TECHNICAL MEMORANDUM

San Antonio Creek Valley Groundwater Basin Quarterly Groundwater Level Monitoring – First Quarter 2024

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

From: Michael McAlpin, GSI Water Solutions, Inc.
Sydney Robertson, GSI Water Solutions, Inc.
David O'Rourke, GSI Water Solutions, Inc.

Attachments: Tables:
Table 1. First Quarter 2024 Groundwater Level Measurements – Depth to Water
Table 2. First Quarter 2024 Groundwater Level Measurements – Groundwater Elevation

Figure:
Figure 1. Wells Included in the San Antonio Creek Valley Groundwater Basin Groundwater Monitoring Network

Date: March 14, 2024

Introduction

On behalf of the San Antonio Basin Groundwater Sustainability Agency (SABGSA), GSI Water Solutions, Inc. (GSI) completed the first quarter 2024 (1Q2024) San Antonio Creek Valley Groundwater Basin (Basin) groundwater level monitoring event (monitoring event) on February 27th and 28th, 2024. 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 13th, 2024.

GSI was able to successfully measure depth to water in all but three of the 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 1Q2024 monitoring event.

1Q2024 Water Level Monitoring Event Summary

The attached tables summarize the results of the Basin 1Q2024 monitoring event for the wells in the Basin Groundwater Level Monitoring Network (Monitoring Network). The tables include the status of current well access agreements, depth to water measurements, and calculated groundwater elevations for all wells that were able to be accessed during the monitoring event. 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 1Q2024 monitoring event:

- The only wells with an active well access agreement that did not have a groundwater level measurement collected during the 1Q2024 monitoring event were 2M1, White Hawk 4, and 34P1.
  - No water level measurement was collected from well 2M1 due to the risk of the sounder becoming stuck in the well. Groundwater level monitoring at well 2M1 is planned to resume pending the installation of a sounding tube.
  - The SABGSA received a Well Verification Request for a proposed replacement water well in July 2023. The SABGSA verified the proposed well was consistent with the SABGSA's Well Verification Policy. The well to be replaced was determined to be White Hawk 4. During the 4Q2023 monitoring event, White Hawk 4 was observed being destroyed as required by the Well Verification Policy. Therefore, no water level measurement was able to be collected.
  - No water level measurement was collected from well 34P1 due to an obstruction or collapse encountered at approximately 72 feet below the reference point elevation (RPE) during the water level measurement attempt.
- At 2N1, which is outfitted with a turbine pump with an oil-lubricated shaft, a layer of suspected lubrication oil was discovered residing on the top of the water in the well. Deep well turbines with oil-lubricated shafts commonly leak oil, which subsequently accumulates on the water surface. Consequently, use of a typical water level sounding device is problematic because the oil tends to coat the devices sensor when passing through the oil. This situation can preclude obtaining a reliable water level measurement.
- The continuous data recording pressure transducer (transducer) that is located in well 16C4 was discovered to have a malfunctioning data cable during the 4Q2023 event. The data cable was replaced during the 1Q2024 event and all water level data to date has been downloaded and analyzed.
- The water level reading device, that could not be retrieved from well 2R1 after the recording of a water level measurement during the 4Q2023 event, was recovered and a water level measurement was recorded during the 1Q2024 monitoring event.
- 13Q1 was added to the SABGSA monitoring network and was included in the 1Q2024 monitoring event after securing an access agreement.

Recommendations

- Consider the installation of a sounding tube in well 2M1.
- Investigate the obstruction encountered in well 34P1.
- Perform well maintenance on wells 2N1 and Mesa Vineyard to clear observed rusty material and oil. 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.
- Consider the purchase and installation of additional transducers.
- Perform an RPE Survey for the wells included in the Basin Monitoring Network in accordance with the Sustainable Groundwater Management Act (SGMA) well elevation accuracy requirements.
- Perform well video surveys of wells included in the Basin Monitoring Network with outstanding well construction information (total depth and screened intervals).
- Pursue access agreement for the White Hawk 4 replacement well.
- Continue public outreach to Basin stakeholders to discuss participation in the Basin's Monitoring Network.
- Collaborate with Central Coast Water Quality Preservation, Inc. to share existing Irrigated Lands Regulatory Program well information.
- Review SABGSA Well Registration Program data to identify existing candidate wells to incorporate into the Basin Monitoring Network.

