**Structural Cross-section of Dip Line Z**

Salinity class and lithology interpretations for the Yegua, Sparta, Queen City, Carrizo, and Wilcox aquifers, Central Texas

The aquifers mapped by the Brackish Resources Aquifer Characterization System (BRACS) team at the Texas Water Development Board (TWDB) in Brackish Groundwater in Aquifers of the Upper Coastal Plains, Central Texas (Meyer and others 2020), are the Wilcox, Carrizo, Queen City, Sparta, and Yegua aquifers (listed oldest to youngest). The team mapped these aquifers in all or parts of 14 counties (Ascencia, Bastrop, Bee, Caldwell, Davi, Fayette, Gonzales, Guadalupe, Karnes, Llano, Llano Oak, Williamson, and Wilson counties), five regional groundwater planning areas (G, K, L, P, and N), and nine groundwater conservation districts.

BRACS studies provide Texas with an estimate of the location and quantity of brackish groundwater, as groundwater salinity is an important parameter for desalination. Groundwater salinity is measured as total dissolved solids (TDS), which is the sum of all ions dissolved in water (major ion components). Groundwater salinity is described as:

- Saline or brackish (3,000-9,999 mg/L TDS) - mainly due to calcium sulfate or magnesium bicarbonate carbonate dissolution
- Moderately saline (10,000-29,999 mg/L TDS)
- Very saline (30,000-39,999 mg/L TDS)
- Extremely saline (40,000-49,999 mg/L TDS)
- Brine (50,000 and greater mg/L TDS)
- Fresh (0-999 mg/L TDS)

The upper two-thirds of the Wilcox Group in well 14407 is significantly less saline than other Wilcox wells on this cross-section. This well intersects the Yegua Canyon, which is a significant, saline-shale feature in the upper middle Wilcox, from Bastrop to Llano counties. Read more information about the Yegua Canyon in the report.

Additional information and cross-sections from Brackish Groundwater in Aquifers of the Upper Coastal Plains, Central (Texas Meyer and others, 2020) are available to download from the study’s website.

**References**


TWDB (Texas Water Development Board). 2019a. BRACS Database. Texas Water Development Board.
