BROWNSVILLE
PUBLIC UTILITIES BOARD

SRWA
Southmost Regional Water Authority

Ensuring a Sustainable and Resilient Water Supply

11/18/2025

Joseph Hollmann, PhD

SRWA President

Brownsville Public Utilities Board
Board Member

About BPUB

Provides Brownsville and surrounding area with electric, water, and wastewater services.

4-time American Public Power Association designation, **Public Power Provider (RP3).** The national award is for reliable electric operations which recognizes public power utilities that demonstrate proficiency in four key disciplines: reliability, safety, workforce development, and system improvement.

OPERATING REVENUES FOR FY 2024:

- Electric: $175,332,512 | Water: $39,461,604 | Wastewater: $31,424,566

PAYMENTS BY CATEGORY TO THE CITY OF BROWNSVILLE FY 2024:

- **Services:** $4,085,779 - Payments for various services BPUB provided to the City, including street patching, landfill fees, COB street project utility improvements, and other services.
- **General Fund Transfers (GFT):** $11,393,548
- **COB Utilities Consumption:** $6,089,411

Brownsville Public Utilities Board Administrative Headquarters 1425 Robinhood Drive, Brownsville, TX.

BPUB Governance

Board of Directors (7 Members): Six members appointed by City Commission for 4-year terms, Mayor serves as ex-officio.

Position	Board Member	Residing District	Term	Term Expires	Appointed By
Position 1	Gerardo Martinez - Chair	District 1	1st	7/1/2027	Bryan Martinez
Position 2	Al Villarreal - Vice Chair	District 2	2nd	7/1/2028	Linda Macias
Position 3	Martin Sarkis	District 3	1st	7/1/2029	Gustavo De Leon
Position 4	Alex Najera	District 4	1st	7/1/2027	Pedro Cardenas
Position 5	Joseph L. Hollmann, PhD - SRWA President	At Large A	1st	7/1/2026	John F. Cowen
Position 6	Daisy Zamora, PhD - Secretary/Treasurer	At Large B	1st	7/1/2027	Rose Gowen
Position 7	John F. Cowen (Ex-officio)	Mayor	1st	May 2027	Elected

BPUB Customer Base & Infrastructure

BROWNSVILLE PUBLIC UTILITIES BOARD

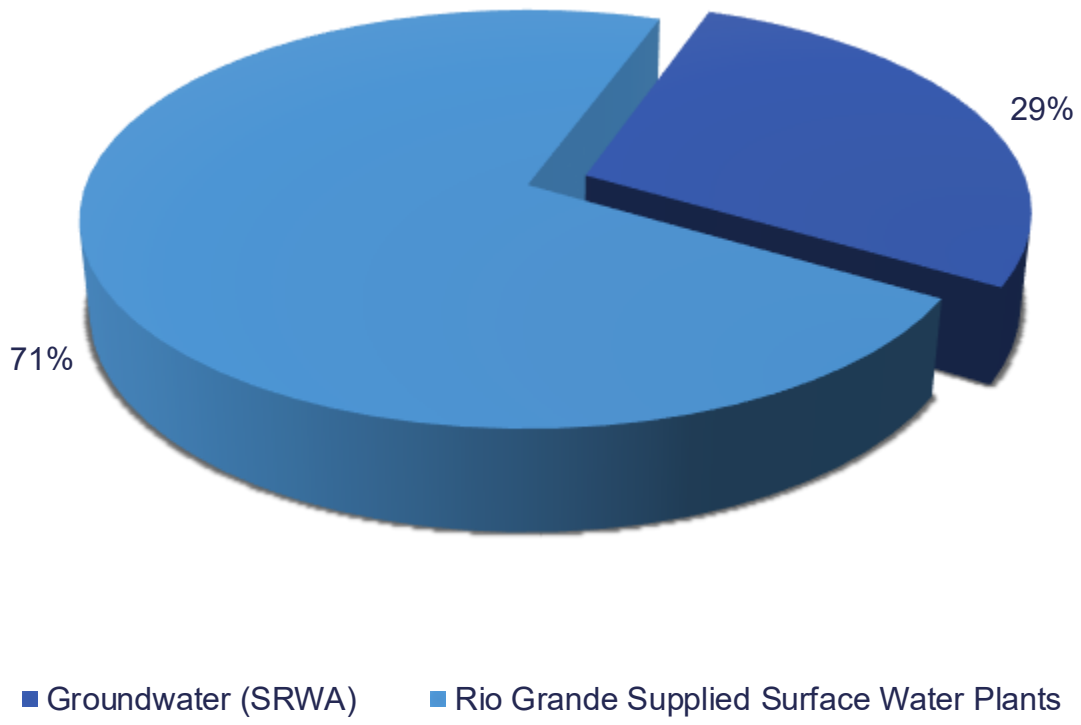
Electric System:	Water System:	Wastewater System:
• **53K customers**	• **54K customers**	• **55K customers**
• 67.95 sq mi	• 148.28 sq mi	• 156.5 sq mi
• 15 substations across 67.95 sq mi service area	• 3 storage tanks, 2 water sources	• 2 treatment plants, 177 lift stations
• Energy Reliability Council of Texas (ERCOT) membership	• 50 MGD capacity across 148.28 sq mi	• 27.3 MGD capacity across 156.5 sq mi
• **Generation:** Silas Ray (115 MW), Hidalgo Energy Center (105 MW), Sendero Wind Farm (78 MW)	• **Rio Grande surface water:** WTP No. 1 (20 MGD), WTP No. 2 (20 MGD)	• South WWTP (12.8 MGD), Robindale WWTP (14.5 MGD)
• **Power Purchase Agreements:** Combined Generation **Wind:** 34 MW | **Natural gas**: 23 MW	• **Brackish groundwater:** SRWA (7.5 MGD production, 10 MGD capacity, 92.91% ownership of SRWA plant)	