Table 1. First Quarter 2024 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 6/22/2021 and 6/23/2021	DTW on 9/14/2021 and 9/15/2021	DTW on 12/8/2021 and 12/9/2021	DTW on 3/10/2022 and 3/11/2022	DTW on 6/21/2022 and 6/22/2022	DTW on 9/15/2022 and 9/16/2022	DTW on 12/14/2022 and 12/15/2022	DTW on 3/15/23 3/16/23 and 3/23/23	DTW on 6/20/2023 6/21/2023 and 6/28/2023	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	Notes on 2/27/24 and 2/28/24
009N034W34N002S	SAHC	Monitoring	Continuous/Transducer	West San Antonio Basin	90	Careaga Sand	73.40	73.55	73.68	73.79	73.93	74.07	74.20	74.43	74.34	74.06	73.86	73.52	
008N034W21A002S	SASA	Monitoring	Continuous/Transducer	West San Antonio Basin	65	Careaga Sand	44.75	45.37	45.69	45.85	46.19	46.98	47.33	46.37	44.82	45.39	46.25	45.59	
008N034W14L002S	SAGR	Monitoring	Continuous/Transducer	West San Antonio Basin	90	Paso Robles Formation	62.06	63.68	63.25	62.89	64.50	66.88	65.72	64.18	62.18	62.31	61.81	60.62	
008N034W23H001S	SAHG	Monitoring	Continuous/Transducer	West San Antonio Basin	75	Paso Robles Formation	43.41	42.85	42.72	43.12	41.42	41.71	40.80	27.74	27.99	30.60	33.22	30.09	
008N033W22G001S	SALS	Monitoring	Continuous/Transducer	Central San Antonio Basin	70	Paso Robles Formation	39.04	38.73	39.73	39.50	39.44	39.34	39.69	31.15	29.29	28.64	29.83	26.88	
008N032W29L004S	SALA	Monitoring	Continuous/Transducer	Central San Antonio Basin	90	Paso Robles Formation	47.54	48.13	48.79	48.95	49.25	49.85	50.46	27.96	26.79	32.32	36.12	25.85	
008N033W19K002S	SACR 1	Monitoring	Continuous/Transducer	West San Antonio Basin	690	Careaga Sand	47.81	49.61	46.27	46.25	51.05	54.90	47.50	--	47.90	53.74	48.68	48.68	
008N033W19K003S	SACR 2	Monitoring	Quarterly/Discrete	West San Antonio Basin	540	Paso Robles Formation	81.41	76.58	75.51	78.76	81.30	83.33	72.58	--	77.38	79.39	73.10	72.08	
008N033W19K004S	SACR 3	Monitoring	Quarterly/Discrete	West San Antonio Basin	350	Paso Robles Formation	119.19	113.90	99.00	102.25	119.95	122.83	99.33	--	110.41	117.35	99.95	95.83	
008N033W19K005S	SACR 4	Monitoring	Quarterly/Discrete	West San Antonio Basin	220	Paso Robles Formation	96.07	95.93	94.72	94.07	95.70	97.73	96.15	--	90.53	91.87	92.38	91.58	
008N033W19K006S	SACR 5	Monitoring	Quarterly/Discrete	West San Antonio Basin	110	Paso Robles Formation	99.75	100.49	100.30	99.68	99.98	100.47	100.87	95.86	91.91	94.34	95.62	96.16	
008N032W19M001S	SACC 1	Monitoring	Continuous/Transducer	Central San Antonio Basin	980	Paso Robles Formation	227.45	237.35	229.72	235.35	236.20	241.70	220.97	214.99	224.04	232.96	222.72	214.81	
