

EL PASO WATER EXPANDS GROUNDWATER EXPLORATION WITH AQUATERREX

Helping a Major Southwestern Water Utility Identify and Prioritize New Well Locations

For municipalities planning future water supplies, deciding to develop groundwater is only part of the challenge. The bigger question is where to drill.

El Paso Water is a municipally owned water utility that serves the city of El Paso, Texas (population 683,000). The utility engaged AquaterreX to evaluate groundwater opportunities in Hudspeth County, Texas, and help identify promising locations for future well development. What began as an initial groundwater assessment expanded into a multi-phase engagement.

THE CHALLENGE

El Paso Water was evaluating potential groundwater resources within a large area of West Texas, which is an arid region with just 233 mm (9.17 inches) average annual precipitation.

Exploratory drilling can require a significant investment and every unsuccessful or underperforming well adds cost, time and uncertainty.

El Paso Water wanted more precise information about where promising groundwater resources were located before making future drilling decisions. The city needed to expand its water supplies to meet growing demand. In addition, water supply from the nearby Rio Grande River on the city's border with Ciudad Juarez in Mexico presented potential future supply challenges.



Map showing El Paso, Ciudad Juarez, the Rio Grande and Hudspeth County.

NARROWING THE SEARCH

AquaterreX began by evaluating the project area to identify the locations with the greatest potential for groundwater.

The initial work helped narrow a broad search area into specific Areas of Interest for more detailed evaluation.

AquaterreX then conducted additional analysis and field surveys using patented instrumentation and proprietary computer algorithms to identify recommended wellbore locations and provide El Paso Water with greater insight into groundwater availability.

The objective: give El Paso Water better information before the drilling begins.

RESULTS

AquaterreX identified four Areas of Interest in the initial Phase I analysis, then located 13 potential wellbore locations with the following data for each:

- GPS coordinates of each potential wellbore
- Estimated depth to groundwater, both shallow and deep
- Identification and thickness of the water-bearing zones
- Projected flow rates in liters/second or gallons/minute
- General water quality and salinity indicators
- Supporting technical information to help guide drilling decisions

PROJECT RESULTS	
Areas evaluated:	4
Recommended drilling locations identified:	13
Projected groundwater depth:	Average: 1,138 feet (347 meters)
Depth Range:	650-2700 feet (198-823 meters)
Projected flow/production per well:	Average: 469 gallons per minute (29.6 liters/second)

A PROJECT THAT KEPT EXPANDING

The strongest indication of the value El Paso Water saw in the work may be what happened next.

Following successful completion of the first four Areas of Interest, El Paso Water authorized additional on-site work to evaluate additional areas and pinpoint optimal wellbore locations.

El Paso Water authorized AquaterreX to evaluate five additional Areas of Interest to identify additional wellbore locations.

In approving the continued work, El Paso Water cited AquaterreX's "successful prior performance," proprietary technology and understanding of the utility's hydrogeologic priorities.

EL PASO WATER ASKED AQUATERREX TO KEEP GOING.

Rather than ending after the initial assessment, El Paso Water continued expanding the scope of AquaterreX's work.

For other municipalities, that multi-phase engagement demonstrates how groundwater exploration can move from a large area of uncertainty to a smaller number of specific, actionable drilling targets.

BETTER INFORMATION BEFORE A MAJOR DRILLING INVESTMENT

AquaterreX helps municipalities identify prospective groundwater resources and determine where drilling has the greatest potential for success.

For cities looking to develop new municipal wells, supplement existing supplies, replace declining wells or strengthen long-term water resiliency, the first step may be understanding what groundwater resources are actually available.

KNOW MORE BEFORE YOU DRILL.

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