

Funding Opportunity Number: R24AS00007

Funding Program: WaterSMART Drought Response Program: Drought Resiliency Projects for Fiscal Year (FY) 2024

Title of Project: Santa Rosa of Santa Rosa Water System Drought Resiliency Improvements

Applicant: Santa Rosa of Santa Rosa, Texas

Address: 411 6th St, Santa Rosa, TX 78593

Email: jared.hockema@frontera-rgv.com

Telephone: 956-371-1752

Project Manager: Jared Hockema, City Manager

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Section 1: Technical Proposal and Evaluation Criteria

1.1 Executive Summary

Date: November 1, 2023 Applicant Name: Santa Rosa of Santa Rosa, Texas Santa Rosa, County, State: Santa Rosa, Cameron County, Texas Applicant Type: Category A Task Area: Task D Project Duration: 24 months Estimated Construction Start Date / Completion Date: January 2025 / January 2027 Project Located on Federal Facility? No Registered through SAM.gov with a valid UEI? Yes Requesting Cost-Share Waiver? Yes

Project Summary:

The proposed project is comprised of four primary components that will work in conjunction to substantially increase drought resiliency for the town of Santa Rosa (Santa Rosa). The project components include:

- New 1.0 Million Gallon (MG) Ground Storage Tank (GST)
- New 0.5 MG Elevated Storage Tank (EST)
- New 7-day storage Raw Water Reservoir at Water Treatment Plant (WTP)
- New 8-inch, 4,200 linear feet waterline Interconnect with neighboring water supply entity

The identified projects are critical to provide currently non-existent drought resiliency to the City of Santa Rosa, Texas (City/Santa Rosa). Santa Rosa currently only has one water source, the Rio Grande River. This source is raw water that is conveyed via an irrigation canal running adjacent to Santa Rosa's WTP. The canal is owned and operated by the local Irrigation District, La Feria Irrigation District, and at this location in their irrigation system the only water usage is from Santa Rosa, as there is no agricultural water demand in this specific canal branch. Therefore, all raw water supplied to Santa Rosa comes with the necessity of using push water, and the entire volume of push water becomes the responsibility of Santa Rosa. Additionally, this irrigation canal does not consistently flow with appropriate volumes, as the only usage comes from the City. As recently as late October 2023, the canal ran dry and caused a state of emergency within Santa Rosa.

The City has no practical raw water storage, no emergency interconnect for potable water, and deteriorated and failing elevated and ground storage tanks. Santa Rosa's drought resiliency is negligible, and the only mechanism for Santa Rosa to achieve drought resiliency for its residents is via the WaterSmart funds that are being requested under the Drought Response Program, Task D for domestic water supply project for tribes or disadvantaged communities.



Relevant Background Information:

Santa Rosa was incorporated in 1929. Santa Rosa is located in northwestern Cameron County at 26°15'24"N, 97°49'36"W (26.256651, –97.826673), and is considered part of the Brownsville–Harlingen–Raymondville metropolitan area. A map showing Santa Rosa's location in relation to the State of Texas is included as Figure 1. It is 6 miles west of Combes and 7 miles east of La Villa. As per the United States Census Bureau American Community Survey, Santa Rosa has a total area of 0.77 square miles. The median income for a household in the town was \$21,154, and the median income for a family was \$23,203. The per capita income for the town was \$6,998. About 34.0% of families and 39.1% of the population were below the poverty line, including 50.3% of those under age 18 and 30.3% of those age 65 or over. Santa Rosa has an estimated population of 2,873. Population estimates for the Texas Water Development Board's (TWDB's) Region M Planning Group, which includes Cameron County, are shown below in Table .



Figure 1: City of Santa Rosa Location in Relation to the State of Texas



COUNTY	2020	2030	2040	2050	2060	2070
Cameron	478,974	559,593	641,376	729,461	820,068	912,941
Hidalgo	981,890	1,219,225	1,457,502	1,696,257	1,935,015	2,167,137
Jim Hogg	5,853	6,356	6,790	7,274	7,694	8,082
Maverick	63,107	72,491	81,243	90,304	98,988	107,327
Starr	70,803	80,085	88,633	97,107	104,687	111,555
Webb	318,028	393,284	464,960	530,330	591,945	647,433
Willacy	25,264	28,479	31,559	34,840	38,012	41,121
Zapata	16,819	19,709	22,876	26,365	29,976	33,742
Total	1,960,738	2,379,222	2,794,939	3,211,938	3,626,385	4,029,338

Table 1: Cameron County and TWDB Region M Population Projections

Santa Rosa's water system has approximately 780 connections. It's WTP has a total production capacity of 1.0 million gallons per day (MGD), composed of two trains of 0.5 MGD each. Train A was built in 1978 and has exceeded its service life but remains partially operational B was built in 2001 and provides the majority of the potable water necessary to meet Santa Rosa's water demand. The WTP also has a steel 0.5 MG GST built in 1978, which has exceeded its services life and is in a critical state. Despite Santa Rosa's repeated repair attempts, the GST keeps springing sizable, large volume leaks, with various leaks currently active. This is the only GST in the system. The water system also has one steel 0.2 MG EST, built in 1992. It shows signs of substantial deterioration after being in service for over 30 years, and Santa Rosa needs to implement new elevated storage before being in state of emergency.

