



2025 Water Strategy

ENSURING A SUSTAINABLE AND RESILIENT WATER SUPPLY

2025 Water Strategy

- 2025 Water Strategy draft prepared and provided to the Board of Directors
- 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



Strategic Plan Inputs



Water Strategy

Mission

Brownsville Public Utilities Board's mission includes ensuring a sustainable, resilient, and affordable water supply for our community by increasing supply, diversifying sources, and adopting conservation measures.

Vision

Our vision is to be a Texas leader in water management, recognized for our innovative and sustainable practices in creating a resilient water system that meets current and future community needs.

Water Strategy Values

1. Sustainability: We prioritize sustainable practices to ensure a reliable water supply for future generations.

2. Innovation: We adopt industry-leading technologies and innovative solutions to recycle and reuse water, promoting efficiency and sustainability.

3. Collaboration: We actively participate in and lead regional efforts to address water strategies, fostering collaboration and shared solutions.

4. Transparency: We communicate openly and transparently with our customers to build trust and keep them informed.

5. Customer Involvement: We involve our customers in our water solutions, encouraging community engagement and support.

6. Proactive Maintenance: We protect our investments with proactive maintenance to extend the lifespan and functionality of our water systems.

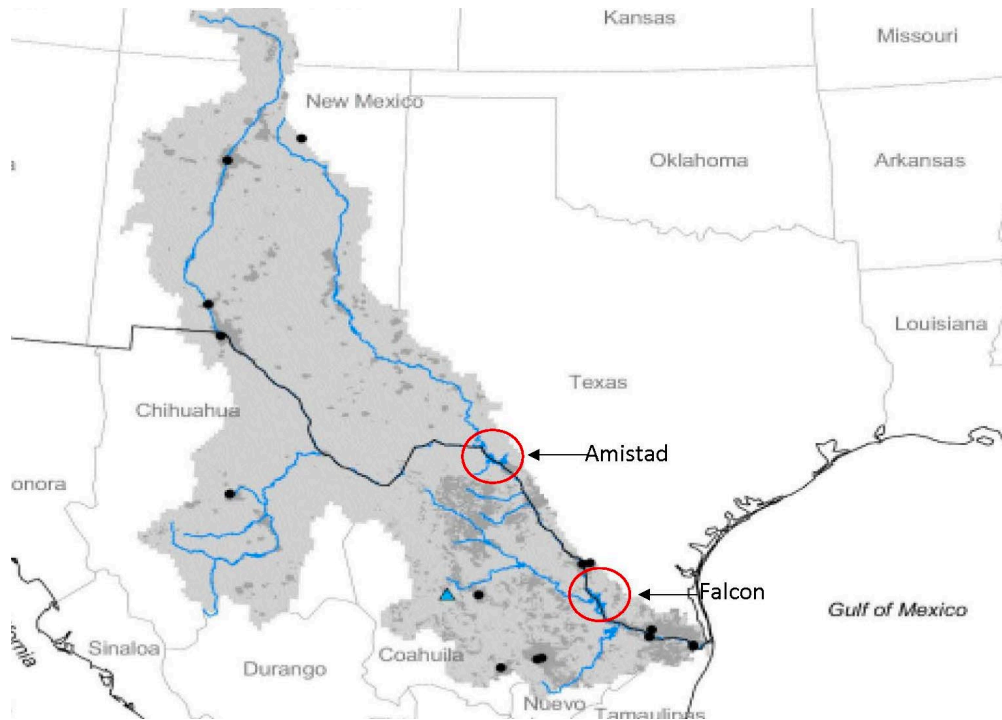
7. Environmental Stewardship: We are committed to protecting and enhancing the environment through responsible water management practices.

