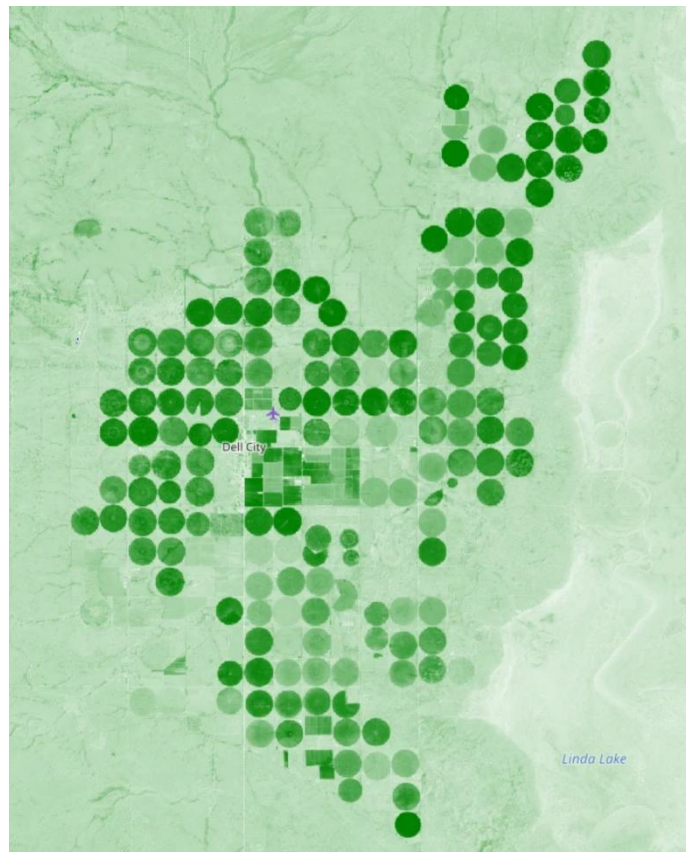


2023 - 2024 Average and Long-Term Average Decline in
Water Elevation for Portions of the Bone Spring-Victorio
Peak Aquifer within Hudspeth County Underground
Water Conservation District No. 1



Prepared for the
Hudspeth County Underground Water
Conservation District No. 1
Dell City, Texas
August 10, 2026

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A handwritten signature in black ink, appearing to read "Allie Blair".

1. Introduction

As requested by the Hudspeth County Underground Water Conservation District No. 1 (the District) this report was prepared in accordance with generally recognized engineering principles, practice, and methods and documents the groundwater elevation measurements made by District staff and Texas Water Development Board members during the years 2023 and 2024. The image on the cover page is a NDWI Sentinel 2 L2A image for August 10, 2026.

2. HCUWCD Well Number 1 – TWDB Well No. 48-07-516

Both TWDB and HCUWCD have separate water level recorders installed in TWDB Well No. 48-07-516. TWDB has maintained a continuous water-level recorder for this well since approximately 1966. Figure 1 shows the daily water level measurements from 1966 through August 2026. The recorder was not operating from 6/10/2021 through 2/16/2022 and from 6/22/2022 through 9/25/2022.