The four project components will dramatically increase drought resiliency in the system, or rather create drought resiliency as any existing resiliency is severely compromised. The new 8-inch waterline emergency interconnect will be tied to the neighboring system, being North Alamo Water Supply Corporation (NAWSC). They have an existing 8-inch line approximately 4,200 linear feet from Santa Rosa's WTP, to which the proposed interconnect will be made. The new raw water reservoir will be built towards the north side of the WTP, adjacent to the existing irrigation canal, and will hold a proposed volume equivalent to 7 days of storage for Santa Rosa's system, creating new resiliency in instances when no water is available within the conveyance canal, which happened as recently as late October 2023. A new 1.0 MG concrete GST will be built within the WTP site, and a new composite 0.5 MG EST will be built for the system. Land acquisition may be required for the new EST with a 0.5-acre site being ideal. Easements will be required for the 4,200 linear feet emergency interconnect. The raw water reservoir and the GST will be built within the WTP property, already owned by Santa Rosa.

The proposed waterline interconnect will provide reliable access to potable water to Santa Rosa of up to 1 MGD (3.07 acre-ft/yr). This would create a new drought-resistant potable water source to Santa Rosa of up to 365 MG per year (1120 acre-ft/yr).



Similarly, the GST, EST, and reservoir will provide new storage of 1.0 MG, 0.5 MG, and 1MG (7-day storage at 1MG per day for total WTP capacity), respectively. At a daily refill cycle, this is the equivalent of (1.0 MG + 0.5 MG + 1.0 MG = 2.5 MG x 365 days) 912.5 million gallons per year, with 547.5 MG being potable and 365 MG being raw water. Subtracting the anticipated volume to be decommissioned from the deteriorated existing 0.5 MG GST and 0.2 MG EST, the new created volume of potable storage would be (547.5 MG - ((0.5 MG + 0.2 MG) x 365 days)) equal to 292 MG. Overall, the project would create access to up to an additional 657 MG of potable water and 365 MG of raw water annually.

WaterSmart funds are being requested under the Drought Response Program, Task D for domestic water supply project for disadvantaged communities. Figure 2 displays the total service area for Santa Rosa. Table presents the disadvantaged status of each census tract, the percentile of the population that is defined as low income, and the total tract population as presented in the Climate and Economic Justice Screening Tool (CEJST). As indicated in 2, all census tracts within the City's service area are defined as being disadvantaged.



Figure 2: Santa Rosa Water Service Area Map



Census Tract #	Disadvantaged?	Low Income Percentile	Population
48061010301	Yes	89th	5,325

Table 2: Rosa Census Tracts and Disadvantaged Status

Existing Water Supplies:

The City currently only has one water source. This source is raw water that is conveyed via an irrigation canal running adjacent to Santa Rosa's WTP. The canal is owned and operated by the local Irrigation District, and at this location in their irrigation system the only water usage is from the City, as there is no agricultural water demand in this specific canal branch. Therefore, all raw water supplied to the City comes with the necessity of using push water, and the entire volume of push water becomes the responsibility of Santa Rosa. Additionally, this irrigation canal does not consistently flow with appropriate volumes, as the only usage comes Santa Rosa. As recently as late October 2023, the canal ran dry and caused a state of emergency within Santa Rosa.

Santa Rosa's water system has approximately 780 connections. The City's WTP has a total production capacity of 1.0 million gallons per day (MGD), composed of two trains of 0.5 MGD each. Train A was built in 1978 and has exceeded its service life but remains partially operational B was built in 2001 and provides the majority of the potable water necessary to meet the City's water demand. The WTP also has a steel 0.5 MG GST built in 1978, which has exceeded its services life and is in a critical state. Despite the City's repeated repair attempts, the GST keeps springing sizable, large volume leaks, with various leaks currently active. This is the only GST in the system. The water system also has one steel 0.2 MG EST, built in 1992. It shows signs of substantial deterioration after being in service for over 30 years.

1.2 Project Location

The proposed project is located in the City of Santa Rosa (Figure 33, which is located in northwestern Cameron County at 26°15'24"N, 97°49'36"W (26.256651, –97.826673), and is considered part of the Brownsville–Harlingen–Raymondville metropolitan area. Three of the four project components (Emergency Interconnect, GTS, and Raw Water Reservoir) will take place within the existing WTP property, while the new EST will be situated in the most beneficial location, with the identification of the location being part of the proposed engineering project effort.





Figure 3: Project Location Map

1.3 Technical Project Description

The proposed project is comprised of four primary components that will work in conjunction to substantially increase drought resiliency for the City. These are projects are:

- New 1.0 Million Gallon (MG) Ground Storage Tank (GST)
- New 0.5 MG Elevated Storage Tank (EST)
- New 7-day storage Raw Water Reservoir at Water Treatment Plant (WTP)
- New 8-inch, 4,200 linear feet Emergency Waterline Interconnect with neighboring water supply entity

The project includes the engineering and construction of the above improvements, as well as the land acquisition required for the new EST and easements for the waterline interconnect.



