



## TECHNICAL MEMORANDUM

# San Antonio Creek Valley Groundwater Basin Quarterly Groundwater Level Monitoring – First Quarter 2025

**To:** Stephanie Bertoux, Executive Director, San Antonio Basin Groundwater Sustainability Agency

**From:** Amanda Webb, PG, Michael McAlpin, PG, & David O'Rourke, PG, CHG, PE, GSI Water Solutions, Inc.

**Attachments:** Tables:  
Table 1. First Quarter 2025 Groundwater Level Measurements – Depth to Water  
Table 2. First Quarter 2025 Groundwater Level Measurements – Groundwater Elevation  
  
Figure:  
Figure 1. Wells Included in the San Antonio Creek Valley Groundwater Basin Groundwater Monitoring Network

**Date:** March 14, 2025

## Introduction

On behalf of the San Antonio Basin Groundwater Sustainability Agency (SABGSA), GSI Water Solutions, Inc. (GSI) completed the first quarter 2025 (1Q2025) San Antonio Creek Valley Groundwater Basin (Basin) groundwater level monitoring event (monitoring event) on February 25<sup>th</sup> and 26<sup>th</sup>, 2025. Prior to each quarterly monitoring event, GSI contacts well owners/property managers to coordinate access to the wells and request that wells be shut off for at least 8 hours before the monitoring event so that a static measurement can be obtained. Well owners/property managers were notified on February 11<sup>th</sup>, 2025.

GSI was able to successfully measure depth to water in 38 of the 42 wells that have secured access agreements during the monitoring event. Tables 1 and 2 provide the status of current well access agreements, and Figure 1 displays the well locations. The following text and tables summarize the results of the 1Q2025 monitoring event.

## 1Q2025 Water Level Monitoring Event Summary

The attached tables summarize the results of the Basin 1Q2025 monitoring event for the wells in the Basin Groundwater Level Monitoring Network (Monitoring Network). Depth-to-water measurements and calculated groundwater elevations for all wells that were able to be accessed during the monitoring event are included in Table 1 and Table 2, respectively. Wells identified as Representative Monitoring Sites (RMSs) in the Basin's Groundwater Sustainability Plan (GSP) are identified in Table 2 and denoted with the respective RMS's sustainable management criteria (i.e., minimum threshold and measurable objective). The following is a summary of observations from the 1Q2025 monitoring event:

- Wells with an active well access agreement that did not have a groundwater level measurement collected during the 1Q2025 monitoring event included 2M1, 2N1, 34P1, and SAHG.

- No water level measurement was collected from 2M1 due to the risk of the sounder becoming stuck in the well. Historically, the sounder has gotten stuck in the well during monitoring. Groundwater level monitoring at 2M1 has been halted pending the installation of a sounding tube. A water level measurement at 2M1 was last recorded during the 1Q2022 monitoring event. Installation of a sounding tube at 2M1 has been evaluated, however installation costs may preclude completion of the work. Therefore, 14L1 is being evaluated as a replacement RMS well for 2M1 due to their locations within Harris Canyon, consistent water levels, and water level trends.
- No water level measurement was collected from 2N1 at the request of Premiere Coastal Vineyards. A water level measurement at 2N1 was last recorded during the 1Q2024 monitoring event. Groundwater level monitoring at 2N1 is planned to resume during the Basin 2Q2025 monitoring event.
- A water level measurement at 34P1 was last recorded during the 4Q2023 monitoring event. An obstruction or collapse has since been encountered at approximately 72 feet below the RPE. Based on historical water levels, the well casing is suspected to have collapsed. Consequently, 34P1 will be removed from the Basin Monitoring Network and a replacement RMS is being evaluated by the SABGSA.
- A manual water level measurement was collected from SAHG, however the data point was lost due to a complete equipment failure. The water level measurement was stored on a laptop that was used to download continuous data recording pressure transducer (transducer) data. The laptop failed during the monitoring event and all stored data was lost and was unable to be recovered. Water level data that was downloaded from the transducer is still stored on the transducer and will be downloaded during the 2Q2025 monitoring event along with a manual water level measurement.
- A groundwater measurement was collected at Char 1, however, the well had recently been pumping earlier that morning. Consequently, the groundwater level measurement may not be representative of static aquifer conditions.
- The transducers that were installed during the 4Q2024 monitoring event at 13C1, 22K3, SACR 3, 14L1, and 16G3 recorded partial data. It was determined that the water column above the transducers exceeded the detectable range (i.e., the water column above the transducer created a pressure greater than the transducer could measure). To resolve this, all transducer cables were adjusted to raise the transducers back within the units detection range.
- Vegetation trimming along well access paths located near Barka Slough was completed during the 1Q2025 monitoring event.

