The current groundwater budget is strongly influenced by the drought; total groundwater pumping shows no trend over the five years that might be related to any continuing land use change. During the current water budget period, the amounts of recharge and streamflow percolation were very low and the average amount of pumping was slightly greater than the historical water budget period. Over the five-year current water budget period, an estimated net loss of groundwater in storage of about 327,000 AF occurred (Figure 6-7). The annual average groundwater storage loss, or the difference between outflow and inflow to the Subbasin, was approximately 65,400 AF.

6.4.2.4 Current Water Balance

The substantial short-term depletion of groundwater in storage indicates that total groundwater outflows exceeded the total inflows over the current water budget period. As summarized in Table 6-9, total groundwater pumping averaged approximately 85,800 AFY during the current period. A quantification of the current sustainable yield for the Subbasin is be estimated by subtracting the average groundwater storage deficit (65,400 AFY) from the total average amount of groundwater pumping (85,800 AFY) to yield about 20,400 AFY. Due to the drought conditions, the current water budget period is not appropriate for long-term sustainability planning.

6.5 Future Water Budget

SGMA Regulations require the development of a future surface water and groundwater budget to estimate future baseline conditions of supply, demand, and aquifer response to GSP implementation. The future water budget provides a baseline against which management actions will be evaluated over the GSP implementation period from 2020 to 2040. Future water budgets were developed using the GSP model.

In accordance with Section 354.18 (c)(3)(A) of the SGMA Regulations, the future water budget should be based on 50 years of historical precipitation, evapotranspiration, and streamflow information. The GSP model includes only 31 years of historical precipitation, evapotranspiration, and streamflow data. Therefore, the future water budget is based on 31 years of historical data rather than 50 years of historical data. It is believed that this time period is representative and is the best available information for groundwater sustainability planning purposes.

6.5.1 Assumptions Used in Future Water Budget Development

Assumptions about future groundwater supplies and demands are described in the following subsections. An overarching assumption is that any future increases in groundwater use within the Subbasin will be offset by equal reductions in groundwater use in other parts of the Subbasin, or in other words, groundwater neutral through implementation of the GSP.

Future water budgets were developed using the GSP model. During the update process for the GSP model, all model components (e.g., groundwater pumping) of the entire original 2016 GSSI model area were updated, including components with Monterey County and the Atascadero Subbasin. However, information provided for the future water budget only pertains to the GSP Subbasin (Figure 1-1), thus do not include areas within Monterey County or the Atascadero Subbasin.

6.5.1.1 Future Non-Agricultural Water Demand Assumptions

Future non-agricultural water demands were estimated for the City of Paso Robles (City) and San Miguel Community Services District (SMCSD) based on the following available planning documents:

- Paso Robles 2015 Urban Water Management Plan (UWMP) (Todd Groundwater, 2016)
- San Miguel Community Services District Water & Wastewater Master Plan Update (Monsoon Consultants, 2017)

Projections of the City's groundwater demand were obtained from the City's UWMP. A portion of the City's future groundwater demand will be offset by imported Nacimiento water. The projected water demand for SMCSD was assumed to be satisfied solely by groundwater. Projections for non-agricultural water demand for entities other than those listed above, such as residential wells and smaller commercial water users, were not available. Water demand for these users was assumed to remain constant into the future to be consistent with the overarching assumption that future growth will be groundwater neutral through the implementation of this GSP.

Total non-agricultural groundwater demand in the Subbasin is projected to increase from about 8,500 AFY in 2020 to about 8,700 AFY in 2040.

6.5.1.2 Future Wastewater Discharge Assumptions

Discharge of treated wastewater to the Salinas River provides a source of recharge to the Alluvial Aquifer. Rates of future wastewater discharge were estimated as a percentage of total water demand. Wastewater discharge as a percentage of water demand was calculated separately for each water provider. Projected annual wastewater discharge for San Miguel CSD is about 200 AFY, and projected annual wastewater discharge for the City of Paso Robles increases from about 2,900 AFY in 2020 to about 3,600 AFY by 2040. If the future wastewater discharge amounts differ from the estimated values cited above the GSP model and future water budgets will be adjusted during implementation to account for these changes.

6.5.1.3 Future Crop Acreage and Irrigation Efficiency Assumptions

In accordance with Section 354.18 (c)(3)(B) of the SGMA Regulations, the most recently available land use (in this case, crop acreage) and crop coefficient information should be used as the baseline condition for estimating future water demand. For the GSP, the 2016 crop acreage data obtained from the office of the San Luis Obispo County Agricultural Commissioner were used. These crop acreage data were the most recently available. To account for irrigation efficiency in the future water budget, the reported crop coefficient information from GSSI (GSSI, 2016) was used.

Projections for agricultural water demand are not available. Agricultural water demand was assumed to remain constant into the future to be consistent with the overarching assumption that future growth will be groundwater neutral through the implementation of this GSP.

6.5.1.4 Future Climate Assumptions

The SGMA Regulations require incorporating future climate estimates into the future water budget. To meet this requirement, DWR developed an approach for incorporating reasonably expected, spatially gridded changes to monthly precipitation and reference ETo (DWR, 2018b). The approach for addressing future climate change developed by DWR was used in the future water budget modeling for the Subbasin. The changes are presented as separate monthly change factors for both precipitation and ETo, and are intended to be applied to historical time series within the climatological base period through 2011. Specifically, precipitation and ETo change factors were applied to historical climate data for the period 1981 to 2011 for modeling the future water budget.

DWR provides several sets of change factors representing potential climate conditions in 2030 and 2070. DWR recommends using the 2030 change factors to evaluate conditions over the GSP implementation period (DWR, 2018b). Consistent with DWR recommendations, datasets of monthly 2030 change factors for the Paso Robles area were applied to precipitation and ETo data from the historical base period to develop monthly time series of precipitation and ETo, which were then used to simulate future hydrology conditions.