8. Economic Growth: We enable economic growth by ensuring a reliable and sustainable water supply for our community.

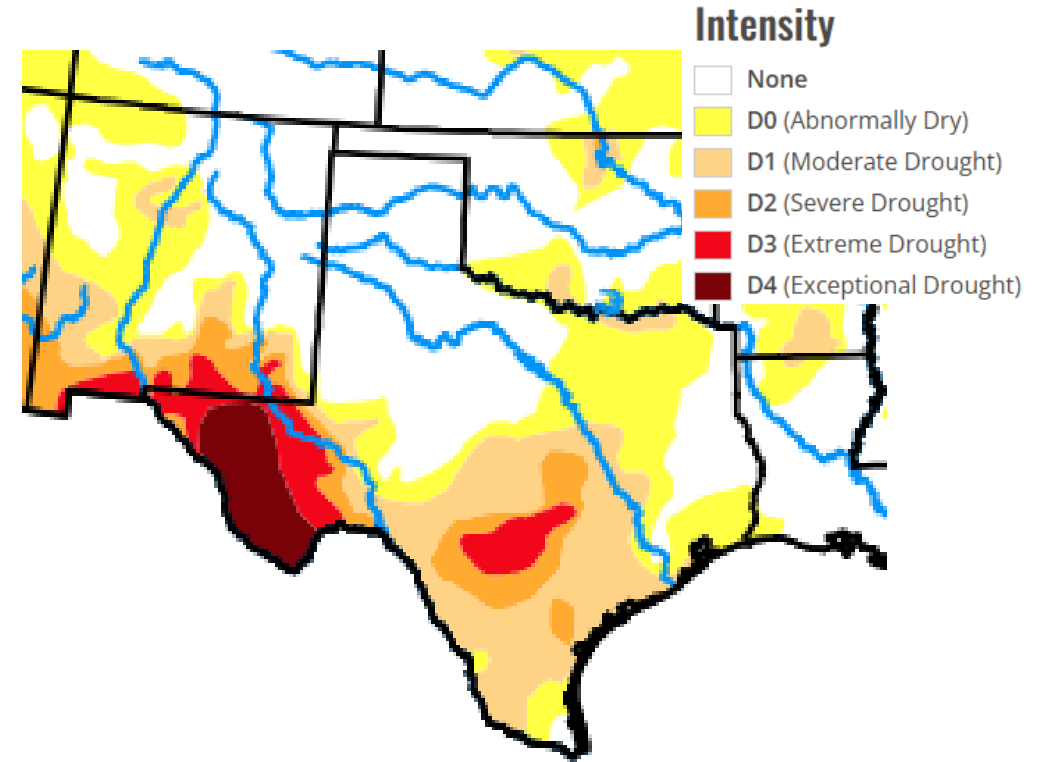
9. Data-Driven Decision-Making: We utilize data-driven decision-making in our water strategies to make informed and effective choices.