## Recommendations

- Consider maintenance on the Mesa Vineyard well to remove rusty material and oil from the water column. The water level reading device becomes coated in either rust or oil when lowered into the well, occasionally blocking the sensor and preventing an accurate water level measurement.
- Perform a RPE Survey for the wells in the Monitoring Network that do not meet the Sustainable Groundwater Management Act (SGMA) well elevation accuracy requirements.
- Perform video survey inspections of the wells in the Monitoring Network with unknown well construction information (total depth and screened intervals).
- Continue public outreach to Basin stakeholders to expand participation in the Monitoring Network.
- Collaborate with Central Coast Water Quality Preservation, Inc. to request and share existing Irrigated Lands Regulatory Program well information.
- Review SABGSA Well Registration Program data to identify existing candidate wells to incorporate into the Monitoring Network.

- Continue to perform routine vegetation trimming for access routes to all wells located in the Barka Slough area, including SAHC located to the north of the Slough and to the west of Highway 135.

Table 1. First Quarter 2025 Groundwater Level Measurements – Depth to Water

State Well Number	Site Name	Well Type	Water Level Measurement Frequency/Type	Area	Total Depth (feet bgs)	Aquifer of Completion	DTW on 3/10/22 and 3/11/22	DTW on 6/21/22 and 6/22/22	DTW on 9/15/22 and 9/16/22	DTW on 12/14/22 and 12/15/22	DTW on 3/15/23, 3/16/23 and 3/23/23	DTW on 6/20/23, 6/21/23 and 6/28/23	DTW on 9/12/23 and 9/13/23	DTW on 12/12/23 and 12/13/23	DTW on 2/27/24 and 2/28/24	DTW on 6/4/24 and 6/5/24	DTW on 8/27/24 and 8/28/24	DTW on 11/26/24 and 11/27/24	DTW on 2/25/25 and 2/26/25	Notes on 2/25/25 and 2/26/25
009N034W34N002S	SAHC	Monitoring	Continuous/Transducer	West San Antonio Basin	90	Careaga Sand	73.79	73.93	74.07	74.20	74.43	74.34	74.06	73.86	73.52	73.06	72.54	71.78	71.05	
008N034W21A002S	SASA	Monitoring	Continuous/Transducer	West San Antonio Basin	65	Careaga Sand	45.85	46.19	46.98	47.33	46.37	44.82	45.39	46.25	45.59	43.54	44.47	45.46	45.54	
008N034W14L002S	SAGR	Monitoring	Continuous/Transducer	West San Antonio Basin	90	Paso Robles Formation	62.89	64.50	66.88	65.72	64.18	62.18	62.31	61.81	60.62	60.13	61.30	61.41	61.16	
008N034W23H001S	SAHG	Monitoring	Continuous/Transducer	West San Antonio Basin	75	Paso Robles Formation	43.12	41.42	41.71	40.80	27.74	27.99	30.60	33.22	30.09	29.55	29.83	32.70	--	Equipment failure, 1Q2025 data point to be reported 2Q2025.
008N033W22G001S	SALS	Monitoring	Continuous/Transducer	Central San Antonio Basin	70	Paso Robles Formation	39.50	39.44	39.34	39.69	31.15	29.29	28.64	29.83	26.88	26.17	27.96	29.63	30.39	
008N032W29L004S	SALA	Monitoring	Continuous/Transducer	Central San Antonio Basin	90	Paso Robles Formation	48.95	49.25	49.85	50.46	27.96	26.79	32.32	36.12	25.85	26.79	32.01	35.15	37.60	
008N033W19K002S	SACR 1	Monitoring	Continuous/Transducer	West San Antonio Basin	690	Careaga Sand	46.25	51.05	54.90	47.50	--	47.90	53.74	48.68	48.68	49.17	54.06	49.98	47.54	
008N033W19K003S	SACR 2	Monitoring	Quarterly/Discrete	West San Antonio Basin	540	Paso Robles Formation	78.76	81.30	83.33	72.58	--	77.38	79.39	73.10	72.08	75.67	84.68	73.11	72.46	
008N033W19K004S	SACR 3	Monitoring	Continuous/Transducer	West San Antonio Basin	350	Paso Robles Formation	102.25	119.95	122.83	99.33	--	110.41	117.35	99.95	95.83	103.84	117.91	99.86	97.52	
008N033W19K005S	SACR 4	Monitoring	Quarterly/Discrete	West San Antonio Basin	220	Paso Robles Formation	94.07	95.70	97.73	96.15	--	90.53	91.87	92.38	91.58	91.51	93.26	93.18	93.04	
008N033W19K006S	SACR 5	Monitoring	Quarterly/Discrete	West San Antonio Basin	110	Paso Robles Formation	99.68	99.98	100.47	100.87	95.86	91.91	94.34	95.62	96.16	95.74	97.06	98.61	98.47	