Brownsville Public Water Supply

FY2024 AVERAGE WATER DEMAND:

21.2

Million Gallons/Day (MGD)

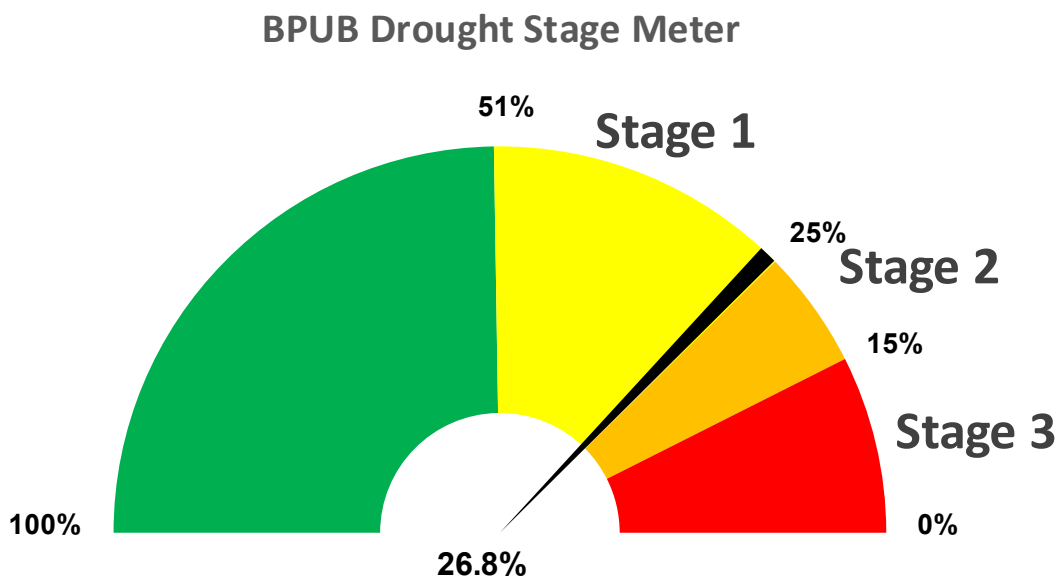


Current Environmental Conditions

National Weather Service Outlook - Lower Rio Grande Valley/Deep South Texas Region

October to December 2025:

- Normal to warmer than normal temperatures are expected to persist through Autumn 2025.
- Precipitation odds/trends will begin dropping across much of the region.
- The odds for drought/dryness expanding over deep south Texas through December are increasing.
- The combined share of water in Amistad and Falcon should continue at or below Stage 2 and 3 triggers (25% or less) until further notice.



U.S. Combined ownership at Amistad and Falcon Reservoirs
October 25, 2025 = 26.8%

*Water reservoir levels is only one of the indicators for drought stage.