Current Drought Conditions

RIO GRANDE WATERSHED



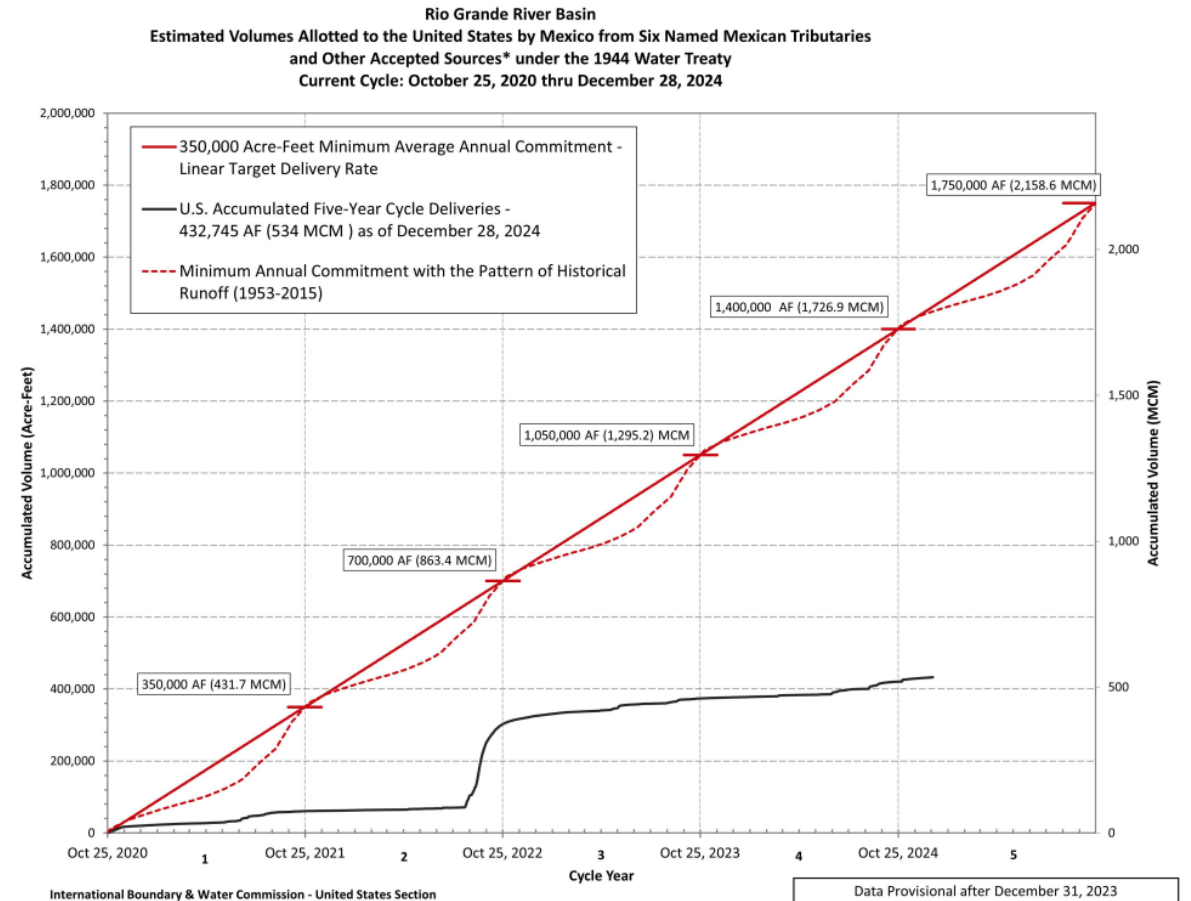
THE U.S. DROUGHT MONITOR



Map released January 1, 2024

Rio Grande Watershed

- Brownsville is dependent on waters from the Rio Grande Watershed for 72.0% of its water
- Climate change has reduced inflows into Amistad by 33% and Falcon by 21.5% since the 1980's
- As of December 28, 2024, the U.S. Combined Ownership at Amistad/Falcon is 20.7%
- Under the 1944 Treaty, Mexico has a water debt to the U.S. of > 1.1 million acre-feet in the current 5-year cycle
- Mexico has only delivered its water requirements to the U.S. in three of the last six 5-year water cycles