008N032W19M001S	SACC 1	Monitoring	Continuous/Transducer	Central San Antonio Basin	980	Paso Robles Formation	235.35	236.20	241.70	220.97	214.99	224.04	232.96	222.72	214.81	224.72	232.65	223.95	226.01	
008N032W19M002S	SACC 2	Monitoring	Quarterly/Discrete	Central San Antonio Basin	720	Paso Robles Formation	217.05	217.45	222.83	215.17	210.04	212.87	219.52	214.50	208.10	211.82	218.35	218.17	214.92	
008N032W19M003S	SACC 3	Monitoring	Quarterly/Discrete	Central San Antonio Basin	530	Paso Robles Formation	219.40	220.10	223.35	213.49	208.65	213.21	219.74	213.49	206.69	214.97	218.65	217.62	218.10	
008N032W19M004S	SACC 4	Monitoring	Quarterly/Discrete	Central San Antonio Basin	325	Paso Robles Formation	173.70	175.70	177.90	175.98	172.58	174.52	177.45	176.87	173.61	174.46	176.76	177.42	176.34	
008N032W19M005S	SACC 5	Monitoring	Quarterly/Discrete	Central San Antonio Basin	120	Paso Robles Formation	107.10	107.05	107.30	107.20	107.01	106.94	106.50	105.82	105.66	105.08	104.95	104.84	104.54	
008N034W02M001S	2M1	Irrigation	Quarterly/Discrete	West San Antonio Basin	750	Paso Robles Formation	154.55	--	--	--	--	--	--	--	--	--	--	--	--	Monitoring discontinued due to risk of stuck sounder.
--	White Hawk 1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	560	Careaga Sand	112.73	125.50	126.50	125.10	123.96	123.96	124.58	123.29	122.81	122.32	122.78	122.09	121.37	
--	White Hawk 4a	Irrigation	Quarterly/Discrete	Central San Antonio Basin	--	Careaga Sand	--	--	--	--	--	--	--	--	--	93.61	94.48	93.12	92.48	White Hawk 4 replacement well.
--	Mesa Vineyard	Irrigation	Quarterly/Discrete	Central San Antonio Basin	--	Careaga Sand	218.80	219.50	220.50	216.10	215.85	--	219.17	216.91	214.89	215.50	216.23	217.19	215.61	Oil in well column.
008N033W02N001S	2N1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	980	Careaga Sand	227.10	226.20	228.00	225.50	--	224.23	228.06	224.33	222.20	--	--	--	--	
008N033W02R001S	2R1	Domestic	Quarterly/Discrete	Central San Antonio Basin	370	Careaga Sand	118.75	173.55	120.50	120.45	120.30	120.61	120.94	121.02	121.48	123.06	122.25	122.46	122.06	
--	Well 4	Irrigation	Quarterly/Discrete	Central San Antonio Basin	1,000	Careaga Sand	--	--	--	--	--	--	--	122.50	122.29	122.01	--	--	124.16	
008N033W10	4-Deer Field	Irrigation	Quarterly/Discrete	Central San Antonio Basin	490	Careaga Sand	27.09	65.90	68.00	28.61	25.59	27.53	30.39	29.48	26.75	27.02	35.41	29.44	28.46	
008N033W03L001S	4-Deer Highway	Irrigation	Quarterly/Discrete	Central San Antonio Basin	349	Careaga Sand	96.10	96.59	98.10	96.11	94.82	98.01	98.79	97.63	95.02	96.07	98.78	97.40	95.80	
--	Schaff Well	Monitoring	Quarterly/Discrete	Central San Antonio Basin	669	Careaga Sand	216.76	217.24	217.90	218.05	218.24	218.29	218.97	219.15	219.12	219.40	220.00	220.26	220.52	
008N034W14L001S	14L1	Monitoring	Continuous/Transducer	West San Antonio Basin	593	Careaga Sand	68.12	71.18	73.70	69.95	68.24	70.85	74.84	72.16	69.04	70.22	73.37	70.55	69.94	
009N034W34P001S	34P1	Monitoring	Quarterly/Discrete	West San Antonio Basin	223	Careaga Sand	72.66	71.85	70.80	70.15	66.50	--	67.65	66.19	--	--	--	--	--	Obstruction or collapse encountered at 72 feet below RPE. Water level not recorded. Monitoring expected to resume 2Q2025.
008N034W17Q001S	17Q1	Monitoring	Quarterly/Discrete	West San Antonio Basin	48	Careaga Sand	14.80	15.40	--	--	13.31	13.72	14.80	15.21	12.96	13.20	14.32	14.80	14.57	
008N034W21A001S	21A1	Monitoring	Quarterly/Discrete	West San Antonio Basin	271	Careaga Sand	36.93	37.80	38.75	38.83	37.70	37.40	38.62	38.88	37.77	37.51	38.12	38.61	38.24	
008N034W17K002S	17K2	Monitoring	Quarterly/Discrete	West San Antonio Basin	60	Careaga Sand	6.98	7.13	7.30	7.40	7.38	7.30	7.31	7.31	7.33	--	7.25	7.26	7.31	
008N034W17E001S	17E1	Monitoring	Quarterly/Discrete	West San Antonio Basin	89	Careaga Sand	22.20	22.28	22.35	22.38	19.72	19.44	20.26	20.67	19.42	18.80	19.96	20.39	20.45	
