Stations, which were built in 1998 and 2000, respectively, provide water for large individual coverage areas, serving nearly 2,400 accounts in the western region of MHWSC's service area. Both stations include dual storage tanks for normal operation and maintenance purposes; however, the existing GSTs have exceeded their useful life, and their deteriorated condition has led to leaks and corroded interior walls, impacting the quality of the water entering the distribution system. The tanks have required frequent repairs, resulting in incidents of low pressure and water outages and requiring the utility to issue notices for residents to boil water prior to use. In fact, since March 2023, one of the tanks at the Moore Road booster station has been placed out of service to prevent further risks to water quality.

While taking one of the GSTs out of service may be a temporary solution and will not immediately impact regulatory compliance for storage capacity, this situation compromises system reliability and increases its vulnerability to service interruptions, especially in the face of increasing demand due to the hot, dry conditions prevailing in the Project area. It also affects the utility's capacity to maintain adequate pressure requirements. During 2022 and 2023, the utility experienced 89 water outages, recorded 170 low-pressure incidents and issued two boil water notices in the Project area.⁵ Figures 2 and 3 show the location and the deteriorated conditions of one of the GSTs at each booster station site.

⁴ The Texas Administrative Code establishes the minimum requirements for storage and pump capacity, which are 200 gallons per connection and 0.60 gallons per minute per connection, respectively.

⁵ Boil Notice, April 2023, <https://www.valleycentral.com/news/local-news/boil-water-notice-for-mhwsc-customers/>

Figure 2
SANTA ANA BOOSTER STATION

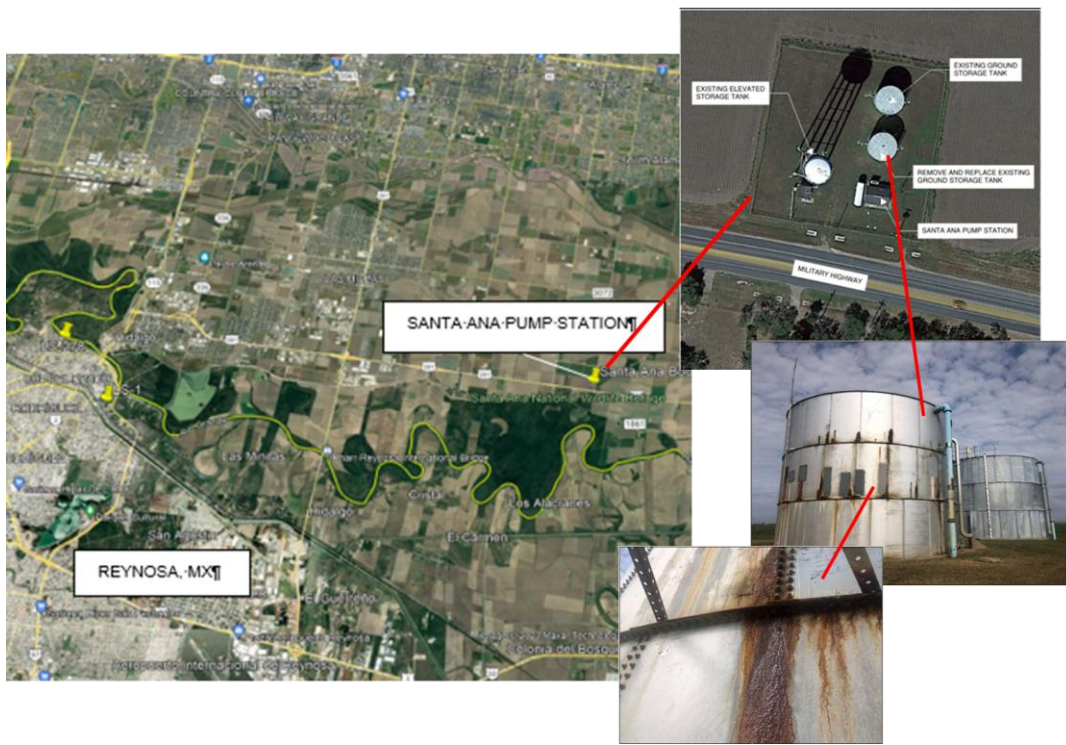


Figure 3
MOORE RD BOOSTER STATION



The proposed Project is designed to address these deficiencies by replacing one GST at each booster station, which will ensure an adequate water supply in compliance with quality standards for customers in the Project area during periods of high demand and scheduled maintenance, thus reducing the potential for incidents of low pressure and service interruptions that could lead to cross contamination and associated health risks.

3.1.2. Project Scope

The Project consists of removing and replacing a ground storage tank at both the Santa Ana and Moore Road Booster Stations. The construction activities for both sites include:

- Demolition of existing 150,000-gallon storage tank.
- Construction of 150,000-gallon, galvanized steel storage tank.
- Replacement of associated piping and valves.

3.1.3. Technical Feasibility

MHWSC developed a technical feasibility memorandum along with final design plans and specifications, which were completed in August 2023. The technical analysis for the Project concluded that GSTs with the same capacity as the existing tanks are sufficient to provide adequate water distribution services to the Project service area; therefore, no regulatory review or additional permitting is required since the original designs were approved previously by Texas Commission on Environmental Quality (TCEQ).

