



Scope of Work and Fee Estimate

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

From: Michael McAlpin and Dave O'Rourke, GSI Water Solutions, Inc.

Date: September 25, 2025

RE: Quarterly Groundwater Water Level Monitoring and Reporting, Calendar Year 2026, San Antonio Creek Valley Groundwater Basin

GSI Water Solutions, Inc. (GSI), is pleased to present this proposal to provide quarterly groundwater level monitoring and reporting services during the 2026 calendar year to support the ongoing groundwater monitoring effort in the San Antonio Creek Valley Groundwater Basin (Basin). We welcome the opportunity to continue to support the San Antonio Basin Groundwater Sustainability Agency (SABGSA) on this important effort. GSI provides the experience needed to efficiently meet your goals for this project. Our team offers the following distinctions:

- **The ability to hit the ground running.** GSI has successfully completed quarterly groundwater monitoring work for the SABGSA since 2019. We are deeply familiar with monitoring locations and the procedures for coordinating with private well owners and the Vandenberg Space Force Base (VSFB). We are prepared to continue conducting this work without any ramp-up time.
- **Deep expertise to meet your expectations.** Our team includes four Professional Geologists—two of whom are also Certified Hydrogeologists—with the skills and expertise required to ensure an accurate outcome. Our team members bring comprehensive knowledge of hydrogeology in the area from our work on the Basin's Groundwater Sustainability Plan (GSP), as well as years of experience conducting groundwater monitoring and reporting that is essential to complying with the protocols and regulations outlined by the Sustainable Groundwater Management Act (SGMA).
- **A streamlined and efficient approach.** Our team includes the same personnel who have supported groundwater monitoring efforts for the SABGSA in the past, which avoids knowledge gaps and promotes an efficient workflow. The same team members also support development of the Groundwater Sustainability Plan Annual Report, which further provides continuity of institutional knowledge. Our approach focuses on delivering streamlined updates of field observations to effectively represent the Basin's path to sustainability.

Previously, GSI developed Annual Groundwater Elevation Monitoring Reports for the SABGSA as part of the Basin's quarterly groundwater monitoring conducted on behalf of the SABGSA by GSI. The report summarized measured groundwater elevation data from the previous four quarters, field observations, and provided recommendations for future monitoring. Consistent with the last three annual reporting periods, to prevent duplication of work, GSI proposes to combine the Basin's Annual Groundwater Elevation Monitoring Report for calendar year 2026 with the Basin's GSP Annual Report for water year 2026. Therefore, the budget to complete the Annual Groundwater Elevation Monitoring Report is included under a separate scope of work.

Scope of Work

Task 1 – Quarterly Groundwater Level Monitoring and Landowner Communication

Groundwater level measurements will be collected manually on a quarterly basis in the 40 accessible wells included in the Basin Groundwater Level Monitoring Network (Monitoring Network).¹ Water level data will be collected at more frequent intervals using existing data-recording pressure transducers (transducers) installed in 15 of the 40 wells. GSI will download water level data from the transducers and calibrate with manual depth to water readings on a quarterly basis. In the event of transducer failure, GSI will coordinate the removal, replacement, and installation of the transducer. For budgeting purposes, it is assumed that one transducer and data cable will need to be replaced each year.

Groundwater level measurements are documented in the field using a tablet that can operate ArcGIS Field Maps in conjunction with ArcGIS Enterprise. Data can be sent in real time directly to our secure SQL Server, or when cellular data isn't available, data can be collected offline and synced once cellular service has returned. The Field Maps application allows our team to build in data triggers and smart forms with features such as conditional visibility, required fields, and hints. These features improve the speed, accuracy, and usability while in the field by providing consistent workflows, automated field population and hints to assist the field team by providing information related to the type of data that should be collected for that field. The field team can also access past sampling events to compare existing conditions to a previous sample date.