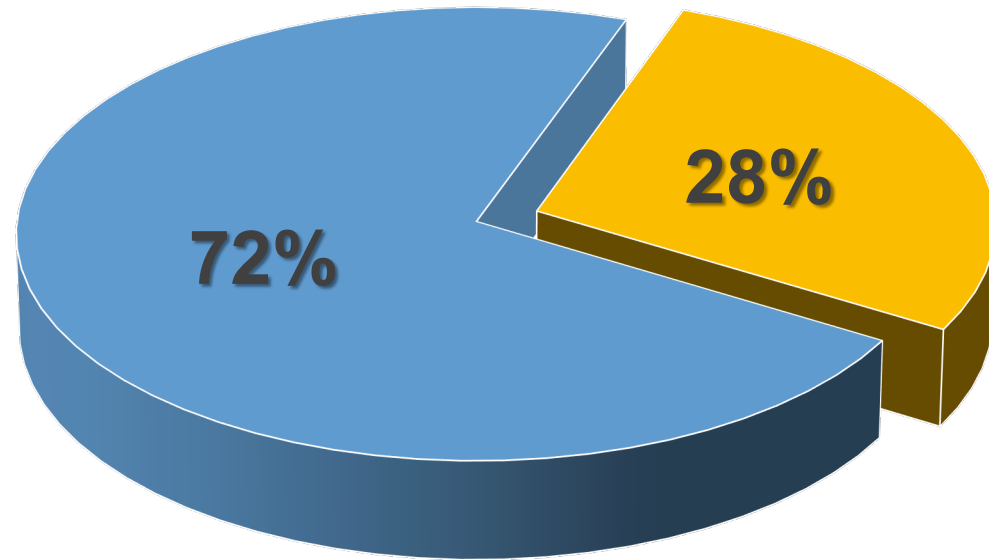
Brownsville Public Water Supply



FY2023 AVERAGE WATER DEMAND:

22.0

Million Gallons/Day (MGD)



- Groundwater (SRWA)
- Rio Grande Supplied Surface Water Plants

BPUB Water Treatment Plants

Treatment Plant 1, 20.0 MGD, Rio Grande



Treatment Plant 2, 20.0 MGD, Rio Grande, Resaca



Southmost Regional Water Authority



- 10.0 MGD reverse osmosis plant produces approximately 6.5 MGD of potable water using brackish groundwater from 20 wells
- Construction completed in April 2004
- Partnership interest:
 - 92.91% BPUB (Operator)
 - 2.51% Valley Municipal Utility District No. 2
 - 2.28% City of Los Fresnos
 - 2.10% Port of Brownsville
 - 0.20% Town of Indian Lake

14 Water Strategy Components

1. Increase Water Supply and Diversify Sources
2. Adopt Water Conservation Measures
3. Invest in System Improvements
4. Improve Water Quality
5. Leverage Grant and Funding Opportunities
6. Participate in Regional Efforts
7. Protect Investments with Proactive Maintenance
8. Adopt Industry-Leading Technologies
9. Utilize Data-Driven Decision-Making
10. Incorporate Resiliency
11. Protect and Enhance the Environment
12. Enable Economic Growth
13. Open and Transparent Communications
14. Involve Customers in Water Solutions



Key Water Strategy Component: Increase Water Supply and Diversify Sources

Our strategic focus will be on increasing our water supply. We will achieve this by exploring new sources such as groundwater, surface water, re-use, and desalination. Diversifying our water sources is crucial to our strategy, creating a more resilient system that can withstand various challenges, including climate change and population growth.

Brackish Groundwater Desalination: Expansion of brackish groundwater treatment to provide a drought-resistant supply		Indirect Potable Re-Use (IPR)	1944 Water Treaty: IBWC Minute 331
SRWA Optimization: This 36-month project will increase SRWA's production from 6.5 MGD to 10.0 MGD at an estimated cost of \$42.4 Million.	SRWA Expansion: This 36-month project will increase SRWA's production to 20.0 MGD at an estimated cost of \$181 Million.	This 24-month project will divert up to 8.0 MGD of effluent discharge from Robindale Wastewater Treatment Plant via Resaca De La Guerra to Water Treatment Plant 2 at an estimated cost of \$9.5 Million.	BPUB supported and advocated for the use of water released by Mexico from the San Juan and Alamo Rivers to qualify as a source to meet Mexico's obligation under the 1944 Water Treaty.

Key Water Strategy Component: Adopt Water Conservation Measures

We will implement water conservation programs to reduce demand as part of our strategy. This is a crucial step that requires the active involvement of all stakeholders, emphasizing our shared responsibility. We will promote water-saving technologies, encourage efficient water use among customers, and implement tiered pricing structures to incentivize conservation.

Stage 2 – Water Shortage Alert	WCDCP Update	Water and Wastewater Rate Study and Long-Term Financial Plan	Toilet Rebate Summer Program
<p>Stage 2 - Water Shortage Alert enacted September 18, 2023. BPUB is committed to water conservation and has implemented a Water Conservation and Drought Contingency Plan (WCDCP).</p>	<p>BPUB and the City are shifting from a compliance-driven WCDCP to an enhanced water strategy plan. In July 2024, BPUB executed a \$200,000 contract to incorporate the best available science and industry best practices to revise effective drought response strategies.</p>	<p>Implemented in June 2022, BPUB incorporated tiered water rates to encourage conservation. By charging higher rates for increased usage, BPUB provides an incentive to customers to reduce their water consumption.</p>	<p>High-efficiency toilet (HET) rebate program as part of BPUB’s Go-Green Rebate programs. Certified HETs are estimated to save 4,000 gallons per year.</p>

Key Water Strategy Components: Invest in System Improvements

We will upgrade our infrastructure to reduce water losses. This includes replacing aging pipes, installing advanced metering systems, and using leak detection technologies to find and repair leaks promptly.

