
Basin-Wide Groundwater Recharge Study

To: Willy Cunha, President, Board of Directors, Shandon-San Juan Water District

From: Nate Page, GSI Water Solutions, Inc.
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This memorandum presents a scope of work and budget to conduct a basin-wide groundwater recharge desktop study utilizing all available science, including the results of the 2020 SkyTEM geophysical study (Ramboll, 2020). This work will also build on (but not be limited to) the results of the Paso Robles Subbasin Stormwater Capture and Recharge Feasibility Study (GSI, 2020). The concept of this desktop study is to focus on the physical characteristics of the basin materials, including aquifers and aquitards, and to identify areas with favorable conditions to recharge the major aquifers of the basin (primarily the Paso Robles Formation Aquifer). The proposed study will endeavor to identify favorable conditions for recharge regardless of location within the basin or proximity to potential recharge water sources. It is understood that the SSJWD (District) is exploring the potential availability of imported water for recharge from Santa Margarita Lake, Lake Nacimiento, and the State Water Project (SWP). The logistics of obtaining allocations of these water sources and constructing potentially needed water conveyance facilities is beyond the scope of this desktop study.

Scope of Work

Task A – Develop Leapfrog 3D Tool

The purpose of this task is to create a digital 3D model of the Paso Robles Basin incorporating the SkyTEM geophysical survey results (Ramboll, 2020) to enhance data visualization and to develop the best tool for identifying favorable groundwater recharge areas in the basin. The 3D model will be developed in Leapfrog Works® and will incorporate relevant data from previous basin studies, including specifically the SkyTEM geophysical survey. The Leapfrog Works® platform allows for unfettered 3D model inspection with infinite slicing and zooming options.

Deliverable: Leapfrog Works® based 3D model of the Paso Robles Basin, incorporating SkyTEM geophysical study results. We assume at least one workshop will be required to review the model with the District Board and staff. A Leapfrog Viewer® version¹ of the model will be produced for SSJWD staff to review on demand.

Task B – Identify Favorable Recharge Locations

The purpose of this task is to use all available science, including the Leapfrog Works® tool developed in Task A to identify areas with favorable conditions to recharge the major aquifers of the basin (primarily the Paso Robles Formation Aquifer). This task will focus on analysis of the physical characteristics of basin materials, including aquifers and aquitards, to identify favorable recharge areas regardless of location within the basin or proximity to potential recharge water sources. This task will be further guided by any direction received from the District during Task A workshop(s).

¹ Leapfrog Viewer® is freeware and can be downloaded here: <https://my.seequent.com/releases/leapfrog-viewer/latest>

Deliverable: Maps and/or Leapfrog Viewer® model identifying favorable recharge sites within the basin.

Task C – Meetings

This task includes up to 2 meetings with the District (with presentation) to review the status and findings from this study.

Budget and Schedule

Our budget estimate for each task is presented in Table 1.

Description	Labor Hours	Labor Cost	Total
Task 1 – Develop Leapfrog 3D Tool	55	\$7,860	\$7,860
Task 2 – Identify Favorable Recharge Locations	40	\$5,970	\$5,970
Task 3 – Meetings	6	\$1,170	\$1,170
Project Totals	84	\$15,000	\$15,000

We will not exceed the estimated budget for each authorized task without first receiving approval from District representatives. We expect that we can complete this work within one month of receiving notice to proceed. We propose to complete this work in accordance with the existing contracts we have with District.

We value this opportunity to provide you with this proposal, and we look forward to continuing to serve you on this interesting project. Please contact us if you have any questions regarding our proposal.

Sincerely,
GSI Water Solutions, Inc.



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Managing Hydrogeologist



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Principal Hydrogeologist