% U.S. Combined Ownership at Amistad/Falcon

Previous 3 Readings

27.0%

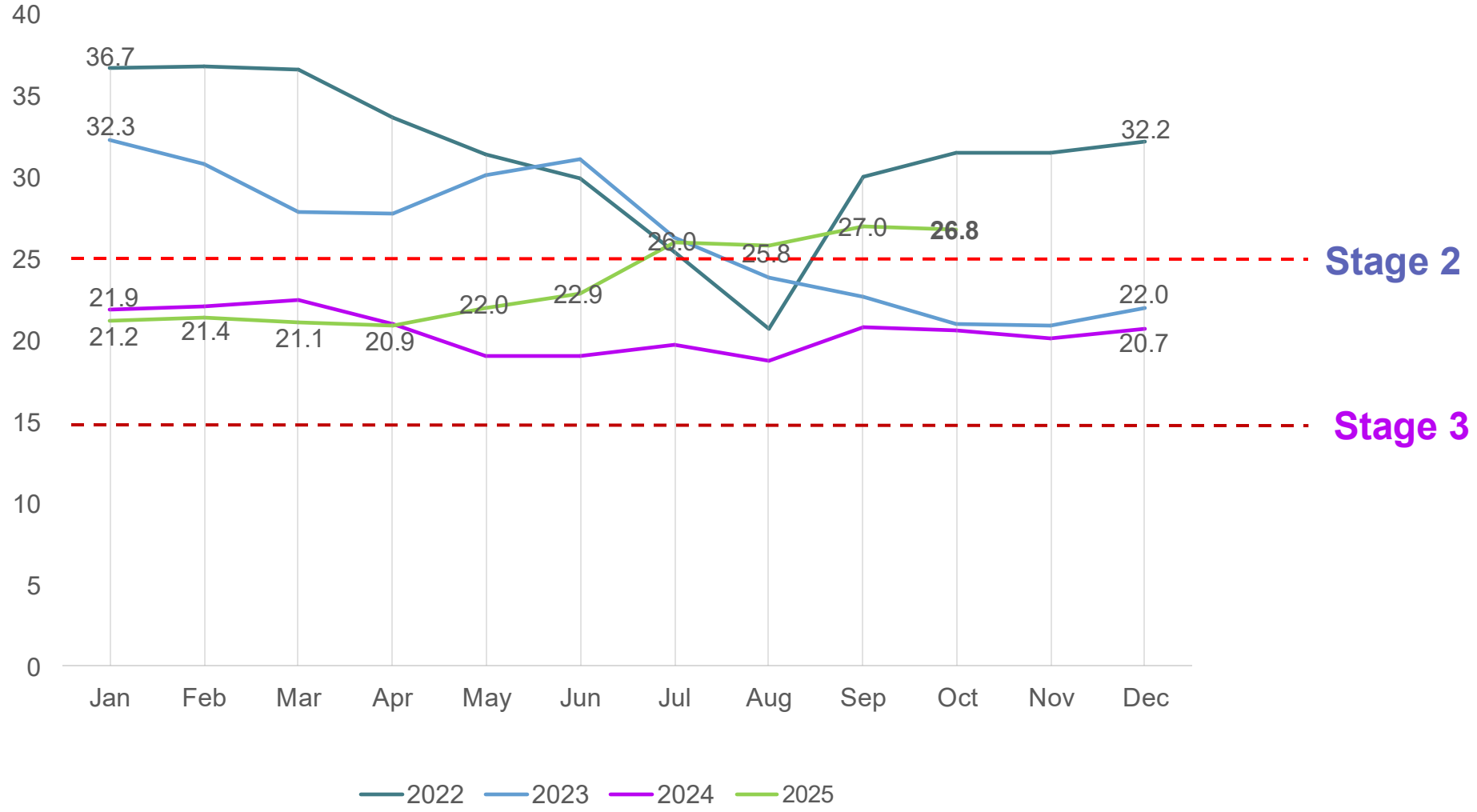
October 18, 2025

26.9%

October 11, 2025

26.9%

October 4, 2025

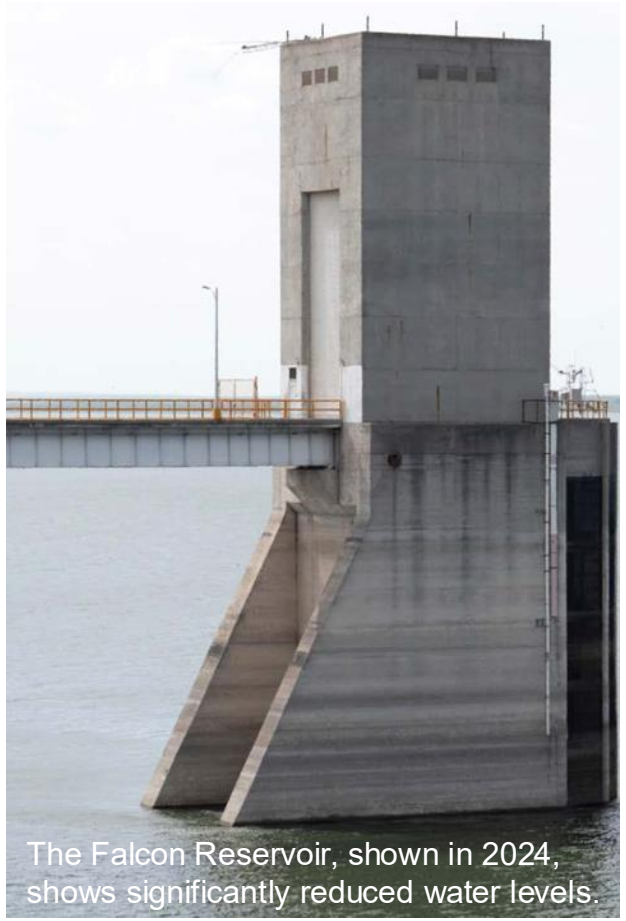


Drought Contingency Plan Stage 2 Guidelines for initiation

- U.S. water stored in reservoirs reaches 25%
- Annual allotment may be exhausted*
- Loss of capability to provide service due to line break, pump failure or system failure
- Peak demands are nearing capacity levels and place strain on the system