The new GST will have a storage capacity of 1.0 MG and is preliminarily anticipated to be of prestressed concrete. It will be located within the existing WTP site, so no land acquisition is required. The design and construction of the GST will include all necessary foundation and structural components, as well as controls and monitoring systems. The existing 0.5 MG steel tank will be decommissioned as part of this effort, as it has exceeded its service life and its total failure could be imminent.

The new EST will have a storage capacity of 0.5 MG and is anticipated to be of a composite built (concrete pedestal and steel tank). Land acquisition of up to 0.5 acres will be necessary for the construction of the new EST. The design and construction of the GST will include all necessary foundation and structural components, as well as controls and monitoring systems.

The new raw water reservoir will be built towards the north side of the WTP, adjacent to the existing irrigation canal, and will hold a proposed volume equivalent to 7 days of storage for the City's system, creating new resiliency in instances when no water is available within the conveyance canal, which happened as recently as late October 2023. It will be clay lined with partial concrete liner where appropriate for maintenance and access. The reservoir will include piping and new pre-cast concrete structures for water diversion. No land acquisition will be required as it will be built within the existing WTP site.

The new 8-inch waterline emergency interconnect will be tied to the neighboring system, being North Alamo Water Supply Corporation (NAWSC). They have an existing 8-inch line approximately 4,200 linear feet from Santa Rosa's WTP, to which the proposed interconnect will be made. The interconnect will also include a metering vault with appropriate piping, valves, and a mag-meter to monitor flow. Easements will be required and acquired for the 4,200 linear feet emergency interconnect.

1.4 Performance Measures

Project performance will be assessed by the following measures:

- 1. For the new 8-inch emergency interconnect waterline, a meter vault will be installed to monitor and record the amount of potable water conveyed to Santa Rosa.
- 2. For the new Raw Water Reservoir at the WTP, flow from the irrigation canal to the reservoir will be metered through the intake, and the volume conveyed to the reservoir will be recorded.
- 3. Volumes (and elevation of the volume) at the new GST will be monitored via transducers and SCADA.
- 4. Volumes (and elevation of the volume) at the new EST will be monitored via transducers and SCADA.

1.5 Evaluation Criteria

1.5.A Evaluation Criterion A – Project Benefits (30 points)

Sub-Criterion A1.a: Adds to Available Water Supplies – Task D

The Climate and Economic Justice Screening Tool (CEJST) was used to assess the local community serviced by the City and who would benefit from the proposed project. The census tract where the City



service area is located was assessed using the CEJST with respect to climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. The results of this analysis by census tract are displayed in Table 3. The census tract containing the City's service area was identified as being disadvantaged with low-income percentile of 89th.

Census Tract #	Disadvantaged?	Low Income Percentile	Population	Other CEJST Burdens
48061010301	Yes	89th	5,325	Climate Change (agri loss, bldg loss), energy (PM 2.5), Health (Diabetes), Housing (green space), Transportation (Barriers), Workforce Development (high school education)

Table 3: Santa Rosa of Santa Rosa Census Tract Analysis

Proposals need to demonstrate that the primary purpose of the proposed project is to provide domestic water supplies to communities our households that do not have reliable access to domestic water supplies. Describe the need for the domestic water supply project including any prominent public health and safety concerns, interruptions in supply or other reasons that the community does not currently have reliable access to domestic water supplies.

These projects are critical to provide currently non-existent drought resiliency to the City. The City currently only has one water source, the Rio Grande River. This source is raw water that is conveyed via an irrigation canal running adjacent to Santa Rosa's WTP. The canal is owned and operated by the local Irrigation District, and at this location in their irrigation system the only water usage is from the City as there is no agricultural water demand in this specific canal branch. Therefore, all raw water supplied to the City comes with the necessity of using push water, and the entire volume of push water becomes the responsibility of Santa Rosa. Additionally, this irrigation canal does not consistently flow with appropriate volumes, as the only usage comes Santa Rosa. As recently as late October 2023, the canal ran dry near the WTP (Figure 4) and caused a state of emergency within the City.





Figure 4: Irrigation canal running dry late October 2023 – only source of raw water for Santa Rosa

The City has no practical raw water storage, no emergency interconnect for potable water, and deteriorated and failing elevated and ground storage tanks. In times like October 2023, the city has no reliable water source that is available for the community, with continuing droughts and changes in the climate, the risk is high for this community to experience more days with no reliable water.

Explain how the proposed project will increase reliable access to domestic water supplies. Provide this quantity in acre-feet per year the average annual benefit that the domestic water supply project



will provide. How many people is it estimated to serve? How were these estimates calculated (average benefit and population)?

The proposed waterline interconnect will provide access to potable water to the City of up to 1 MGD. This would create a new drought-resistant and reliable potable water source to the City of up to 365 MG per year.

Similarly, the GST, EST, and reservoir will provide new storage of 1.0 MG, 0.5 MG, and 1MG (7-day storage at 1MG per day for total WTP capacity), respectively. At a daily refill cycle, this is the equivalent of (1.0 MG + 0.5 MG + 1.0 MG = 2.5 MG x 365 days) 912.5 million gallons per year, with 547.5 MG being potable and 365 MG being raw water. Subtracting the anticipated volume to be decommissioned from the deteriorated existing 0.5 MG GST and 0.2 MG EST, the new created volume of potable storage would be (547.5 MG - ((0.5 MG + 0.2 MG) x 365 days)) equal to 292 MG. Overall, the project would create access to up to an additional 657 MG of potable water and 365 MG of raw water annually, equivalent to 2,016 acre-feet and 1,120 acre-feet of potable and raw water, respectively. This will benefit the entire Town of Santa Rosa community, which is approximately 2,873 people.