008N032W19M002S	SACC 2	Monitoring	Quarterly/Discrete	Central San Antonio Basin	720	Paso Robles Formation	217.18	219.00	215.05	217.05	217.45	222.83	215.17	210.04	212.87	219.52	214.50	208.10	
008N032W19M003S	SACC 3	Monitoring	Quarterly/Discrete	Central San Antonio Basin	530	Paso Robles Formation	220.53	224.73	220.42	219.40	220.10	223.35	213.49	208.65	213.21	219.74	213.49	206.69	
008N032W19M004S	SACC 4	Monitoring	Quarterly/Discrete	Central San Antonio Basin	325	Paso Robles Formation	171.01	173.62	172.79	173.70	175.70	177.90	175.98	172.58	174.52	177.45	176.87	173.61	
008N032W19M005S	SACC 5	Monitoring	Quarterly/Discrete	Central San Antonio Basin	120	Paso Robles Formation	107.25	107.20	107.13	107.10	107.05	107.30	107.20	107.01	106.94	106.50	105.82	105.66	
008N034W02M001S	2M1	Irrigation	Quarterly/Discrete	West San Antonio Basin	750	Paso Robles Formation	152.50	154.13	152.60	154.55	--	--	--	--	--	--	--	--	Temporarily discontinued due to risk of stuck sounder
--	White Hawk 1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	560	Careaga Sand	123.12	124.03	124.03	112.73	125.50	126.50	125.10	123.96	123.96	124.58	123.29	122.81	
008N32W17N001S	White Hawk 4	Irrigation	Quarterly/Discrete	Central San Antonio Basin	820	Careaga Sand	98.80	99.24	98.85	97.90	100.55	101.20	98.50	98.00	98.77	98.97	--	--	Proposed Original Well in July 2023 Well Verification Request. Well observed being destroyed during 4Q2023 as required by the SABGSA Well Verification Policy.
--	Mesa Vineyard	Irrigation	Quarterly/Discrete	Central San Antonio Basin	--	Careaga Sand	216.50	217.10	218.08	218.80	219.50	220.50	216.10	215.85	--	219.17	216.91	214.89	Rusty material in well
008N033W02N001S	2N1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	980	Careaga Sand	226.50	--	224.65	227.10	226.20	228.00	225.50	--	224.23	228.06	224.33	222.20	Rusty material and oil in well
008N033W02R001S	2R1	Domestic	Quarterly/Discrete	Central San Antonio Basin	370	Careaga Sand	192.82	185.22	119.42	118.75	173.55	120.50	120.45	120.30	120.61	120.94	121.02	121.48	
--	Well 4	Irrigation	Quarterly/Discrete	Central San Antonio Basin	1,000	Careaga Sand	--	--	--	--	--	--	--	--	--	--	122.50	122.29	
008N033W10	4-Deer Field	Irrigation	Quarterly/Discrete	Central San Antonio Basin	490	Careaga Sand	25.15	27.82	27.67	27.09	65.90	68.00	28.61	25.59	27.53	30.39	29.48	26.75	
008N033W03L001S	4-Deer Highway	Irrigation	Quarterly/Discrete	Central San Antonio Basin	349	Careaga Sand	97.71	94.80	95.05	96.10	96.59	98.10	96.11	94.82	98.01	98.79	97.63	95.02	
--	Schaff Well	Monitoring	Quarterly/Discrete	Central San Antonio Basin	669	Careaga Sand	215.82	216.28	216.65	216.76	217.24	217.90	218.05	218.24	218.29	218.97	219.15	219.12	