Prior to each quarterly monitoring event, GSI will contact well owners to coordinate access to the wells and request that well owners shut off the well for at least 8 hours before the monitoring event so that a static measurement can be obtained. If access to any of the wells is restricted, water levels may not be measured in affected wells. GSI will conduct a good faith effort to access each well.²

Basin Monitoring Network wells in the Barka Slough (Slough) area are located on VSFB property. Because the wells are located near or within the Slough, the vegetation along the access trails can become overgrown. GSI (under separate scope), in collaboration with VSFB and the SABGSA, has been able to successfully coordinate vegetation trimming (outside of bird nesting season) along the well access trails to maintain access to the Basin Monitoring Network wells. GSI has worked to develop strong and friendly working relationships with VSFB representatives and Basin well owners.³

The SABGSA completed a well registration program in 2023 in partnership with Wallace Group Engineering. On behalf of the SABGSA, GSI completed a review of the well registration data acquired through the well registration program to identify potential candidate wells to be evaluated for inclusion into the Basin Monitoring Network to supplement water level data and fill existing data gaps identified in the Basin GSP. Prior to incorporating an identified candidate well, the SABGSA would likely contact the well owners to determine their willingness to participate, require supplemental candidate well information, and perform a site visit. The SABGSA would then be able to determine if the well could be reasonably included in the Basin Monitoring Network and arrange continued access. Therefore, GSI assumes inclusion of any identified candidate wells into the Basin Monitoring Network would not occur until calendar year 2027. However, if wells were added to the Basin Monitoring Network

¹ As of the second quarter of 2025 groundwater level monitoring event, a total of 40 wells within the Basin monitoring network have access agreements. Although the SABGSA has an access agreement for well 2M1, monitoring of the well has been discontinued due to the lack of a sounding tube and the prohibitive expense of installing one. Likewise, groundwater levels are no longer able to be collected from well 34P1 due to a suspected casing failure. A groundwater level was last collected from 2M1 and 34P1 during the fourth quarter of 2022 and 2023, respectively. Therefore, 2M1 and 34P1 are no longer included in the list of wells with an access agreement.

² Historically, there have been instances GSI was unable to collect a representative depth to groundwater measurement at one or more wells during a quarterly monitoring event. In those cases, GSI has returned to the well as part of an additional mobilization within the authorized budget.

³ Select GSI staff have active annual VSFB passes and are familiar with the check-in and check-out process for accessing the VSFB property wells. GSI can obtain temporary passes for additional GSI staff upon request.

during the 2026 calendar year, GSI anticipates being able to monitor up to 4 additional wells without requiring an additional mobilization and extending the subject quarterly monitoring to 3 days.

Task 2 – Quarterly Groundwater Level Reporting and Upload Water Levels to the SGMA Portal

At the conclusion of each quarterly monitoring event, GSI will generate a brief technical memorandum (TM) that includes an overview of that quarter's monitoring activities, a tabular presentation of the collected data, and select hydrographs. The intent of these TMs is to regularly update the SABGSA on the status of the monitoring program and identify groundwater level trends. Additionally, the quarterly TMs document important changes in the monitoring program that may influence data collection and can be reviewed at a later date. The quarterly TMs will be provided to SABGSA within 3 weeks after each monitoring event and provide the following information:

- Summary tables listing measured depth to groundwater and groundwater elevation in each monitoring well.
- Maps of the well locations in the monitoring network, including access status and updates for the addition or removal of wells from the network.
- Presentation of select hydrographs.
- Summary of noteworthy observations or differences between monitoring events, including, but not limited to, well access, changes in reference points, equipment repairs/replacements, and challenges associated with data collection.
- Recommendations for future monitoring events.

Per SGMA regulations and Water Code §10933(e)(2), the SABGSA is required to upload seasonal water level measurements that provide sufficient information to demonstrate seasonal and long-term trends in groundwater elevations. DWR has historically defined seasonal measurement periods as spring (January 1 to June 30) and fall (July 1 to December 31). The SABGSA is required to collect a minimum of one measurement per season, for all wells included in the Basin's Monitoring Network Module (MNM) on the SGMA Portal. These measurements are to be submitted to the SGMA Portal by July 1 for spring and January 1 for fall. Task 2 includes the upload of Basin water level measurements for spring 2026 and fall 2026 to the SGMA Portal by July 1, 2026 and January 1, 2027, respectively. Because GSI currently houses and maintains the SABGSA Data Management System (DMS), GSI is able to leverage the DMS by automating the population of water level data into the Basin SGMA Portal MNM reporting forms.

Formerly, results of the Basin quarterly groundwater monitoring were documented within an email and submitted to the SABGSA. GSI changed the format in 2022 from an email to a more formal brief TM. The content and analysis of the quarterly TMs can be modified upon request by the SABGSA. Additional reporting costs may be warranted depending on the requested change in scope. SGMA regulations do not require specific reporting requirements except for the semi-annual reporting of groundwater levels (discussed above) and GSP annual reporting.