How many years will the project continue to provide benefits?

The storage tank component of this project will provide a benefit for the next 30 years before it would have to be replaced. With proper maintenance, the interconnect can provide a benefit of over 50 years.

Sub-Criterion A2.a: Climate Change

The proposed project is in direct response to current drought conditions that are only expected to worsen over the next several years to decades as a result of climate change impacts. Current surface water sources from the irrigation canal that are currently treated by Santa Rosa are already threatened with depletion due to climate change, noncompliance with international treaties, drought, and push water. As discussed in Evaluation Criterion C, the impacts of climate change are anticipated to worsen the reliability of the water supply in the Rio Grande further. That coupled with population growth are a direct threat to municipal water providers in the LRGV.

Sub-Criterion A2.b: Environmental Benefits

Does the project seek to improve ecological climate change resiliency of a wetland, river, or stream to benefit to wildlife, fisheries, or habitats? Do these benefits support an endangered or threatened species?

This project does not have a direct ecological improvement that benefits wildlife, fisheries, or habitats. It also does not directly support endangered or threatened species. There could be indirect benefits to the Rio Grande River, but since the water is not directly pumped from the river and is rather conveyed via the irrigation canal, the indirect benefits are difficult to quantify. There are endangered or threatened species along the



Rio Grande River in this area but not necessarily directly impacted by the irrigation canal. The list of this species consists of, but is not limited to the Alligator gar, American eel, river goby, Mexican fawnsfoot, Rio Grande River cooter, Shinner's rocket, Swallow-tailed kite, Swallowtooth sawfish, Salina mucket, Texas hornshell, Tropical parula, Zone-tailed hawk, and the Tamaulipan clubtail dragonfly.

What are the types and quantities of environmental benefits provided, such as the types of species and the numbers benefited, acreage of habitat improved, restored, or protected, or the amount of additional stream flow added? How were these benefits calculated?

The City is not able to quantify direct benefits for this criterion as there is not additional stream flow added to the irrigation canal, which is the source water supply for the City. The benefit of this project is to ensure there is adequate storage and a reliable water supply for the community, which currently does not exist.

Will the proposed project reduce the likelihood of a species listing or otherwise improve the species status?

Not applicable for this project since endangered species were not impacted or have a benefit from this project.

Sub-Criterion A2.c: Other Benefits

Will the project assist States and water users in complying with interstate compacts?

There are no interstate compacts that are applicable to this project.

Will the project benefit multiple sectors and/or users (e.g., agriculture, municipal and industrial, environmental, recreation, or others)? Describe the associated sector benefits.

The water used and made available for this project is currently only for municipal, as the water in the irrigation canal is not used for agriculture.

Will the project benefit a larger initiative to address sustainability?

The project will benefit those that live in this small, disadvantaged community and it is currently not a part of a larger initiative but will certainly address sustainability within the LRGV.

Will the project help to prevent a water-related crisis or conflict? Is there frequently tension or litigation over water in the basin?

There is frequent tension related to the Rio Grande River's water use and the prolonged periods of drought experienced throughout South Texas. Drought conditions throughout the Lower Rio Grande Valley are well documented. There is no current litigation over water in the basin, other than related to conflicts regarding



the overallocation of water from the Rio Grande. This project will not be adding any new water to the river. In this case, the project will ensure that the water rights within this community are protected and fully captured to ensure a reliable water supply.

1.5.B Evaluation Criterion B – Planning and Preparedness (20 points)

Describe any prior planning efforts related to the proposed project.

Santa Rosa engaged Dunham Engineering to perform an inspection and assessment of Santa Rosa's elevated and ground storage tanks in August 2023. The results of this assessment are included in Appendix A, with the overall conditions of both tanks being deemed as unacceptable and not meeting TCEQ requirements. This is primarily due to the age and deterioration of these facilities, which are beyond the design service life.

Additionally, this project relates to the recommended water management strategies in the 2022 State Water Plan and the 2021 Region M Water Plan. The state and regional water plans are developed collaboratively with stakeholders.

In addition to local planning, planning efforts take place at the state level. As part of Cameron County, the City is included in the Rio Grande Water Planning Group (RWPG). The RWPG is one of 16 local bodies in Texas that were established by Senate Bill 1 to coordinate long-range water supply planning for the State of Texas. The regional and state water plans are facilitated by the Texas Water Development Board and incorporate collaboration across all regional water planning groups. The regional water planning groups also incorporate direct input from each entity that is included in the plan through surveys and meetings. Advanced municipal water conservation was identified as a recommended water management strategy for the City in the 2022 State Water Plan and the 2021 Region M Water Plan. A figure from the 2021 Region M Water Plan showing the City's recommended water management strategies is included below as Figure 5. The proposed project supports both increased drought resiliency and water conservation.