The final designs were prepared in accordance with applicable regulations and design standards, including:

- Texas Commission on Environmental Quality (TCEQ) Rules and Regulations for Public Water Systems, Title 30, Texas Administrative Code (TAC), Chapter 290, Subchapter D, including 30 TAC §290.44(b)(1), regarding the maximum allowable lead content of pipes, pipe fittings, plumbing fittings and fixtures.
- American Water Works Association (AWWA) standards, AWWA D103 for factory-coated carbon steel tanks for water storage.

3.1.4. Land Acquisition and Right-of-Way Requirements

No land or rights of way need to be acquired for the Project. The new storage tanks will be constructed at the same location as the existing tanks following their demolition. MHWSC owns the existing booster station sites.

3.1.5. Project Milestones

Once the Project is approved and the grant agreement is executed, MHWSC will initiate the procurement process, which is expected to take less than two months. Tank removal and construction are expected to take approximately six months for both tanks. Table 2 summarizes the Project milestones and their respective status.

Table 2
PROJECT MILESTONES

Key Milestone	Status
Final designs	Completed in August 2023
Procurement	Anticipated in the 4 th quarter of 2023
Construction	Estimated duration of six months

3.1.6. Management and Operation

MHWSC is a large rural utility responsible for the administration, operation and maintenance of water and wastewater systems serving over 12,000 water connections and more than 6,500 wastewater connections in both Cameron and Hidalgo Counties. In 2022, the utility treated and distributed an average of 4.56 mgd of drinking water to its customers. Its mission is to operate in compliance with all environmental and health standards, improve quality of life, accommodate growth and new demand, and maintain public trust.

MHWSC is organized under a General Manager with departments for Field Operations, Business, Customer Service, Sewer Operations, Water Plants and Warehouse, among others. For the operation and maintenance of the water system, MHWSC has one Grade A, one Grade B, six Grade C and one Grade D certified operators. The utility has an operation and maintenance manual for routine tasks to ensure proper operation of its water and wastewater systems, as well as procedures to address unexpected conditions. In addition, on-site training has been provided to utility employees. All employees are offered continuing education to ensure proper water management and that safety protocols are followed.

MHWSC's current operation and maintenance expenses are estimated to be around US\$9 million. The Project will not increase the budget and may allow for savings, as frequent repairs will no longer be necessary and should result in higher service performance and customer satisfaction.

3.2. Environmental Criteria

3.2.1. Environmental and Health Effects/Impacts

A. Existing Conditions

A portion of the MHWSC water distribution system has been experiencing regular water outages and low-pressure incidents due to the deteriorated conditions of the ground storage tanks, resulting in leaks and internal wall corrosion. These conditions are causing significant water quality issues. During service outages and when water pressure drops below 20 psi, there is also an increased risk for backflows and cross contamination that could allow potential contaminants, such as pathogenic protozoan, to enter the water system and cause waterborne diseases. In accordance with TCEQ regulations, the water utility has had to issue boil water notices more than once in the last year.

B. Project Impacts

The Project will improve access to sustainable drinking water service by replacing deficient water storage facilities. The new tanks will help ensure adequate water supply, service reliability and system redundancy by preventing service interruptions, incidents of low pressure and potential cross-contamination of drinking water and the risk of waterborne diseases. Specifically, the Project will:

- Improve access to reliable and sustainable drinking water services for 2,377 existing residential connections;
- Provide reliable storage capacity for 300,000 gallons of water; and
- Maintain full regulatory compliance of the water distribution system.

C. Transboundary Impacts

No negative transboundary impacts are expected as a result of implementing the proposed Project. Based on the location of the service area adjacent to the border, improving the management of water resources and preventing the potential contamination of the local water supply may also reduce health risks related to cross-border activities for area residents.

3.2.2. Compliance with Applicable Environmental Laws and Regulations

The Safe Drinking Water Act (SDWA) is the primary law regulating public water systems in the United States. In accordance with that law, the Environmental Protection Agency (EPA) has published regulatory requirements setting limits on contaminants allowed in drinking water. In Texas, TCEQ is responsible for monitoring drinking water systems and issuing enforcement actions in those cases where a system is not in compliance. The Project will comply with Title 30 of the Texas Administrative Code (30 TAC), Part 1, Chapter 290, Subchapter D: Rules and Regulations for Public Water Systems, and with the provisions of Chapter 361 of the Texas Health and Safety Code Solid Waste Disposal Act.

A. Environmental Clearance

Both ground storage tanks are within the confines of the existing booster station sites. The existing storage tanks will be demolished, and the new tanks will be built in the same location. No adverse environmental impacts are anticipated, and no formal environmental clearance process is required.