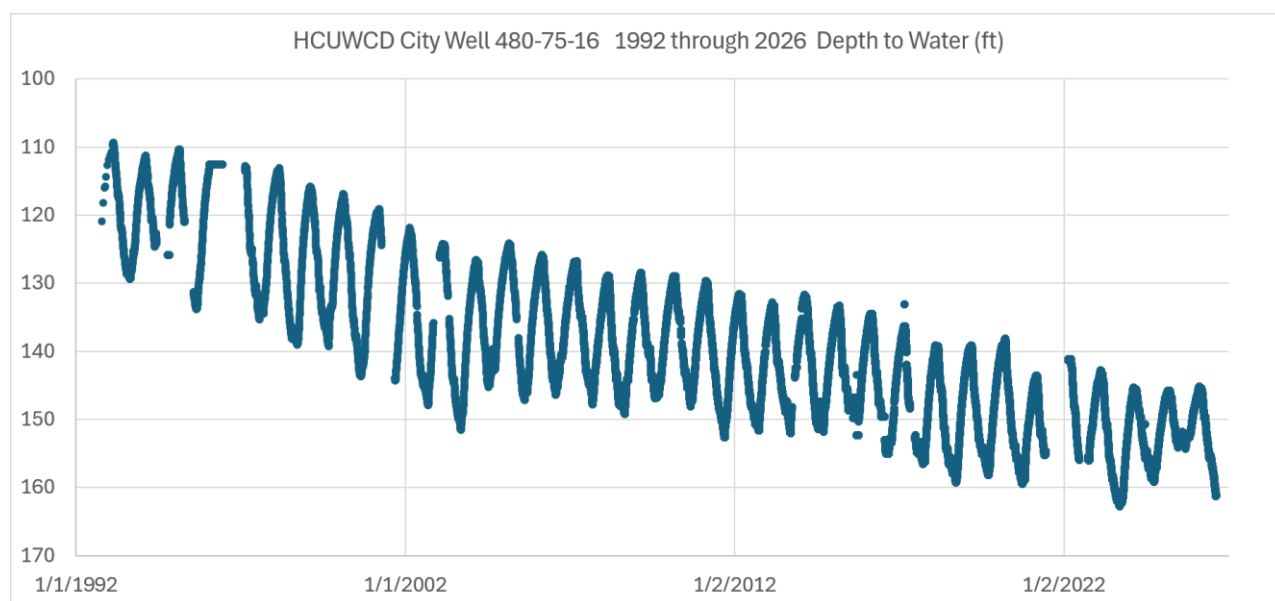


Figure 1 – HCUWCD No. 1 Continuous Record of Water Level (City Well)

3. Determination of Average Water Level

Table 1 below shows the two-year average groundwater elevations for the years 2023 and 2024 as determined in accordance with Section 3.5(a) of the District’s rules, “Water Allocations Determinations for In-District Irrigation Use”. Section 3.5(a) states:

3.5(a) The 2 year monthly moving average of the water surface elevation measured in feet above mean sea level (U.S. Dept. of Commerce, National Geodetic Vertical Datum of 1929) as measured in the monitoring well identified by the Texas Water Development Board as Well No. 48-07-516 and located within the District (the “Average Water Elevation”) shall be determined by the Board by January 31st of each odd year using the 24-month period ending on the previous December 31st. The Average Water Elevation shall be calculated according to the procedures of Section 3.6 of these Rules. The initial Average Water Elevation shall be determined by the Board by January 31, 2003.

The “Average Water Elevation” for 2023/2024 is 3,548.9 feet (MSE). Section 3.5(c)(3) of the District’s rules, “Water Allocations Determinations for In-District Irrigation Use ” applies. Section 3.5(c)(3) states:

3.5(c)(3) In the event that the Average Water Elevation is equal to or less than 3570.0 feet but greater than or equal to 3560.0 feet, the District by resolution may establish a Water Allocation on a pro-rata basis between 4.0 and 3.0 acre-feet per acre for all Validation Permits of Existing and Historic Use for in-District irrigation of an Agricultural Crop. For uses other than irrigation, the Water Allocation shall be a pro-rata reduction of the amount of groundwater authorized for production or withdrawal by Validation Permits of Existing and Historic Use for other than irrigation use by the same percentage amount the Validation Permits of Existing and Historic Use for irrigation of an Agricultural Crop are reduced below the amount stated in Section 3.5(c)(1) of these Rules.

The Water Allocation for 2023 and 2024 is 3.0 acre-feet per acre.

Table 1: Monthly Depths to Water in City Well

4.