Raw Water River Intake Facility Project	Advanced Meter Infrastructure (AMI)	Two Million Gallon Elevated Storage Tank	Water Distribution & Meter Management Audit
72% of the water used by BPUB customers is from the Rio Grande River. BPUB operates two raw water intakes with 80-year-old pumps in the flood area. BPUB is investing \$36.2 million to replace the pumps and relocate the intake facility, which is expected to be completed in 2029.	BPUB is investing \$29.7 million to install and utilize AMI on over 100,000 electric and water meters. The project will be completed in February 2027 and support water conservation through leak detection and isolation, malfunctioning meter detection, and consumption data for customer behavior programs.	BPUB invested \$6.8 million to replace the Southmost Elevated Storage Tank. Completed in November 2023, the new tank allows BPUB to meet its TCEQ storage capacity while decommissioning the aged tank at UTRGV.	BPUB conducted a five-year Water Audit and Meter Management Evaluation in 2023 to identify and address Non-Revenue Water (NRW) losses. Improvement recommendations are currently underway.

Key Water Strategy Components: Leverage Grant and Funding Opportunities

We will seek grants and other funding opportunities at the state and federal levels to fund supply and demand projects. This additional funding will support our initiatives and help us achieve our strategic goals.

Bureau of Reclamation's WaterSMART Water and Energy Efficiency	Bureau of Reclamation's WaterSMART Desalination and Construction Program	Texas Water Development Board's Drinking Water State Revolving Fund	Water Resources Development Act of 2024
BPUB received \$5.0 million to replace 17,678 manual-read meters with AMI smart meters and retrofit 39,773 existing meters, aiming to save 2,103 acre-feet of water annually lost to leaks.	BPUB applied for a \$10.6 million grant to support SRWA's desalination plant optimization. The funds will be used for new groundwater wells, upgrading reverse osmosis piping, microfiltration racks, electrical equipment, and chemical dosing for improved water supply.	BPUB anticipates applying to the Drinking Water State Revolving Fund in March 2025. The program aims to provide financial help for planning, acquiring, designing, and constructing water infrastructure.	The WRDA of 2024 (H.R. 8812) authorizes \$40.0 million for water and wastewater infrastructure upgrades in Brownsville, prioritizing water supply management. The President signed the bill into law on January 4, 2025.

Key Water Strategy Components: Participate in Regional Efforts

We will collaborate with regional partners to address water strategies. By participating in and leading regional efforts, we can share resources, knowledge, and solutions to common water challenges.

Texas Water Development Board, Region M Water Planning Group	Southmost Regional Water Authority	Texas Clean Rivers Program	Texas Commission on Environmental Quality – Rio Grande Watermaster
BPUB serves on the RWPG’s Executive Committee, working with state agencies and local stakeholders to develop and update a Regional Water Plan, which guides the development and stewardship of the region’s water resources.	BPUB is the operating partner for SRWA, which owns and operates the largest regional brackish water desalination plant in the Rio Grande Valley, saving approximately 11,200 acre-feet of surface water and enhancing regional water security.	BPUB participates in the Texas CRP, a partnership between the TCEQ and regional water authorities that coordinates and conducts water quality monitoring, assessment, and stakeholder participation to improve the quality of surface water.	BPUB participates in the Rio Grande Watermaster Advisory Committee, which reviews watermaster operations, advises on the annual budget, and makes recommendations to benefit water rights holders.



Water Strategy

Ensuring a Sustainable and Resilient Water Supply