- Contamination of water supply or transmission system may result in loss of capability to provide service

***ANNUAL ALLOTMENT USAGE:**

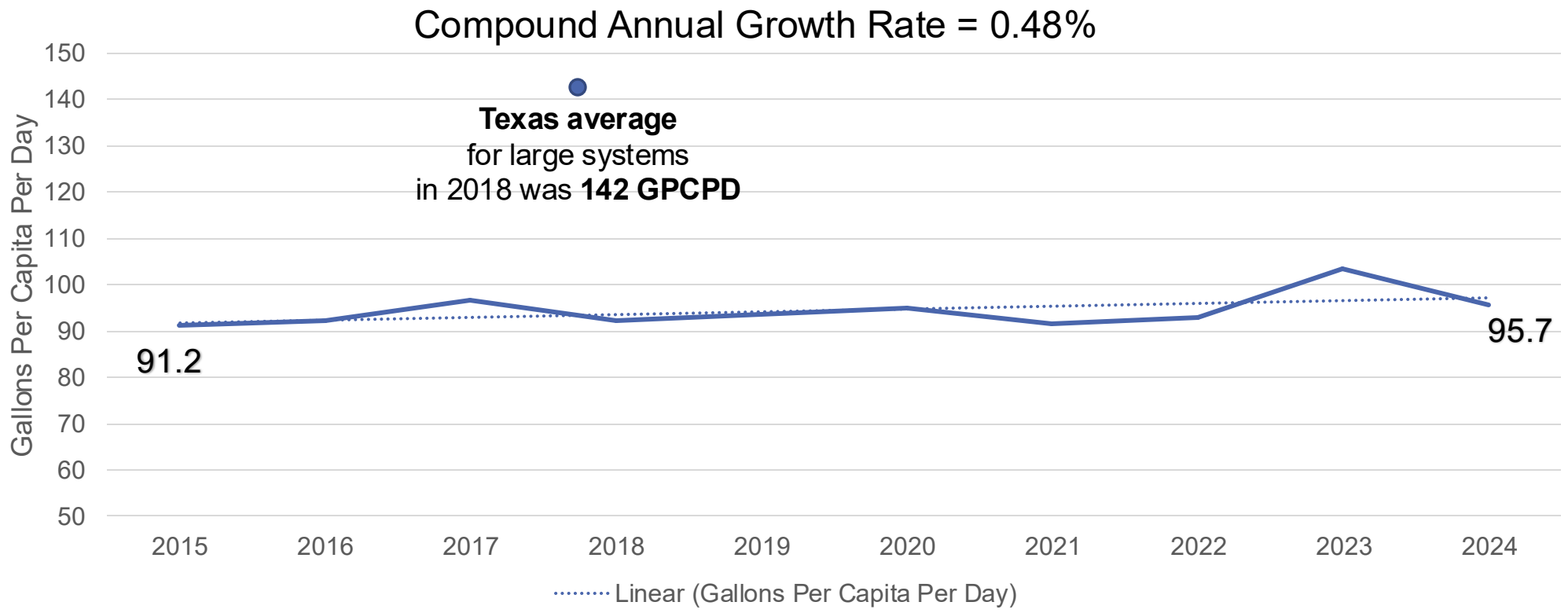
Water Rights owned	Water rights used in 2024	Water rights used in previous 5yrs
31,965 acre-feet	**~59.5%** of ownership	**~62.3%** of ownership
Surplus Water Rights owned (Permit 1838)	Surplus water rights used in 2024	Water rights used in previous 2yrs
40,000 acre-feet	**~2.1%** of ownership	**~2.2%** of ownership



