



Sustainable, Droughtproof Supply

El Paso's Advanced Water Purification Facility will be the first pipe-to-pipe direct potable reuse facility in the United States

Sanaan Villalobos

While many U.S. communities have unencumbered access to water resources, others are experiencing drought cycles and have been forced to take a closer look at their water portfolios. This is the case in El Paso, a desert community situated in the western tip of Texas that receives just 23 cm

(9 in.) of rainfall each year — significantly less than the national average of 76 cm (30 in.). To meet the challenge of providing a consistent water supply into the future, El Paso Water (EPWater) has partnered with Carollo Engineers (Walnut Creek, California) on a state-of-the-art project that could significantly improve El Paso's water security for years to come.



Fast-growing El Paso, Texas, in the heart of the Chihuahuan Desert, is building a groundbreaking potable reuse facility that will help ensure future water supply.



A Water Innovator

The city of El Paso shares a border and groundwater resources with portions of New Mexico and Juarez, Mexico, a sister city with a population of more than 1.5 million — both of which expect sustained population growth into the future. EPWater serves a population of approximately 865,000 through customer connections and wholesale water. Because of El Paso's continued population growth, Chihuahuan Desert location, and climate conditions affecting water supplies conveyed from other states, the city needs additional water resources to meet future demand.

El Paso is no stranger to water reuse. In the 1960s, EPWater already was supplying reclaimed water for golf course irrigation. In the 1980s, the utility developed the first aquifer recovery facility in Texas, the Fred Hervey Reclamation Plant, which made the utility a leader in indirect potable reuse (IPR). The plant treats wastewater to drinking water standards and uses it to recharge groundwater through percolation ponds. In its

lifetime, the facility has recharged more than 114 million m³ (30 billion gal) of water into the Hueco Bolson aquifer.

Over the years, EPWater has continued to diversify its water supply portfolio while applying a holistic One Water approach, which emphasizes that every drop within a water system should be maximized. This has helped the utility be resilient through various drought cycles.

El Paso is fortunate to have several water sources of water supply.

- Groundwater — The Hueco Bolson and Mesilla Bolson aquifers are the primary sources of water in El Paso, supplying approximately 50% of the water used. These resources are shared by two countries and three states.
- Surface water — The Rio Grande provides nearly 40% of the water supply for El Paso but is only available seasonally when water is released from the Elephant Butte reservoir. Even though surface water is more costly to produce, EPWater leverages its use during the irrigation season to safeguard groundwater resources.