008N034W16C002S	16C2	Monitoring	Continuous/Transducer	West San Antonio Basin	169	Careaga Sand	87.76	74.72	94.03	87.72	92.73	82.20	91.43	84.44	81.70	81.02	81.33	83.45	80.83	
008N034W16C004S	16C4	Monitoring	Continuous/Transducer	West San Antonio Basin	560	Careaga Sand	74.66	87.21	79.63	75.30	78.30	74.79	78.03	73.70	71.79	71.43	71.82	72.67	72.82	
008N034W17H001S	17H1	Monitoring	Quarterly/Discrete	West San Antonio Basin	61	Careaga Sand	16.97	17.81	18.81	18.90	13.24	13.94	15.65	16.43	13.19	14.33	15.59	16.61	16.58	
008N034W16F001S	16F1	Monitoring	Quarterly/Discrete	West San Antonio Basin	58	Careaga Sand	40.34	43.83	46.30	45.47	45.09	38.45	43.17	41.39	38.03	36.47	35.91	38.86	35.14	
008N034W16G003S	16G3	Monitoring	Continuous/Transducer	West San Antonio Basin	56	Careaga Sand	49.86	50.52	51.17	51.85	52.36	52.47	52.40	52.65	52.70	52.54	52.36	52.28	52.17	
008N033W13C001S	13C1	Irrigation	Continuous/Transducer	Central San Antonio Basin	1,070	Careaga Sand	188.90	190.20	188.00	187.30	--	188.40	186.08	185.94	185.39	184.99	185.58	185.75	185.10	
008N033W07	Stephen's Well	Irrigation	Quarterly/Discrete	West San Antonio Basin	590	Careaga Sand	341.04	339.88	343.35	339.88	--	342.19	381.46	379.15	343.34	343.34	349.12	--	343.34	Measured with airline.
008N033W22K003S	22K3	Irrigation	Continuous/Transducer	Central San Antonio Basin	250	Paso Robles Formation	--	--	--	--	--	79.65	82.59	79.45	78.91	76.90	75.82	73.87	71.24	
008N033W13Q001S	13Q1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	295	Paso Robles Formation	--	--	--	--	--	--	--	--	116.71	112.13	113.82	112.55	112.32	
--	Char 1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	330	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	99.03	96.72	Measured with airline. Well was recently pumping.
008N032W30D001S	30D1	Monitoring	--	Central San Antonio Basin	895	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N032W25D001S	25D1	Irrigation	--	East San Antonio Basin	700	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N031W22J001S	22J1	Unknown	--	East San Antonio Basin	--	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N031W22N001S	22N1	Unknown	--	East San Antonio Basin	175	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N031W22M001S	22M1	Unknown	--	East San Antonio Basin	--	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N034W24E001S	24E1	Monitoring	--	West San Antonio Basin	--	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N033W20Q002S	20Q2	Irrigation	--	West San Antonio Basin	--	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	--	--	
--	VERNAS 1	Unknown	--	Central San Antonio Basin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
--	VERNAS 2	Unknown	--	Central San Antonio Basin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
--	HWY 101 CATTLE	Unknown	--	East San Antonio Basin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N032W27P003S	GUZMAN 2	Unknown	--	East San Antonio Basin	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N032W30E005S	30E5	Unknown	--	Central San Antonio Basin	1,001	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N033W25B005S	25B5	Unknown	--	Central San Antonio Basin	100	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N032W28P004S	28P4	Unknown	--	East San Antonio Basin	524	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N034W36R	Careaga Lease	Unknown	--	West San Antonio Basin	284	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	
008N32W17N001S	White Hawk 4	Irrigation	Quarterly/Discrete	Central San Antonio Basin	820	Careaga Sand	97.90	100.55	101.20	98.50	98.00	98.77	98.97	--	--	--	--	--	--	Well Destroyed December 2023
009N034W27L001S	27L1	Unknown	--	West San Antonio Basin	405	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	--	Well Destroyed March 2021