City Well 48-07-516, Hudspeth County (elevation in feet above MSL)				
Date	AMWE Depth ft	Datum ft	Monthly Elevation	Avg. Annual Elevation
Jan-23	144.5	3702.0	3557.5	
Feb-23	143.4	3702.0	3558.6	
Mar-23	145.2	3702.0	3556.8	
Apr-23	150.4	3702.0	3551.6	
May-23	154.6	3702.0	3547.4	
Jun-23	157.8	3702.0	3544.2	
Jul-23	159.9	3702.0	3542.1	
Aug-23	161.4	3702.0	3540.6	
Sep-23	161.9	3702.0	3540.1	
Oct-23	161.0	3702.0	3541.0	
Nov-23	155.7	3702.0	3546.3	
Dec-23	151.2	3702.0	3550.8	3548.1
Jan-24	147.7	3702.0	3554.3	
Feb-24	145.7	3702.0	3556.3	
Mar-24	146.3	3702.0	3555.7	
Apr-24	148.9	3702.0	3553.1	
May-24	151.9	3702.0	3550.1	
Jun-24	154.8	3702.0	3547.2	
Jul-24	156.0	3702.0	3546.0	
Aug-24	157.2	3702.0	3544.8	
Sep-24	158.0	3702.0	3544.0	
Oct-24	157.2	3702.0	3544.8	
Nov-24	153.8	3702.0	3548.2	
Dec-24	150.7	3702.0	3551.3	3549.7
Average Water Elevation 2023-2024	153.1	3702.0	3548.9	

Long Term Average Decline in Water Levels and Recommended DFC

Figure 2 below shows the decline in water levels (increase in depth to water) from 2005 through 2006 for the City Well measurements made in early February of each year, which average 1.02 feet per year. Figure 3 shows a decline in average annual depth-to-water measurements of 0.9 feet per year.

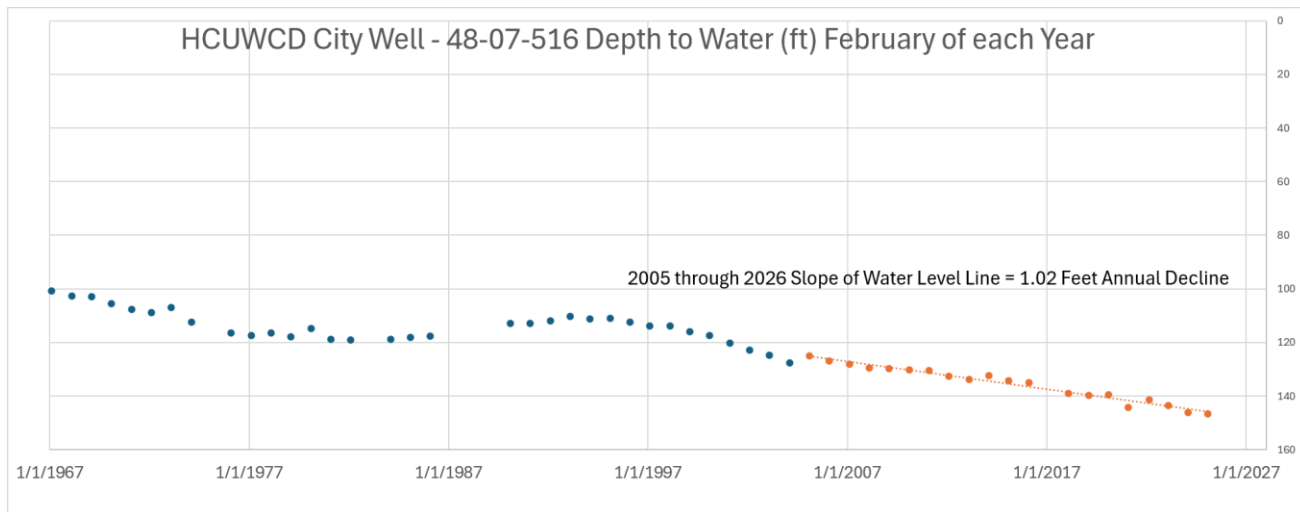


Figure 2: Average Rate of Decline in Water Levels in City Well for February 2005-2026

