

## 7 MONITORING NETWORKS

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### 7.6 Interconnected Surface Water Monitoring Network

Data presented in Section 5.5 indicate potential groundwater connection to surface water or to the riparian vegetation root zone at least some of the time along certain sections of the Salinas River, along the middle reach of the Estrella River (from Shedd Canyon to Martingale Circle) and along San Juan Creek upstream of Spring Creek. The potential connection along the Salinas River is between the surface water system and the adjacent Alluvial Aquifer. There is no evidence that the Salinas River surface water flows are connected to the underlying Paso Robles Formation Aquifer. The potential connection between the surface water system along the middle reach of the Estrella River (from Shedd Canyon to Martingale Circle) and along San Juan Creek upstream of Spring Creek, and the underlying Paso Robles Formation Aquifer is unknown but sufficient evidence exists that there could potentially be a connection, and therefore further investigation in these areas is recommended.

Seven existing wells already are monitored for water levels within 2,000 feet of those stream reaches and these have water-level patterns consistent with expected shallow water table conditions. Two of these are shown as blue squares in **Figure 7-5**. The locations of the others are not shown due to confidentiality restrictions, but they include three wells along the Salinas River between Wellsona and the Estrella River, one well next to the Estrella River near Jardine Road and one well next to San Juan Creek about 7 miles above Shandon. The City of Paso Robles' Supplemental Environmental Project (SEP) identified ten sites where multi-depth monitoring wells and stream gages would be useful for better characterizing interconnection of surface water and groundwater (Cleath-Harris Geologists, 2021). Those sites are shown as orange circles numbered 1 through 10 on the figure. Sites 1 and 9 have existing stream gages, and shallow and intermediate depth monitoring wells were installed nearby in spring 2021.

#### 7.6.1 Interconnected Surface Water Monitoring Data Gaps

The existing shallow monitoring wells do not adequately cover the three stream reaches where interconnection of groundwater with surface water and/or the riparian vegetation root zone appears to occur some or most of the time. The presence of shallow clay layers and degree of separation between Alluvial Aquifer groundwater levels and Paso Robles Formation Aquifer pumping and water levels is poorly known in the eastern part of the Subbasin. Recommended locations for additional wells to verify and monitor interconnection are listed in **Table 7-6** and shown in **Figure 7-5** as green squares labeled A through H. Shallow and deep monitoring wells are needed at some of the locations to confirm any differences between Alluvial Aquifer and Paso Robles Formation Aquifer water levels. These locations are suggestions that would

need to be refined based on practical considerations such as land ownership and adequate road access.

New stream gages have already been installed since the beginning of the GSP development process. This includes SEP sites 2, 4 and 10 on the Salinas River, Huer Huero Creek and Estrella River (see **Figure 7-5**) and a new gage installed by DWR on Cholame Creek at SEP site 8. Of the remaining SEP sites, a gage at site 7 would be the most useful.