The 2022 State of Texas Water Plan, and the 2021 Region M Water Plan all incorporate elements of drought planning. These plans identify water management strategies to better water manage existing water supplies. Increased system resiliency during periods of drought is one benefit of this planning. Prolonged periods of drought are intensifying and becoming more frequent throughout the State of Texas. Water suppliers must work together to identify strategies that will enable their water systems to be as resilient as possible during drought periods, especially those that serve disadvantaged communities that do not have potential access to alternate supplies and could solely rely upon supplied water to support their livelihood.



Santa Rosa

Santa Rosa does not have any projected needs (Table 5.3-80); however, WMSs are recommended (Table 5.3-81).

Table 5.3-80 Santa Rosa Existing Supply Balance (acft/yr)

SANTA ROSA	2020	2030	2040	2050	2060	2070
Supplies	612	612	612	612	612	612
Demand	296	326	360	402	450	500
Need(-)/Surplus(+)	316	286	252	210	162	112

Table 5.3-81

L Santa Rosa WMS Supplies (acft/yr)

SANTA ROSA	2020	2030	2040	2050	2060	2070
Advanced Municipal Water Conservation	0	0	0	0	0	12
ID Improvements - La Feria ID	156	156	156	156	156	156
New Supplies from WMS	156	156	156	156	156	156
WUG Balance After WMS	472	442	408	366	318	280

Advanced Municipal Water Conservation

This strategy includes methods and practices that either reduce demand for water supply or increase the efficiency of supply. These strategies include the BMP identified in the BMP Guide discussed in Subsection 5.2.5, Advanced Municipal Water Conservation. Santa Rosa's 2011 GPCD was estimated at 88, and therefore the conservation WMS includes a 0.5 percent annual reduction in municipal use through the planning horizon.

Figure 5: Santa Rosa Recommended Water Management Strategies in 2021 Region M Water Plan

1.5.C Evaluation Criterion C – Severity of Actual or Potential Drought or Water Scarcity Impacts to be Addressed by the Project (15 points)

According to the Drought Monitor as of October 2023 the Lower Rio Grande Valley (LRGV) is currently categorized as being in a state of "D1 moderate drought". This is slightly improved from the previous month when the southern portion of the county was classified as being in "D3 Extreme Drought" conditions. Looking back three years prior in May of 2020, the majority of Cameron County was categorized in "D3 Extreme Drought" conditions. Overall, Cameron County, and the rest of the LRGV, have experienced significant drought conditions on and off over the last several years but particularly since 2019 as supported by data from droughtmonitor.unl.edu in Table 4.



Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	10/31/2023	0.46	99.54	88.51	7.6	0	0	196
Last Week to Current	10/24/2023	0.32	99.68	88.51	7.6	0	0	196
3 Months Ago to Current	8/1/2023	0	100	0	0	0	0	100
Start of Calendar Year to Current	12/27/2022	100	0	0	0	0	0	0
Start of Water Year to Current	9/26/2023	0	100	100	87.95	61.33	0	349
One Year Ago to Current	11/1/2022	30.7	69.3	0	0	0	0	69
September 2023	9/26/2023	3.03	96.97	80.54	59.66	38.06	12.68	
September 2023	9/19/2023	3.03	96.97	81.91	61.33	40.76	16	
September 2022	9/27/2022	14.96	85.04	61.36	31.61	8.82	1.06	
May 2020	5/5/2020	68.53	31.47	13.3	6.14	1.71	0	
October 2019	10/3/2019	31.74	68.26	46.05	22.33	6.32	0	
DO Abnormally Dry D1 Moderate Drought D2 Severe Drought D3 Extreme Drought D4 Exceptional Drought DSCI Drought Severity Coverage Index (0-500)								

Table 4: Data from Drought Monitor for Cameron County, Texas

Santa Rosa, Cameron County, and the LRGV have experienced numerous direct impacts from the prevalent drought and water scarcity conditions throughout the area. One of the sectors that has been most directly affected in the LRGV has been the agricultural sector. Drought conditions as mentioned previously as the cause for the irrigation canal that serves Santa Rosa to go dry in October 2023. In 2022, drought conditions have led to historically low levels in the Falcon Dam (9% full) and the upstream Amistad Dam being less than one-third full. As previously detailed, drought conditions are further complicated by the lack of compliance by Mexico to the Mexican Water Treaty of 1944 that defines how the U.S. and Mexico share water supplies from the Rio Grande and the Rio Grande Compact. The 2022 State Water Plan details that demand is anticipated to continually exceed supply in the LRGV and in other areas throughout the state. Additionally, climate change impacts are expected to intensify droughts. Drought conditions can also present public health challenges for populations that rely upon water for a variety of health reasons beyond just hydration. This is particularly troublesome for disadvantaged communities, such as the City's service area, that do not likely have the means or access to alternate sources of water.