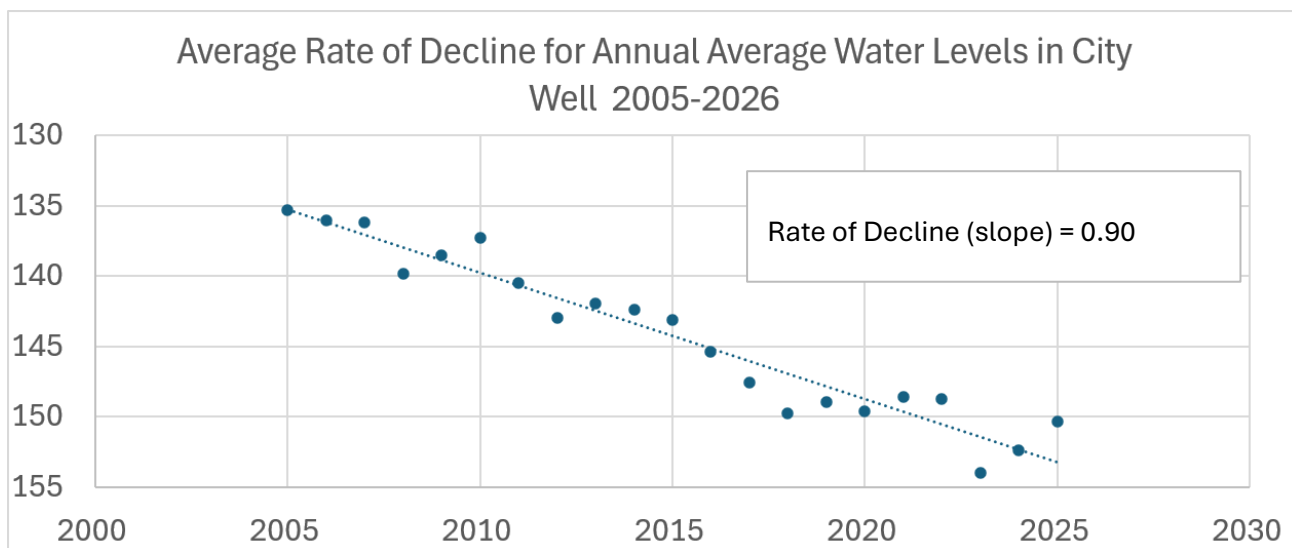


Figure 3: Average Rate of Decline for Annual Average Water Levels in City Well 2005-2026

Table 2 shows that the rate of decline in water levels measured during the late winter months (when pumping is at a minimum) from 2014 through 2026 is 1.01 feet per year. The wells in Table 2 are located throughout the high production zone within the District. The rate of change for the City Well (monthly values from 2005 through 2025)

Table 2: Measured Depth to Water in Well Located in High Production Zone in District

	Measured Depth (ft) to Water During Late Winter												Rate of Decline
Well ID	3/6/2014	2/25/2015	2/24/2016	2/28/2017	2/15/2018	2/5/2019	2/14/2020	2/16/2022	1/10/2023	1/24/2024	1/15/2025	2/2/2026	ft/yr
4815301	74.52	75.3	76.82	78.15	80	80.75	80.33	86.3	84.97	87.35	88.24	86.38	0.99
4807904		77.75	79.15	80.15	82.39	82.83	82.79	86.73	88.34	90.16	89.8	88.29	0.96
4807803	114.5	114.73	115.79	117.91	121.36	118.71	119.02	122.94	122.97	126.01			1.15
4807607	70.5	70.55	75.76	75.89	81.64	77.3	77.54	81.6	83.58	85.79	88.09	83.97	1.12
4807606	81.6	78.8	80.01	81.12	85.65	85.3	85.6	89.63	90.29	92.28	93.51	91.56	0.83
													1.01

5. Recommended DFC based on Measured Long-Term Declines in Water Levels

Table 3 shows the DFC drawdown for 2025 through 2080 based on the measured long-term average rate of decline of 1 foot per year for the Rule 3.5 Well (City Well).

Table 3: Depth to Water, Water Elevation, and Drawdown for City Well DFC 2025 - 2080

City Well Annual Averages	2025	2030	2040	2050	2060	2070	2080
Depth to Water (ft)	150	155	165	175	185	195	205
Water Elevation (ft, MSLE)	3552	3547	3537	3527	3517	3507	3497
Drawdown (ft since 2025)	0	5	15	25	35	45	55