Task 3 – House and Maintain the SABGSA DMS

GSI developed the DMS in accordance with SGMA regulations (Article 3, Section 352.6 and Article 5, Section 354.40) during the preparation of the Basin GSP. A copy of the GSP table summarizing data in the DMS is included below.

Overview of Data Management System

Data	Description
Groundwater Levels	Water level data, well construction information, and salient information related to measurements
Groundwater Storage	Calculated annual change in groundwater in storage
Water Quality	Water quality well and station data as reported by the SWRCB DDW and ILRP ¹
Land Subsidence	Land subsidence data from the UNAVCO CGPS ORES and InSAR data
Interconnected Surface Water	Data related to the interconnected surface water sustainability indicator such as groundwater levels, stream gages, visual streamflow observations, and precipitation stations.
Water Use Data	Irrigation, municipal, and domestic water use estimates

Notes

¹ Water quality data is accessed through the California State Water Resources Control Board and the U.S. Geological Survey Groundwater Ambient Monitoring and Assessment Program Database
CGPS = Continuous Global Positioning System
DDW = Division of Drinking Water

ILRP = Irrigated Lands Regulatory Program
InSAR = Interferometric Synthetic Aperture Radar
SWRCB = State Water Resources Control Board
UNAVCO = University NAVSTAR Consortium

Pertinent data collected in Task 1 will be uploaded into the DMS. This includes all quality control checks, reconciliation of data to standardized benchmarks (e.g., all groundwater level data are in elevations using the same datum), and data formatting. Although GSI has provided a proposal to complete the subject scope of work and the Basin GSP Annual Report for water year 2025, which also includes a task to house and maintain the SABGSA DMS, the Task 3 budget presented herein indicates a cost specific to the subject scope of work.

Fee Estimate

Our team's proposed fee to complete the tasks is \$65,000. The work will be performed on a time and materials basis for an amount that will not exceed the authorized budget unless approved by SABGSA. GSI will perform the work in accordance with GSI's Master Services Agreement with SABGSA dated December 14, 2023. The proposed budget is based on GSI's projected 2026 rates. This fee estimate includes a 10 percent markup on direct expenses.

Tasks	Labor Hours	Labor Cost	Outside Services	Direct Expenses	Total
Task 1 – Quarterly Water Level Monitoring ¹	256	\$46,100	\$0	\$3,400 ²	\$49,500
Task 2 – Quarterly Reporting and Upload Water Levels to the SGMA Portal	62	\$12,600	\$0	\$0	\$12,600
Task 3 – House and Maintain SABGSA Data Management System	16	\$2,900	\$0	\$0	\$2,900
Project Totals	334	\$61,600	\$0	\$3,400	\$65,000

Notes:

¹ Quarterly water level monitoring field efforts assume a 2-person team for 2 days.

² Task 1 Direct Expenses include equipment use, milage for 4 monitoring events, and replacement of one transducer and associated data cable.

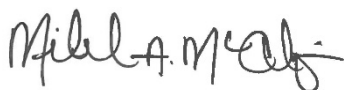
GSI has provided this budget estimate assuming that the wells are accessible, access issues do not delay the field staff, and equipment functions as intended. We will notify you if we encounter circumstances that cause us to spend more time in the field than budgeted. Based on the nature of the work, circumstances requiring a pump to be pulled and reset if a sounder gets stuck may occur. Since 2020, GSI has identified many of the problematic wells and will work to avoid these instances.

Schedule

GSI can coordinate with the SABGSA to determine an appropriate monitoring schedule or complete the proposed scope of work relatively consistent with the monitoring schedule completed during 2025. We estimate that each monitoring event will take 2 days in the field to complete, assuming that all site access approvals have been provided.

We appreciate this opportunity to continue to assist SABGSA in managing the Basin's shared groundwater resources. Please do not hesitate to contact us with questions about this proposal.

Sincerely,
GSI Water Solutions, Inc.



Michael McAlpin, PG
Supervising Hydrogeologist



Dave O'Rourke, PG, CHG, PE
Principal Hydrogeologist

Approval

You may indicate your approval of this proposal by signing on the space provided below.

Approved by

Date