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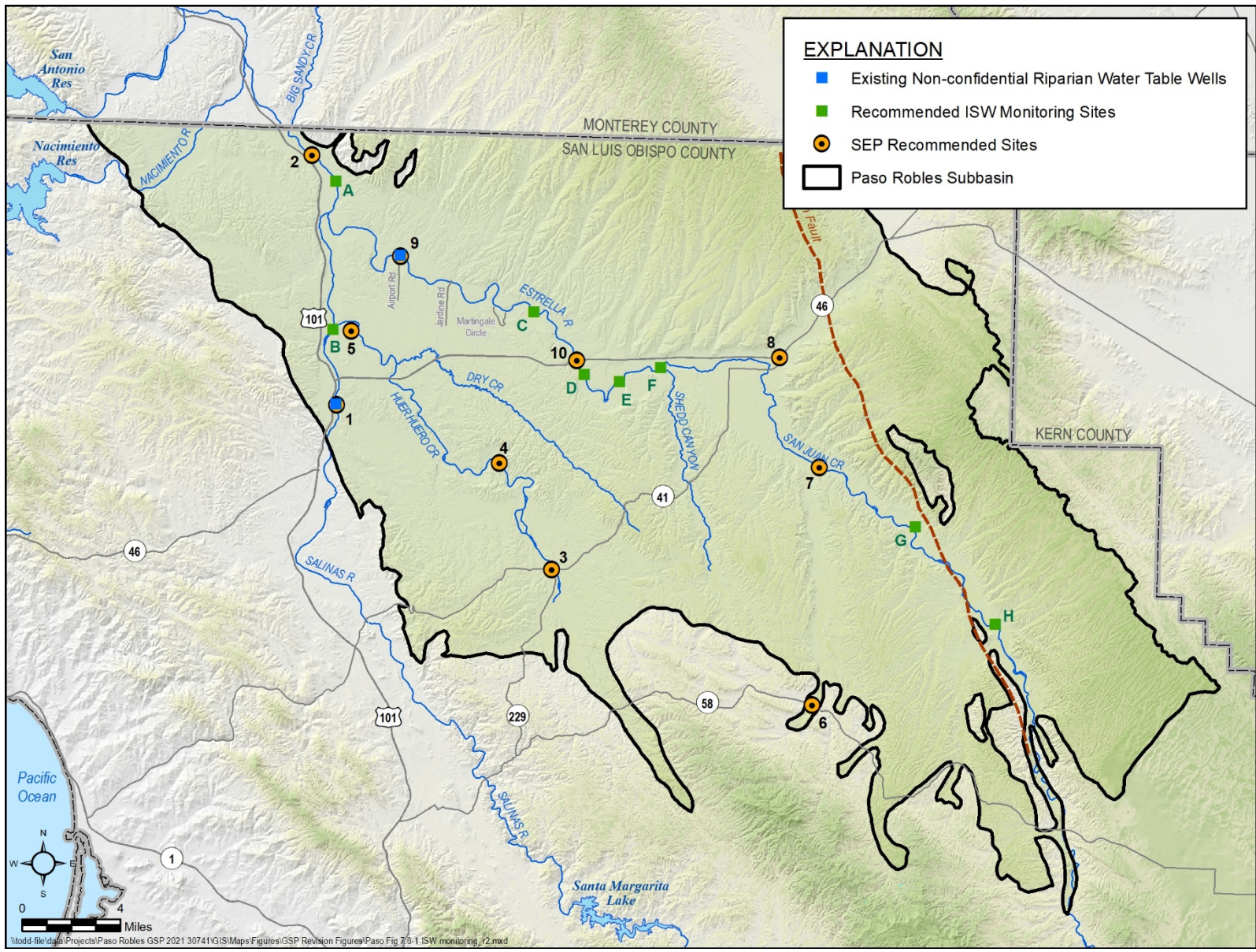


Figure 7-1. Interconnected Surface Water Monitoring Well Network

Table 7-1. Recommended Well Locations for Monitoring Interconnected Surface Water and GDEs

Map Label	Description
A	Salinas River in San Miguel, near existing Paso Robles Formation Aquifer monitoring well clusters. This site could replace or be shifted to SEP site 2. Only a shallow well is needed.
B	Salinas River near Wellsona. This fills a long reach with no data and is a location where surface flow is likely to become discontinuous before other reaches. Only a shallow well is needed.
C	Estrella River above Martingale Circle. This site is near an existing monitoring well near the river that shows a Paso Robles Formation Aquifer water-level pattern. Only a shallow well is needed.
D	Estrella River at Whitley Gardens. The suggested site is at the River Grove Drive bridge at the upstream edge of town. This site could replace or be shifted to SEP site 10. This site needs shallow and deep wells to confirm whether the alluvial water table is somewhat independent of underlying Paso Robles Formation Aquifer water levels.
E	Estrella River 3.3 channel miles upstream of Highway 46 (Whitley Gardens). There are no nearby existing wells to confirm the apparent presence of shallow water table conditions. This site needs shallow and deep wells to confirm whether the alluvial water table is somewhat independent of underlying Paso Robles Formation Aquifer water levels.
F	Estrella River near Shedd Canyon confluence. There are no nearby existing wells to confirm the apparent presence of shallow water table conditions. This site needs shallow and deep wells to confirm whether the alluvial water table is somewhat independent of underlying Paso Robles Formation Aquifer water levels.
G	San Juan Creek between existing monitoring well and San Juan Fault preferably near riparian vegetation. A shallow well is needed at this location to supplement the single existing well along this reach of San Juan Creek, which is reportedly 225 feet deep but has relatively stable water levels close to the creek bed elevation, like an Alluvial Aquifer well.
H	At this location, the San Juan Fault forces groundwater into the channel of San Juan Creek, creating a spring and a short reach of flowing water bordered by wetland vegetation. In lieu of a well, the length of the flowing reach and wetland area could be monitored to detect decreases in the flow of groundwater across the fault.