According to the National Oceanic and Atmospheric Administration (NOAA) and the National Integrated Drought Information System (NIDIS) (<u>https://www.drought.gov/states/texas/county/cameron</u>) Cameron County experienced their 44th driest year to date over the past 129 years in 2023. NOAA and the NIDIS estimate that 88.5% of people in Cameron County are currently directly affected by drought. NOAA and NIDIS



list the social vulnerability index for Cameron County as being the highest possible in terms of needing support to prepare for and recover from hazards like drought. Additionally, stream flows are low, and agriculture in the county is being affected significantly. As of October 27, 2023, 54,989 acres of cotton, 44,492 acres of sorghum, 26,226 acres of corn, 7,871 heads of cattle, and 1,081 sheep are currently in drought in Cameron County. These numbers highlight the direct impacts that drought has on the agricultural sector and water users throughout Cameron County. Although the proposed project will not directly impact the agriculture sector due to Santa Rosa's water system only serving municipal needs, it does represent the economic losses that drought can have on resources that customers use to generate an income and provide for their families, such as agricultural commodities. If periods of prolonged drought continue to occur because of climate change, these impacts will likely compound and become more severe.

Drought conditions throughout the LRGV and Santa Rosa's service area are a significant threat to raw water supplies and consumers' ability to receive domestic water supplies reliably. These conditions are anticipated to worsen because of projected increases in population and negative effects due to climate change such as increased and intensified periods of drought. Water systems' resiliency during times of drought is a key component to ensuring that customers will still be able to receive water. If no action is taken by Santa Rosa to improve the overall reliability of their water system, all consumers could potentially be at risk of receiving no water during times of drought. The impacts that would be felt because of not being able to receive water would be severe.

What are the ongoing or potential drought or water scarcity impacts to specific sectors in the project area if no action is taken and how severe are those impacts?

Documented drought conditions in the Lower RGV are a significant threat to raw water supplies and this threat is projected to worsen under the pressures of population growth and climate change. In recent years, the LRGV has already been under the threat of not meeting water demand as local ranchers and farmers have scaled back production and municipal water suppliers have had to turn to emergency interconnects and irrigation push water. This further reduces reliability of the water supply.

1.5.D Evaluation Criterion D – Presidential and DOI Priorities (15 points)

1.5.D.1 Disadvantaged or Underserved Communities

The proposed project is consistent with the presidential and DOI priorities laid out in Executive Order (E.O) 14008: Tackling the Climate Crisis at Home and Abroad and E.O 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. The project would help the local community build resilience against the impacts of climate change, which was previously discussed in Evaluation Criterion C and is expected to worsen local drought conditions. Additionally, the project would serve a disadvantaged community that has historically been underserved which is also consistent with Presidential and DOI priorities.



Santa Rosa's service area is located within Cameron County where recent census data (July 1, 2022) indicates the population is approximately 90% Hispanic or Latino, over 35% is under the age of 18 and median household income is \$43,057 with per capita income at \$19,371. Of the population over the age of 25, 69.5% are high school graduates and only 19% hold bachelor's degrees or higher. Population has been steadily growing across the LRGV and the high percentage of the population under the age of 18 supports that this trend is likely to continue. This project is crucial to ensure a reliable water supply to not only support the current population but also ensure there is water available to meet the current and future needs of this disadvantaged population.

As discussed in Evaluation Criterion A, the census tract containing the City's service area meets the criteria to be considered "disadvantaged" based on the CEJST. The vast majority of households within the service area fall within a low-income bracket above the 89th percentile. Households also face a number of other burdens including being at or above the 90th percentile for the following:

- Climate Change
 - Agricultural Loss
 - o Building Loss
- Energy
 - o PM 2.5 in the air
- Health
 - o Diabetes
- Housing
 - Lack of Green Space
- Transportation
 - o Transportation Barriers
- Workforce Development
 - High School Education

Based on this information, any federal money spent within the City's service area will be benefiting a disadvantaged community. Further, the project that is proposed will help this population become more resilient against current, prolonged drought conditions and the projected impacts of climate change.

1.5.D.2 Tribal Benefits

The proposed project does not provide any tribal benefits as there are not national recognized tribes living in this community.

1.5.E Evaluation Criterion E – Readiness to Proceed and Project Implementation (10 points)

Upon award, Santa Rosa will be ready to begin the project immediately. Preliminary engineering design is anticipated to take approximately 3 months to complete upon which time it will be coordinated with the Texas



Historic Commission (THC) to comply with the Antiquities Code. While the project is under review by THC, the design phase will continue and is anticipated to be complete by October 2025. Construction of the proposed facilities will be let out to bid following all standard bid requirements supplied by the BOR with construction anticipated to begin in January 2026. Construction of the proposed facilities is expected to be complete in December 2026. A summary of the proposed project schedule is provided in 5.

Table 5: Proposed Project Schedule

Milestone / Activity	Anticipated Start Date	Anticipated Completion Date
Task 1: Anticipated Project Award and		
Agreement Execution	October 2024	December 2024
Task 2: Project Management	January 2025	December 2026
Task 3: Engineering Design	January 2025	October 2025
Task 4: Permitting	August 2025	October 2025
Task 5: Bidding Phase	October 2025	December 2025
Task 6: Construction	January 2026	December 2026
Task 7: Testing and Closeout	December 2026	January 2027

Permits and/or Approvals

Project construction will be subject to State and local permitting requirements that may include: Cameron County ROW for installation of waterline interconnect and North Alamo Water Supply Corporation for the interconnect tie-in. Additionally, the project will be submitted to THC as described above to ensure proper coordination and compliance with Texas Antiquities Code and any other requested or required NEPA procedures.

