



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

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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.

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

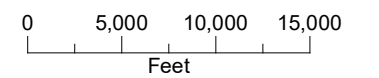
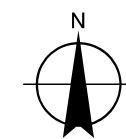
- Representative Well
- Wells (by screened aquifer)**
- Paso Robles Formation
- Careaga Sand
- All Other Features**
- ~ San Antonio Creek or Tributary
- Major Road
- San Antonio Creek Valley Groundwater Basin
- Barka Slough
- City Boundary



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.



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