008N034W14L001S	14L1	Monitoring	Quarterly/Discrete	West San Antonio Basin	593	Careaga Sand	70.93	70.82	68.99	68.12	71.18	73.70	69.95	68.24	70.85	74.84	72.16	69.04	
009N034W34P001S	34P1	Monitoring	Quarterly/Discrete	West San Antonio Basin	223	Careaga Sand	68.86	68.60	68.55	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.
008N034W17Q001S	17Q1	Monitoring	Quarterly/Discrete	West San Antonio Basin	48	Careaga Sand	13.85	--	14.78	14.80	15.40	--	--	13.31	13.72	14.80	15.21	12.96	
008N034W21A001S	21A1	Monitoring	Quarterly/Discrete	West San Antonio Basin	271	Careaga Sand	35.64	36.22	36.79	36.93	37.80	38.75	38.83	37.70	37.40	38.62	38.88	37.77	
008N034W17K002S	17K2	Monitoring	Quarterly/Discrete	West San Antonio Basin	60	Careaga Sand	--	--	6.98	6.98	7.13	7.30	7.40	7.38	7.30	7.31	7.31	7.33	
008N034W17E001S	17E1	Monitoring	Quarterly/Discrete	West San Antonio Basin	89	Careaga Sand	21.40	21.76	22.03	22.20	22.28	22.35	22.38	19.72	19.44	20.26	20.67	19.42	
008N034W16C002S	16C2	Monitoring	Continuous/Transducer	West San Antonio Basin	169	Careaga Sand	75.36	76.15	86.75	87.76	74.72	94.03	87.72	92.73	82.20	91.43	84.44	81.70	
008N034W16C004S	16C4	Monitoring	Continuous/Transducer	West San Antonio Basin	560	Careaga Sand	67.24	67.80	73.94	74.66	87.21	79.63	75.30	78.30	74.79	78.03	73.70	71.79	
008N034W17H001S	17H1	Monitoring	Quarterly/Discrete	West San Antonio Basin	61	Careaga Sand	15.68	16.54	17.20	16.97	17.81	18.81	18.90	13.24	13.94	15.65	16.43	13.19	
008N034W16F001S	16F1	Monitoring	Quarterly/Discrete	West San Antonio Basin	58	Careaga Sand	30.33	30.92	38.50	40.34	43.83	46.30	45.47	45.09	38.45	43.17	41.39	38.03	
008N034W16G003S	16G3	Monitoring	Quarterly/Discrete	West San Antonio Basin	56	Careaga Sand	48.84	49.00	49.31	49.86	50.52	51.17	51.85	52.36	52.47	52.40	52.65	52.70	
008N033W13C001S	13C1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	1,070	Careaga Sand	195.00	--	188.10	188.90	190.20	188.00	187.30	--	188.40	186.08	185.94	185.39	
008N033W07	Stephen's Well	Irrigation	Quarterly/Discrete	West San Antonio Basin	590	Careaga Sand	--	332.95	338.73	341.04	339.88	343.35	339.88	--	342.19	381.46	379.15	343.34	Measured with airline
008N033W22K003S	22K3	Irrigation	Quarterly/Discrete	Central San Antonio Basin	250	Paso Robles Formation	--	--	--	--	--	--	--	--	79.65	82.59	79.45	78.91	
008N033W13Q001S	13Q1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	295	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--	--	116.71	
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	--	--	--	--	--	--	--	--		--			
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