The Falcon Reservoir, shown in 2024, shows significantly reduced water levels.

10-Year History Gallons Per Capita Per Day

BPUB customers consume less water than the average Texan



> " BPUB is projected to reach **80% of water capacity by 2038**, which under TCEQ rules requires planning new plants or expansions to meet demand. *By year 2045, BPUB would not be able to meet the required production capacity. – BPUB Water Master Plan* "

SRWA History & Governance

- **Created in 1981** as a conservation and reclamation district to develop water supply strategies for regional partners in Southern Cameron County.
- The Authority was **organized pursuant to Article XVI, Section 59 of the Texas Constitution**.
- Governance structure requires each member to send representation. For Brownsville, the BPUB Board appoints one of its board members.
- The President of SRWA is a BPUB Board member

SRWA remained largely inactive after its initial creation until 2000, when it was reactivated to address long-term regional water supply issues in the Southern Cameron County.

Key Milestones:

- **2000** - Feasibility
- **2004** – Plant becomes operational
- **2013** - Pretreatment and expansion design
- **2015** - Start-up

SRWA's governance structure advances a **regional approach** by aligning **multiple jurisdictions** within Brownsville and its surrounding areas to collaboratively address **shared water needs and infrastructure planning**.

SRWA Membership

BROWNSVILLE PUBLIC UTILITIES BOARD
(Owner/Operator)

92.91%

CITY OF LOS FRESNOS

2.28%

TOWN OF INDIAN LAKE

2.20%

VALLEY MUNICIPAL UTILITY DISTRICT NO. 2

2.51%

BROWNSVILLE NAVIGATION DISTRICT

2.10%

Laguna Madre Water District

0.0%

Brackish Desalination Facility

FACILITY OVERVIEW:

- **Production:** 7.5 MGD
- **Current Capacity:** 10 MGD
- **Status:** Texas's 3rd largest groundwater desalination plant, largest south of San Antonio

OPTIMIZATION PLAN……*$42.44M:

- Reconstruction of 20 wells
- Construction of 2 new wells
- Upgrade and increase the capacity of the microfiltration system
- Upgrade the reverse osmosis system
- Upgrade electrical and instrumentation systems
- Improve chemical dosing and storage systems

Location: 1255 N. FM 511, Brownsville, TX

*Cost estimates as of Sept. 2024

SRWA Water Treatment Process

WATER SOURCE:

- Twenty brackish groundwater production wells, approximately 200 to 300 feet below ground level, tap into the **Rio Grande Alluvium** within the **Gulf Coast Aquifer.**

- The pilot study in the Brownsville Ship Chanel had a **total dissolved solids (TDS)** concentration at a **range of 34,400 to 17,800 mg/L**, with an average of 29,800. Which on average is **10 times saltier** than SRWA raw water intake.

RAW WATER CHARACTERISTICS:

- Local brackish aquifer with 3,000 mg/L TDS
- **Challenge:** Natural occurring metals cause membrane fouling and reduced their efficiency.

SRWA's production wellfield is located west of Rancho Viejo, TX in Cameron County.