Engineering Design Work

Engineering design work will commence upon Notice of Award from the BOR and will include design of the following:

- New 1.0 Million Gallon (MG) Ground Storage Tank (GST)
- New 0.5 MG Elevated Storage Tank (EST)
- New 7-day storage Raw Water Reservoir at Water Treatment Plant (WTP)
- New 8-inch, 4,200 linear feet Waterline Interconnect with neighboring water supply entity

Design of all project elements is anticipated to be complete within 10-months of project award.



Required Land Purchases

It is anticipated that land acquisition will be required for the new EST, with a 0.5-acre site being ideal. The new EST will be situated in the most beneficial location for the system, with the identification of the location being part of the proposed engineering project effort.

Required new policies or administrative actions for project implementation

There are no required policies or administrative actions to implement the project.

1.5.F Evaluation Criterion F – Nexus to Reclamation (5 points)

The City does not have a water service, repayment, or O&M contract with Reclamation and it does not receive Reclamation water through a Reclamation contractor or by any other means.

Will the proposed work benefit a Reclamation project area or activity?

Due to the composition of the region, there are numerous irrigation districts in the area. Many of these irrigation districts have been recipients of Reclamation funding for various activities, such as canal to pipeline conversions. The City receives raw water from an irrigation canal owned by La Feria Irrigation District. This project will benefit Reclamation projects in the area due to the water resources it will conserve.

This project is also consistent with recommendations made in the Lower Rio Grande Basin Study (study) completed by the Bureau of Reclamation in December 2013. The report was completed in conjunction with multiple State and Local entities and determined that there will be a need for an additional 592,000 ac-ft/year of water by the year 2060 (approximately 35% of the total water demand) and that the impacts of climate change is likely to increase this shortage by an additional 86,438 ac-ft/yr. The study further emphasizes the need to reduce dependency on the Rio Grande and preserve downstream flows for irrigation/push water and environmental needs, particularly in Cameron, Willacy, and Hidalgo Counties. This project directly supports the stated objectives of the study and will help preserve valuable and limited water resources from the Rio Grande, by implementing drought resiliency and creating water savings by the community of Santa Rosa.

Is the applicant a Tribe?

No, Santa Rosa is not a Tribe

1.5.G Evaluation Criterion G – Stakeholder Support for Proposed Project (5 points)

The proposed project will benefit a number of other local entities in that it preserves valuable surface water supplies from the Rio Grande for other local use. Every entity in the region that relies on the Rio Grande for surface water will benefit from conservation. Santa Rosa has the support from a diverse array of local



stakeholders including irrigation districts, water supply corporations, neighboring municipalities, and the county. Letters of support are provided in Appendix B and include the following stakeholders:

- Cameron County Commissioner, Gus Ruiz
- Congressman Vicente Gonzalez, 34th District, Texas

Section 2: Project Budget

2.1 Budget Proposal

The proposed project's budget is broken down between non-Federal and Federal sources in Table 6.

Table 6: Summary of Federal and Non-Federal Funding Sources

Funding Sources	Amount
Non-Federal Entities	
1. City of Santa Rosa – Requesting Financial Hardship Waiver	\$0
Non-Federal Subtotal	\$0
REQUESTED RECLAMATION FUNDING	\$9,553,500

2.2 Budget Narrative

Attachment B

Attachment B is included with the Grants.gov application and uploaded via the online system. It contains the detailed budget along with the budget narrative.

Budget Form

Budget Form SF-424C is included with the Grants.gov application and uploaded via the online system.

Section 3: Environmental and Cultural Resources Compliance

The proposed project is anticipated to have minimal impact on the surrounding environment because the new facilities will be built within the Water Treatment Plant site. The project will be constructed on land that was previously disturbed and will not be located at a greenfield site. The proposed project will have minor and temporary impacts on the surrounding environment that could include temporary increases in dust and partial loss of vegetation. All measures will be taken by the selected contractor to mitigate any potential effects on the air, water, and animal habitats that surround the project area. These measures include, but are not limited to:

- Utilizing erosion control devices such as buffer zones, flow diversion, gabions, and sediment traps;
- Minimizing the amount of disturbed soil;



- Meeting or exceeding any local or state sediment or erosion control plans;
- Minimizing the amount of removed vegetation;
- Ensuring efficient and timely construction;
- Construction personnel will post signage of work area;
- Construction personnel will facilitate ingress and egress of vehicles to project site through on-street traffic direction; and
- The Construction Contractor will alert local emergency response entities that construction vehicles will be located within the project area.

The City is not aware of any listed or proposed Federal threatened or endangered species or designated critical habitats located directly in the project area that would be affected by any activities associated with the proposed project. There are no wetlands or other surface waters inside the project boundaries that fall under CWA jurisdiction as "Waters of the United States."

Section 4: Required Permits or Approvals

Required permits and approvals are discussed in detail in Section 1.5.E, Evaluation Criterion E – Readiness to Proceed and Project Implementation. The City will follow state and local procedures to submit construction plans and specifications to the TCEQ for review and approval.

Section 5: Additional Required Material

5.1 Overlap or Duplication of Efforts Statement

There is no overlap between the proposed project and any other active or anticipated proposals or projects in terms of activities, costs, or commitment of key personnel. This proposal is not in any way duplicative of any proposal or project that has been or will be submitted for funding consideration to any other potential funding source - whether it be Federal or non-Federal.