Table 2. First Quarter 2024 Groundwater Level Measurements – Groundwater Elevation

State Well Number	Site Name	Well Type	Water Level Measurement Frequency/Type	Area	Total Depth (feet NAVD88)	Aquifer of Completion	MT Elevation (feet NAVD88)	MO Elevation (feet NAVD88)	GWE on 6/22/2021 and 6/23/2021	GWE on 9/14/2021 and 9/15/2021	GWE on 12/8/2021 and 12/9/2021	GWE on 3/10/2022 and 3/11/2022	GWE on 6/21/2022 and 6/22/2022	GWE on 9/15/2022 and 9/16/2022	GWE on 12/14/2022 and 12/15/2022	GWE on 3/15/23 3/16/23 and 3/23/23	GWE on 6/20/2023 6/21/2023 and 6/28/2023	GWE on 9/12/23 and 9/13/23	GWE on 12/12/23 and 12/13/23	DTW on 2/27/24 and 2/28/24	Notes on 2/27/24 and 2/28/24
009N034W34N002S	SAHC	Monitoring	Continuous/Transducer	West San Antonio Basin	363	Careaga Sand	358	--	381.94	381.79	381.66	381.55	381.41	381.27	381.14	380.91	381.00	381.28	381.48	381.82	
008N034W21A002S	SASA	Monitoring	Continuous/Transducer	West San Antonio Basin	245	Careaga Sand	--	--	267.06	266.44	266.12	265.96	265.62	264.83	264.48	265.44	266.99	266.42	265.56	266.22	
008N034W14L002S	SAGR	Monitoring	Continuous/Transducer	West San Antonio Basin	240	Paso Robles Formation	--	--	267.49	265.87	266.30	266.66	265.05	262.67	263.83	265.37	267.37	267.24	267.74	268.93	
008N034W23H001S	SAHG	Monitoring	Continuous/Transducer	West San Antonio Basin	246	Paso Robles Formation	--	--	280.20	280.76	280.89	280.49	282.19	281.90	282.81	295.87	295.62	293.01	290.39	293.52	
008N033W22G001S	SALS	Monitoring	Continuous/Transducer	Central San Antonio Basin	390	Paso Robles Formation	397	--	420.22	420.53	419.53	419.76	419.82	419.92	419.57	428.11	429.97	430.62	429.43	432.38	
008N032W29L004S	SALA	Monitoring	Continuous/Transducer	Central San Antonio Basin	506	Paso Robles Formation	--	--	548.83	548.24	547.58	547.42	547.12	546.52	545.91	568.41	569.58	564.05	560.25	570.52	
008N033W19K002S	SACR 1	Monitoring	Continuous/Transducer	West San Antonio Basin	-327	Careaga Sand	291	--	314.01	312.21	315.55	315.57	310.77	306.92	314.32	--	313.92	308.08	313.14	313.14	
008N033W19K003S	SACR 2	Monitoring	Quarterly/Discrete	West San Antonio Basin	-177	Paso Robles Formation		--	280.41	285.24	286.31	283.06	280.52	278.49	289.24	--	284.44	282.43	288.72	289.74	
008N033W19K004S	SACR 3	Monitoring	Quarterly/Discrete	West San Antonio Basin	13	Paso Robles Formation	233	--	242.62	247.91	262.81	259.56	241.86	238.98	262.48	--	251.40	244.46	261.86	265.98	
008N033W19K005S	SACR 4	Monitoring	Quarterly/Discrete	West San Antonio Basin	143	Paso Robles Formation	--	--	265.75	265.89	267.10	267.75	266.12	264.09	265.67	--	271.29	269.95	269.44	270.24	
008N033W19K006S	SACR 5	Monitoring	Quarterly/Discrete	West San Antonio Basin	252	Paso Robles Formation	--	--	265.49	264.75	264.94	265.56	265.26	264.77	264.37	269.38	273.33	270.90	269.62	269.08	
008N032W19M001S	SACC 1	Monitoring	Continuous/Transducer	Central San Antonio Basin	-394	Paso Robles Formation	348	--	357.59	**347.69**	355.32	349.69	348.84	**343.34**	364.07	370.05	361.00	352.08	362.32	370.23	
008N032W19M002S	SACC 2	Monitoring	Quarterly/Discrete	Central San Antonio Basin	-134	Paso Robles Formation	--	--	367.83	366.01	369.96	367.96	367.56	362.18	369.84	374.97	372.14	365.49	370.51	376.91	
008N032W19M003S	SACC 3	Monitoring	Quarterly/Discrete	Central San Antonio Basin	56	Paso Robles Formation	--	--	364.52	360.32	364.63	365.65	364.95	361.70	371.56	376.40	371.84	365.31	371.56	378.36	
008N032W19M004S	SACC 4	Monitoring	Quarterly/Discrete	Central San Antonio Basin	261	Paso Robles Formation	--	--	413.98	411.37	412.20	411.29	409.29	407.09	409.01	412.41	410.47	407.54	408.12	411.38	
008N032W19M005S	SACC 5	Monitoring	Quarterly/Discrete	Central San Antonio Basin	466	Paso Robles Formation	--	--	478.83	478.88	478.95	478.98	479.03	478.78	478.88	479.07	479.14	479.58	480.26	480.42	