Hydrologist have identified the water available from the Alluvium is abundant, enough water to meet the growing community needs for the state of Texas.

Brine Management

ADDITIONAL BENEFITS OF SURFACE WATER DISCHARGE:

- TCEQ permit allows discharge to Cameron County Drainage Ditch, which then drains to San Martin Lake and into the Gulf.
- SRWA discharge is 37% of the salinity of the Gulf Coast, causing no adverse effects. The discharge is **environmentally friendly**, reducing the hyper-salinity of the San Martin Lake.

- The concentrate's lower salinity (9,000 mg/L) dilutes the Bahia Grande's hypersaline conditions (47,000-87,000 mg/L), potentially creating conditions more suitable for marine organisms like fish, shrimp, and crabs.

Gamboa, Yaneth Parra. "Characterization of Desalination Plant Concentrate Discharge Impacts on Water Quality in a Texas Coastal Area." Master's thesis, Texas A&M University-Kingsville, August 2007.

Future Expansion Plans

HOW DOES THE EXPANSION FIT INTO FUTURE NEEDS?

- The 2025 BPUB Water and Wastewater Master Plan identified SRWA expansion needs projected in the 20-year horizon, SRWA expansion is needed by 2045.
- The Board is prioritizing projects to **minimize rate impact**
- Other projects with lower cost produce more water and are considered a new water supply (indirect potable reuse).
- Texas Senate Bill 7 (signed June 2025) established the Texas Water Fund with up to $1 billion annually for water infrastructure, directly enabling BPUB to secure $47.2 million in state funding for the **Banco Morales Reservoir ($34.5M)** and **Potable Water Reuse Project ($12.7M)** to diversify water sources and enhance drought resilience.

EXPANSION PROJECT……*$181M:

- Construct 20 new wells, a raw water transmission line, an intermediate pump station and additional reverse osmosis trains
- Expand and enhance the pretreatment system
- Install and upgrade of the pumps and ancillary equipment
- Upgrade electrical and instrumentation systems
- Install a new backup generation

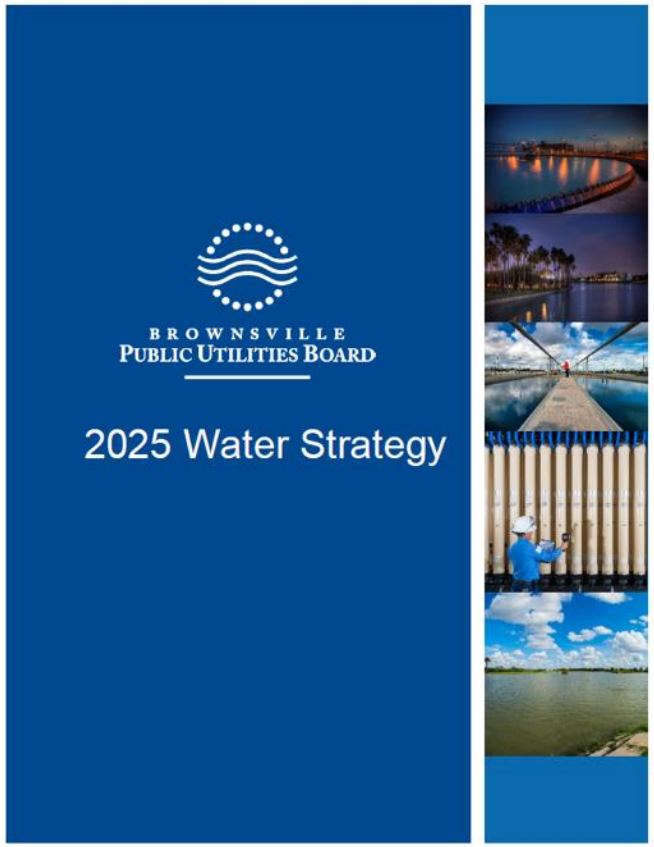
SRWA DESALINATION EXPANSION AND OPTIMIZATION

- $223 million optimization and expansion project to double capacity to 20 MGD
- Currently seeking funding for optimization and expansion
- Critical for long-term regional water security

*Cost estimates as of Sept. 2024

Strategic Solutions

KEY INVESTMENT PRIORITIES IN 2025 WATER STRATEGY



- Intended to address how BPUB will meet the challenges of ensuring a sustainable, resilient, and affordable water supply for our community.
- Creates a strategic framework to help prioritize resources and guide decision-making.
- Designed to be a “living document” that is a part of our overall strategic planning process.