B. Mitigation Measures

Although Project implementation will have no significant adverse impact on the environment, the contractor will follow best management practices to minimize temporary and minor adverse impacts during construction. Typical mitigation measures to be practiced include:

- Application of water to reduce fugitive dust emissions;

- Vehicle tune-ups to reduce emissions;
- Construction to be scheduled between 8 a.m. and 5 p.m. to prevent extended disturbance from noise;
- Placement of warning signs to prevent potentially hazardous situations; and
- All construction personnel will attend a briefing to familiarize workers with potential construction impacts and mitigation measures.

Additionally, the contractor will properly dispose of the old storage tanks and solid waste generated during construction in accordance with the applicable regulations.

C. Pending Environmental Tasks and Authorizations

No environmental authorizations or tasks are pending.

3.3. Financial Criteria

The total estimated cost of the Project is US\$556,000, which includes construction, supervision, taxes and contingencies. MHWSC requested a US\$500,000 grant from NADBank through its Community Assistance Program (CAP) to cover a portion of the cost of the water system improvements. Table 3 presents the total Project cost and proposed sources of funding.

Table 3
PROJECT INVESTMENT & FINANCING PLAN
(USD)

Uses		Amount	%
Construction*		\$ 556,000	100.0
TOTAL		\$ 556,000	100.0
Sources	Instrument	Amount	%
NADBank-CAP	Grant	\$ 500,000	89.9
MHWSC	Equity	56,000	10.1
TOTAL		\$ 556,000	100.0

*Includes construction, taxes, contingencies, and construction management.

The proposed Project complies with all CAP criteria.⁶ It is located within the U.S.-Mexico border region served by NADBank, is being sponsored by a public sector entity, and is in an eligible environmental sector for NADBank financing. Furthermore, as a water project, it is considered a priority under the CAP guidelines. The CAP grant is needed to make the Project affordable. To comply with CAP program requirements, MHWSC will fund at least 10% of the total cost of the Project.

⁶ The Sponsor applied for CAP funding and the project was developed under the previous program guidelines dated April 2020.

Finally, since no permits or authorizations are required for tank replacement, MHWSC is ready to initiate procurement once funding has been approved.

4. PUBLIC ACCESS TO INFORMATION

4.1. Public Consultation

On November 15, 2023, NADBank published the draft certification and financing proposal for a 14-day public comment period. The following Project documentation is available upon request:

- Technical Memorandum for the Proposed Ground Storage Tank Replacements at Moore Road and Santa Ana Booster Stations, developed by Freese and Nichols, June 2023; and
- Mid Valley Water System, Phase II Santa Ana & Moore Rd GST Replacement Project, Freese and Nichols, August 2023.

The 14-day public comment period ended on November 29, 2023, with no comments received.

4.2. Outreach Activities

MHWSC discussed the need for replacement of the storage tanks and the anticipated request for CAP funding from NADBank during its regular board meetings held on May 25 and July 6, 2023. The meetings were open to the public, and the public was given the opportunity to comment. No public comments or opposition to the project or funding request were received during these meetings. On July 17, 2023, MHWSC officially announced its proposed plan for Phase II of the Mid Valley Water Supply Project on its website.

No articles were identified in a media search conducted to gauge public awareness of this Project. However, upon review of other publicly available information, there were articles expressing concerns regarding water quality from MHWSC service area customers and boil water notices from the utility. The articles listed below are from the last two years:

- *Texas Public Radio* (August 18, 2023) "*Texas Matters: The struggles of life in a border colonia; Old Infrastructure, New Problems.*" A desire for more positive coverage of their communities is pervasive in colonias. But even some of the most optimistic residents recognize their problems are serious beyond their control.
<https://www.tpr.org/podcast/texas-matters/2023-08-18/texas-matters-the-struggles-of-life-in-a-border-colonia>
- *Texas Public Radio* (June 16, 2023) "*Toxic water in South Texas colonias costs residents precious health and money.*" Araceli Palomino and other colonia residents waited to enter the board meeting of their water supplier, Military Highway Water Supply

Corporation. They were tired of having to deal with the corporation's foul and even toxic drinking water. <https://www.tpr.org/border-immigration/2023-06-16/the-cost-of-clean-water-in-south-texas-colonias-is-paid-for-in-lives>

- *My RGV* "(June 8, 2023) "Texas Water Development Board approves nearly \$25M for RGV wastewater projects." It was announced that MHWSC in Cameron County will receive \$2.2 million to replace 11,000 linear feet of water lines along Military Highway, moving them farther away from the roadway in the process. <https://myrgv.com/local-news/2023/06/08/texas-water-development-board-approves-nearly-25m-for-rgv-wastewater-projects/>
- *Valley Central*. (April 29, 2023) "Boil water notice for MHWSC customers." <https://www.valleycentral.com/news/local-news/boil-water-notice-for-mhwsc-customers/>
- *My RGV*. (May 18, 2022) "Military Highway water utility begins major overhaul." The Military Highway Water Supply Corp. and county officials broke ground to install miles of larger 12-inch water pipe, as well as replace the filtration system at Las Rusias Water Treatment Plant. <https://myrgv.com/local-news/2022/05/18/military-highway-water-utility-begins-major-overhaul/>.

The Project will help address concerns expressed by utility customers. No specific public comments were found regarding the proposed Project.