008N034W02M001S	2M1	Irrigation	Quarterly/Discrete	West San Antonio Basin	-331	Paso Robles Formation	244	286	267.51	265.88	267.41	265.46	--	--	--	--	--	--	--	--	Temporarily discontinued due to risk of stuck sounder
--	White Hawk 1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	241	Careaga Sand	--	--	679.24	678.33	678.33	689.63	676.86	675.86	677.26	678.40	678.40	677.78	679.07	679.55	
008N32W17N001S	White Hawk 4	Irrigation	Quarterly/Discrete	Central San Antonio Basin	-39	Careaga Sand	--	--	682.87	682.43	682.82	683.77	681.12	680.47	683.17	683.67	682.90	682.70	--	--	Proposed Original Well in July 2023 Well Verification Request. Well observed being destroyed during 4Q2023 as required by the SABGSA Well Verification Policy.
--	Mesa Vineyard	Irrigation	Quarterly/Discrete	Central San Antonio Basin	--	Careaga Sand	--	--	590.29	589.69	588.71	587.99	587.29	586.29	590.69	590.94	--	587.62	589.88	591.90	Rusty material in well
008N033W02N001S	2N1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	-153	Careaga Sand	--	--	600.75	--	602.60	600.15	601.05	599.25	601.75	--	603.02	599.19	602.92	605.05	Rusty material and oil in well
008N033W02R001S	2R1	Domestic	Quarterly/Discrete	Central San Antonio Basin	406	Careaga Sand	--	--	584.58	592.18	657.98	658.65	603.85	656.90	656.95	657.10	656.79	656.46	656.38	655.92	
--	Well 4	Irrigation	Quarterly/Discrete	Central San Antonio Basin	1,000	Careaga Sand	--	--	--	--	--	--	--	--	--	--	--	--	596.57	596.78	
008N033W10	4-Deer Field	Irrigation	Quarterly/Discrete	Central San Antonio Basin	149	Careaga Sand	--	--	614.21	611.54	611.69	612.27	573.46	571.36	610.75	613.77	611.83	608.97	609.88	612.61	
008N033W03L001S	4-Deer Highway	Irrigation	Quarterly/Discrete	Central San Antonio Basin	340	Careaga Sand	--	--	591.97	594.88	594.63	593.58	593.09	591.58	593.57	594.86	591.67	590.89	592.05	594.66	
--	Schaff Well	Monitoring	Quarterly/Discrete	Central San Antonio Basin	-71	Careaga Sand	--	--	383.68	383.22	382.85	382.74	382.26	381.60	381.45	381.26	381.21	380.53	380.35	380.38	
008N034W14L001S	14L1	Monitoring	Quarterly/Discrete	West San Antonio Basin	-264	Careaga Sand	--	--	259.49	259.60	261.43	262.30	259.24	256.72	260.47	262.18	259.57	255.58	258.26	261.38	
009N034W34P001S	34P1	Monitoring	Quarterly/Discrete	West San Antonio Basin	230	Careaga Sand	361	386	**386.10**	**386.36**	**386.41**	382.30	383.11	384.16	384.81	**388.46**	--	**387.31**	**388.77**	--	Obstruction or collapse encountered at 72 feet below RPE. Water level not recorded.
008N034W17Q001S	17Q1	Monitoring	Quarterly/Discrete	West San Antonio Basin	222	Careaga Sand	--	--	261.15	--	260.22	260.20	259.60	--	--	261.69	261.28	260.20	259.79	262.04	
008N034W21A001S	21A1	Monitoring	Quarterly/Discrete	West San Antonio Basin	30	Careaga Sand	--	--	268.13	267.55	266.98	266.84	265.97	265.02	264.94	266.07	266.37	265.15	264.89	266.00	
008N034W21A001S	21A1	Monitoring	Quarterly/Discrete	West San Antonio Basin	30	Careaga Sand	--	--	268.13	267.55	266.98	266.84	265.97	265.02	264.94	266.07	266.37	265.15	264.89	266.00	
008N034W17K002S	17K2	Monitoring	Quarterly/Discrete	West San Antonio Basin	200	Careaga Sand	--	--	--	--	257.32	257.32	257.17	257.00	256.90	256.92	257.00	256.99	256.99	256.97	
008N034W17E001S	17E1	Monitoring	Quarterly/Discrete	West San Antonio Basin	154	Careaga Sand	--	--	225.70	225.34	225.07	224.90	224.82	224.75	224.72	227.38	227.66	226.84	226.43	227.68	
008N034W16C002S	16C2	Monitoring	Continuous/Transducer	West San Antonio Basin	160	Careaga Sand	--	--	254.80	254.01	243.41	242.40	255.44	236.13	242.44	237.43	247.96	238.73	245.72	248.46	