INFRASTRUCTURE MODERNIZATION:

- $36.2 million investment in river pump replacement and intake relocation.
- Advanced Meter Infrastructure implementation beginning March 2025.
- Enhanced water usage monitoring and operational efficiency.

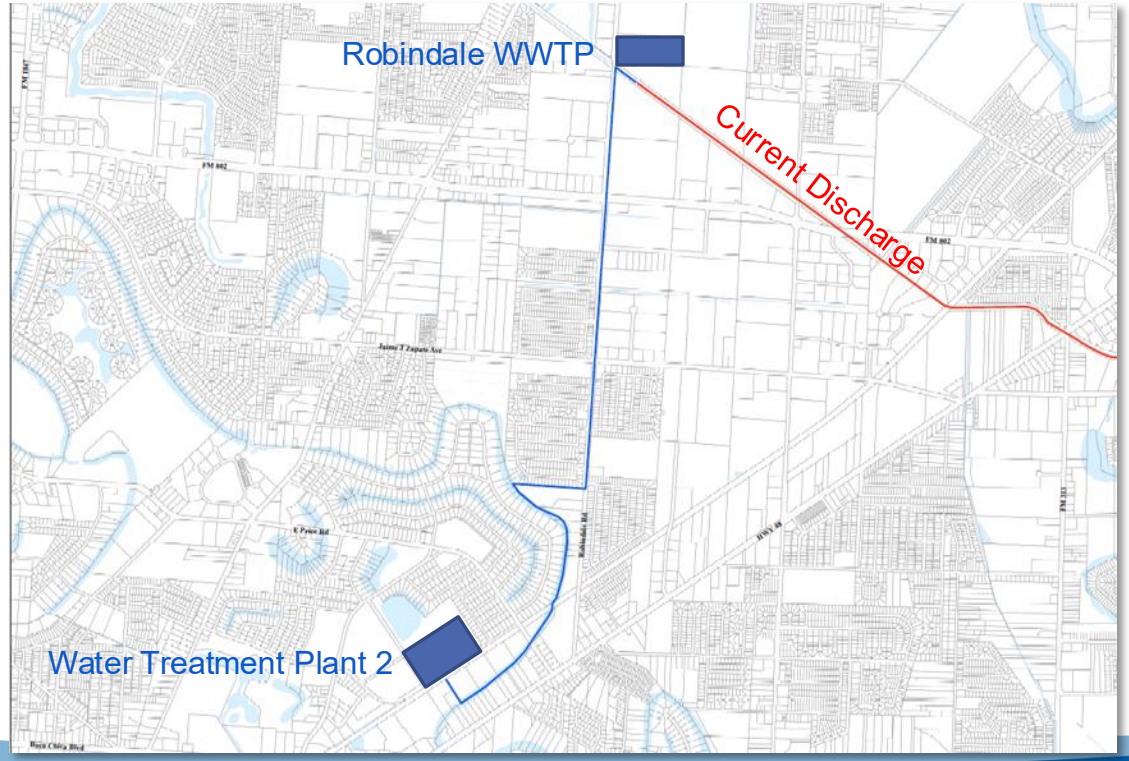
POLICY ADVOCACY:

- Lobby for water allocation under 1944 water treaty.
- Secure rightful water resources for regional needs.
- Ensure priority of water rights allocations and maintain ownership of invested water rights.

Indirect Potable Re-use (IPR) Pilot Project

KEY INVESTMENT PRIORITIES IN 2025 WATER STRATEGY CONTINUED

Indirect Potable Reuse project will increase water supply reliability and drought resilience by treating wastewater effluent to potable reuse standards to augment and partially replace raw water supply into WTP 2.



- Robindale Wastewater Treatment Plant **currently discharges 8 MGD** of unused effluent discharge, which flows via a channel to the Gulf via San Martin Lake .
- BPUB is analyzing the opportunity to divert the water to Resaca De La Guerra to augment as a raw water supply.
- Water Treatment Plant 2 can source water from Resaca De La Guerra and treat it to potable water standards.
- An engineering firm has been retained to assist with planning, permitting, and grant applications for the US Bureau of Reclamation (USBR) Drought Response Program.