5.2 Conflict of Interest Disclosure

Per the Financial Assistance Interior Regulation (FAIR), 2 CFR §1402.112, Valley MUD No. 2 states that there are no actual or potential conflicts of interest that exist at the time of submission of this application.

5.3 Uniform Audit Reporting Statement

Santa Rosa did not expend more than \$750,000 in U.S. dollars or more in Federal award funds in the most recently closed fiscal year. Therefore, Santa Rosa was not required to submit a Single Audit report through the Federal Audit Clearinghouse Internet Data Entry System in accordance with 2 CFR §200 subpart F for that year.



5.4 Disclosure of Lobbying Activity

Not applicable to this project.

5.5 Letters of Project Support

Letters of project support are included as Appendix B.

5.6 Official Resolution

An Official Resolution has been adopted by Santa Rosa in compliance with the BOR's requirements and is included in Appendix C.

5.7 Letters of Funding Commitment

Not applicable. This project does not include any third-party funding commitments.

Section 6: Cost-Share Waiver Request – Financial Hardship

6.1 Population-Weighted Median Household Income

According to the American Community Survey's 2021 5-year data 2017-2021. The City's population-weighted median household income and average unemployment rate within the study area and the state based on the latest available data from the U.S. Census Bureau's American Community Survey is included below in Table 7.

Location	Median Household Income	Average Unemployment Rate
Texas	\$67,321	5.4%
Cameron County	\$43,057	6.0%
Santa Rosa Town	\$27,464	9.3%
Tract: 48061010301	\$36,166	8.6%

Table 7: ACS 2021 5-Year Data for Santa Rosa Service Area

6.2 Average Unemployment Rate within Study Area and State

According to the ACS' 5-year data, the current average unemployment rate for the State of Texas is 5.4%. Cameron County's current unemployment rate is 6.0%. This data is summarized in Table 8.

Table 8: Unemployment Data

Texas Unemployment	Cameron County Unemployment	Santa Rosa Town
5.4%	6.0%	9.3%



6.3 Family Poverty Level

Family poverty level for the State of Texas as estimated by guidelines published annually by the U.S. Department of Health and Human Services (aspe.hhs.gov/poverty-guidelines) are included below in Table 9.

2023 POVERTY GUIDELINES FOR THE 48 CONTIGUOUS STATES AND THE DISTRICT OF					
COL	UMBIA				
Persons in family/household Poverty guideline					
1	\$14,580				
2	\$19,720				
3	\$24,860				
4	\$30,000				
5	\$35,140				
6	\$40,280				
7	\$45,420				
8	\$50,560				
For families/households with more than 8 persons.	add \$5,140 for each additional person.				

Table 9: Family Poverty Guidelines in Texas

6.4 Current Financial Statement of the Applicant

A current financial statement stating that the City does not possess sufficient funds or assets to pay for all or part of the required cost share is included as Appendix D.

VICENTE GONZALEZ 34TH DISTRICT, TEXAS

COMMITTEE ON FINANCIAL SERVICES SUBCOMMITTEE ON CAPITAL MARKETS SUBCOMMITTEE ON NATIONAL SECURITY, ILLICIT FINANCE, AND INTERNATIONAL FINANCIAL INSTITUTIONS

Congress of the United States House of Representatives

WASHINGTON OFFICE 154 CANNON HOUSE OFFICE BUILDING WASHINGTON, D.C. 20515 (202) 225–2531

> BROWNSVILLE OFFICE 835 E. LEVEE ST., 6TH FLOOR BROWNSVILLE, TX 78520 (956) 682-5545

> > gonzalez.house.gov

Washington, DC 20515-4315

November 7, 2023

The Honorable Deb Haaland Secretary U.S. Department of the Interior 1849 C Street, NW Washington, DC 20240

Dear Secretary Haaland:

I write in support of the City of Santa Rosa's Drought Resiliency Project. The project will provide needed upgrades to the city's water infrastructure, promote conservation, and explore ways of improving resiliency to drought conditions. With this funding, the city will reconstruct its Ground Storage Tank, Elevated Storage Tank, construct an inter-connect with a neighboring utility, and perform planning studies on the possible use of groundwater. The total project being proposed is \$9,553,500.

Over the last several years, South Texas has faced one of the hottest summers and one of its worst droughts on record. In 2023 alone, drought conditions reached extreme levels in several parts of the Rio Grande Valley, according to the U.S. Drought Monitor. Water levels at Falcon Lake Reservoir have reached historical lows, which significantly affects the region's agriculture industry and the needs of everyday people.

A project like this is an important part of the city's efforts to recover and protect against future losses. I applaud the foresight of the City of Santa Rosa in seeking these funds, and hope that the Bureau of Reclamation will see this project as favorably as I do.

I strongly support the City of Santa Rosa's application and their efforts to mitigate drought in South Texas. I ask that you consider this request in accordance with all applicable rules, regulations, laws, and guidelines. Should you have any questions, please do not hesitate to contact Constituent Field Representative, Victor Garza, with my office at Victor.Garza@mail.house.gov or at (956) 682-5545.

Sincerely,

Vicente Gonzalez Member of Congress