008N034W16C004S	16C4	Monitoring	Continuous/Transducer	West San Antonio Basin	-231	Careaga Sand	--	--	262.75	262.19	256.05	255.33	242.78	250.36	254.69	251.69	255.20	251.96	256.29	258.20	
008N034W17H001S	17H1	Monitoring	Quarterly/Discrete	West San Antonio Basin	199	Careaga Sand	--	--	248.92	248.06	247.40	247.63	246.79	245.79	245.70	251.36	250.66	248.95	248.17	251.41	
008N034W16F001S	16F1	Monitoring	Quarterly/Discrete	West San Antonio Basin	219	Careaga Sand	--	--	250.14	249.55	241.97	240.13	236.64	234.17	235.00	235.38	242.02	237.30	239.08	242.44	
008N034W16G003S	16G3	Monitoring	Quarterly/Discrete	West San Antonio Basin	239	Careaga Sand	226	244	**248.64**	**248.48**	**248.17**	**247.62**	**246.96**	**246.31**	**245.63**	**245.12**	**245.01**	**245.08**	**244.83**	**244.78**	
008N033W13C001S	13C1	Irrigation	Quarterly/Discrete	Central San Antonio Basin	-293	Careaga Sand	565	597	582.75	--	589.65	588.85	587.55	589.75	590.45	--	589.35	591.37	591.81	592.36	
008N033W07	Stephen's Well	Irrigation	Quarterly/Discrete	West San Antonio Basin	83	Careaga Sand	--	--	--	341.06	335.29	332.98	334.13	330.67	334.13	--	331.82	292.55	294.86	330.67	Measured with airline
008N033W22K003S	22K3	Irrigation	Quarterly/Discrete	Central San Antonio Basin	203	Paso Robles Formation	344	370	--	--	--	--	--	--	--	--	**373.68**	**370.74**	**373.88**	**374.42**	
008N033W13Q001S	13Q1	Irrigation	--	Central San Antonio Basin	367	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--		--		546.61	
008N032W30D001S	30D1	Monitoring	--	Central San Antonio Basin	-355	Paso Robles Formation	345	388	--	--	--	--	--	--	--	--		--			
008N032W25D001S	25D1	Irrigation	--	East San Antonio Basin	65	Careaga Sand	634	661	--	--	--	--	--	--	--	--		--			
008N031W22J001S	22J1	Unknown	--	East San Antonio Basin	--	Careaga Sand	--	--	--	--	--	--	--	--	--	--		--			
008N031W22N001S	22N1	Unknown	--	East San Antonio Basin	1,026	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--		--			
008N031W22M001S	22M1	Unknown	--	East San Antonio Basin	--	Careaga Sand	--	--	--	--	--	--	--	--	--	--		--			
008N034W24E001S	24E1	Monitoring	--	West San Antonio Basin		Careaga Sand	220	257	--	--	--	--	--	--	--	--		--			
008N033W20Q002S	20Q2	Irrigation	--	West San Antonio Basin	--	Paso Robles Formation	298	335	--	--	--	--	--	--	--	--		--			
--	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	-458	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--		--			
008N033W25B005S	25B5	Unknown	--	Central San Antonio Basin	426	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--		--			
008N032W28P004S	28P4	Unknown	--	East San Antonio Basin	99	Paso Robles Formation	--	--	--	--	--	--	--	--	--	--		--			
008N034W36R	Careaga Lease	Unknown	--	West San Antonio Basin	344	Careaga Sand	--	--	--	--	--	--	--	--	--	--		--			
009N034W27L001S	27L1	Unknown	--	West San Antonio Basin	110	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
Bold Minimum Threshold (MT) exceeded
Bold Measurable Objective (MO) exceeded
NAVD88 = North American Vertical Datum of 1988
GWE = Groundwater Elevation (feet NAVD88)
-- = 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 2024

LEGEND

- Representative Well

Wells (by screened aquifer)

- Paso Robles Formation
- Careaga Sand

All Other Features

- San Antonio Creek or Tributary
- Major Road
- San Antonio Creek Valley Groundwater Basin
- Barka Slough
- City Boundary

NOTES

*SACR 1 and 14L1 are screened in the Careaga Sand.

San Antonio Creek Valley Groundwater Basin Boundary as defined in the California Department of Water Resources Bulletin 118.

N

0 5,000 10,000 15,000
Feet

Date: March 11, 2024
Data Sources: USGS (2020a), ESRI, DWR (2018), Maxar imagery (2020)

GSI Water Solutions, Inc.

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