Notes:	Green highlighted cells indicate well access agreement has been acquired
	Yellow highlighted cells indicate well access agreement is pending
	Red highlighted cells indicate well access denied
	Gray highlighted cells indicate well access not applicable

bgs = below ground surface  
DTW = Depth to Water (feet below reference point elevation)  
-- = unknown or not applicable



**FIGURE 1**  
**Wells Included in the**  
**San Antonio Creek Valley**  
**Groundwater Basin**  
**Groundwater Level Monitoring**  
**Network**

San Antonio Creek Valley  
 Groundwater Basin Quarterly  
 Groundwater Level Monitoring

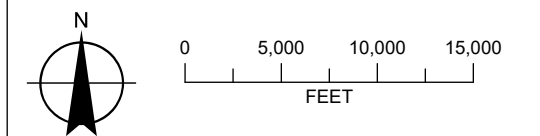
First Quarter 2025

**LEGEND**

- Representative Well
- All Other Features**
- San Antonio Creek Valley Groundwater Basin
- Barka Slough
- City Boundary
- Major Road
- ~ San Antonio Creek or Tributary
- Wells (by screened aquifer)**
- Screened Aquifer**
- Paso Robles Formation
- Careaga Sand

**NOTES**

1. SACR 1 and 14L1 are screened in the Careaga Sand.
2. White Hawk 4 was destroyed in December 2023. Replacement well White Hawk 4a was constructed and completed in June 2024.



Date: March 13, 2025  
 Data Sources: USGS, ESRI, DWR,  
 Maxar Imagery (4/10/2024)