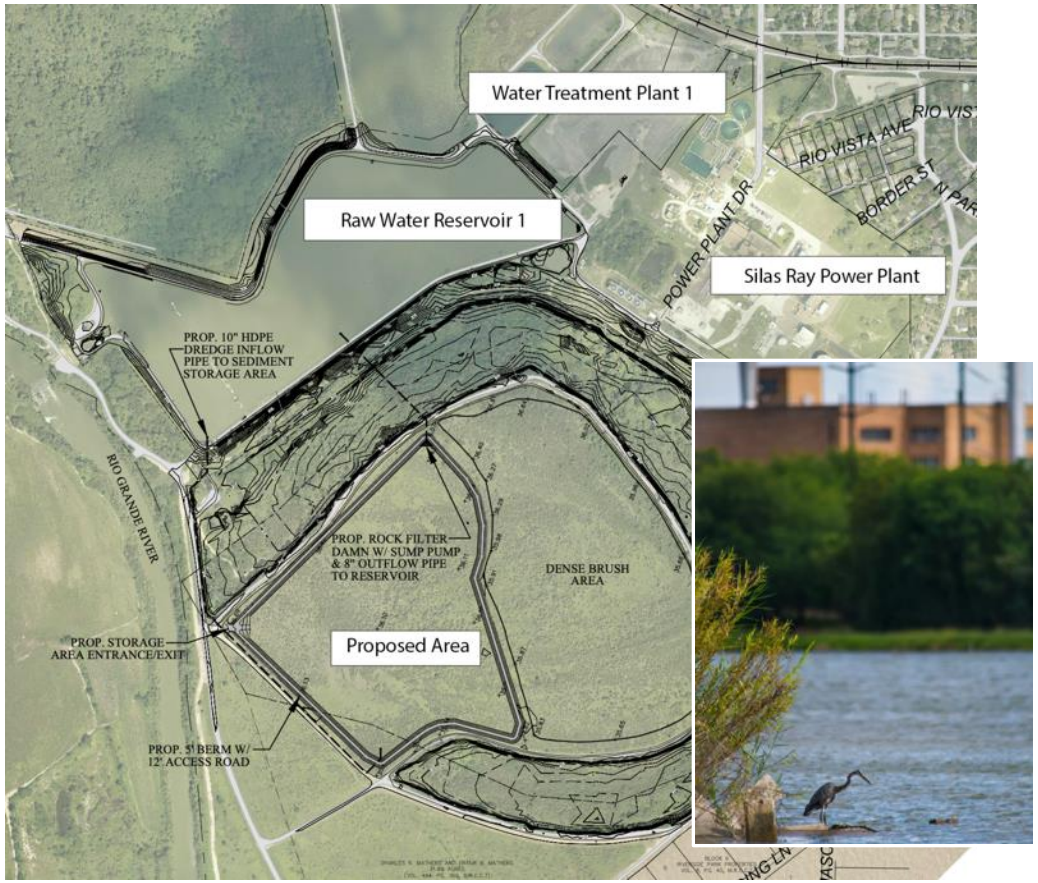
Total Project Cost: $35 million

- BPUB Cost-Share: $17.3 million
- Texas House Bill Appropriation: $12.7 million
- USACE - WRDA EI Program: $5 million

Banco Morales Reservoir Surplus Water Impoundment Project

KEY INVESTMENT PRIORITIES IN 2025 WATER STRATEGY CONTINUED

- 2002 Feasibility Study estimated $26M for construction. In 2025 BPUB conducted advocacy work with the Texas Legislature and secured $34.5 million in state funding.
- Current off-channel storage capacity is 186.6 million gallons, and the proposed project will add an additional 400 million gallons of storage capacity.
- Located between the International Boundary and Water Commission (IBWC) levee system and Brownsville's city levee, adjacent to Water Treatment Plant 1.
- Greater Brownsville Incentives Corporation (GBIC) could benefit by receiving the fill material (dirt) from Banco Morales at no cost, paying only transportation expenses to fill low-lying areas of the FM 511 site for the future Industrial Park expansion.



Contact Information

JOSEPH HOLLMANN, PHD
PRESIDENT SRWA, BPUB BOARD MEMBER

BROWNSVILLE PUBLIC UTILITIES BOARD

SRWA Southmost Regional Water Authority

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Brownsville-pub.com

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srwadesal.com

Questions?