6.5.2 Modifications to Modeling Platform to Simulate Future Conditions

The existing modeling platform was modified to simulate future conditions, and the results of these simulations are used to develop the future water budget.

6.5.2.1 Modification to Soil Water Balance Model

The soil water balance model operates on a daily time scale and tracks daily variations in soil water storage for different agricultural areas in the Paso Robles Subbasin. For consistency with the monthly climate change factors provided by DWR, the daily model was used to develop

monthly soil water balance calculations. These calculations compute irrigation demand as the residual crop evapotranspiration demand unsatisfied by effective precipitation.

These calculations use monthly precipitation and ETo, rescaled by the monthly climate change factors provided by DWR, and the same monthly crop coefficients used in the historical water budget analysis. Empirical relationships were developed to account for soil moisture carryover from the winter into the spring based on results from the daily soil water balance model.

Monthly applied irrigation water was determined over the future base period from computed monthly crop demand and the crop-specific irrigation efficiencies. Agricultural irrigation return flow is then computed as the difference between the applied irrigation water and the crop demand. Results were then averaged to provide average monthly rates of applied irrigation water and irrigation return flow that would be expected under future climate conditions.

6.5.2.2 Modifications to the Watershed Model

The watershed model operates on a daily time scale and simulates streamflow and infiltration of direct precipitation. The watershed model was modified to account for climate change by rescaling daily precipitation and ETo with the monthly climate change factors provided by DWR. The watershed model was then re-run using the modified precipitation and ETo values.

Results from the modified historical base period simulation were then averaged to provide average monthly rates of infiltration of direct precipitation and streamflow under future climate conditions.

6.5.2.3 Modifications to the Groundwater Model

The groundwater model operates at a semi-annual time scale, with stress periods representing six-month periods. The groundwater model was extended and modified to simulate the period 2020 to 2040. Starting groundwater levels for the future simulation were set to groundwater levels at the end of Water Year (WY) 2016, extracted from the updated groundwater model.

Future groundwater recharge components were computed using the modified soil water balance model and watershed model, as described above. Future streamflow generated both inside and outside the Subbasin was computed using the modified watershed model.

Future agricultural groundwater pumping was computed based on the modified soil water balance model. Future non-agricultural groundwater pumping was determined based on water demand assumptions described in Section 6.4.1.1.

Future groundwater recharge, streamflow, and agricultural pumping are specified in the groundwater model as repeating average time-series, based on average monthly calculation of applied irrigation water, excess irrigation water, recharge of direct precipitation, and streamflow.

This approach was adopted to simplify the future water budget and allow reporting of average future conditions accounting for climate change. Future non-agricultural pumping and wastewater return flows are the only inputs to the groundwater model that exhibit a long-term trend over the implementation period.

6.5.3 Projected Future Water Budget

Future surface water and groundwater budgets were projected.

6.5.3.1 Future Surface Water Budget

The future surface water budget includes average inflows from local imported supplies, average inflows from local supplies, average stream outflows, and average stream percolation to groundwater. Average future local imported supplies are estimated to be approximately 1,400 AFY. Table 6-11 summarizes the average local supply components of projected surface water budget.

Table 6-11. Projected Future Annual Average Surface Water Budget

Surface Water Budget Component	Flow Amount
Inflows	
Nacimiento River Inflow to Subbasin	214,300
Precipitation Runoff within Watershed	84,800
Salinas River Inflow to Subbasin	39,300
Groundwater Discharge to Rivers and Streams	4,600
Total	343,000
Outflows	
Nacimiento River Outflow from Subbasin	214,300
Salinas River Outflow from Subbasin	99,900
Percolation of Surface Water to Groundwater	28,800
Total	343,000

Note: All values in AF

6.5.3.2 Future Groundwater Budget

Projected groundwater budget components are computed using the modified groundwater flow model to simulate average conditions over the implementation period.

Table 6-12 summarizes projected annual groundwater inflows. In contrast to the historical groundwater budget which accounted for month-to-month variability, the projected groundwater budget is based on average monthly inflows. Therefore, variability in simulated groundwater budget components is minor, and minimum and maximum values are not included in Table 6-12.

Table 6-12. Projected Future Annual Groundwater Inflow to Subbasin

Groundwater Inflow Component	Average
Streamflow Percolation	28,800
Agricultural Irrigation Return Flow	14,500
Deep Percolation of Direct Precipitation	12,600
Subsurface Inflow into Subbasin	8,300
Wastewater Pond Leakage	3,500
Urban Irrigation Return Flow	1,800
Total	69,500

Note: All values in AF

The total average annual groundwater inflow is 1,900 AF less during the future period than during the historical base period. Annual agricultural irrigation return flow is the inflow component with the most significant reduction – about 3,300 AF – between the historical base period and future water budget period. Reduction in agricultural irrigation return flow is due partly to changes in historical cropping patterns and partly to improvements in vineyard irrigation efficiency.

Table 6-13 summarizes projected annual groundwater outflows.

Table 6-13. Projected Future Annual Groundwater Outflow from Subbasin

Groundwater Outflow Component	Average
Total Groundwater Pumping	74,800
Discharge to Streams and Rivers from Alluvial Aquifer	4,600
Groundwater Flow Out of Subbasin	2,100
Riparian Evapotranspiration	1,700
Total	83,200

Note: All values in AF

The total average annual groundwater outflow is estimated to be 800 AF less during the future period than during the historical base period. Future total annual groundwater pumping is projected to increase by about 2,400 AF compared to the historical base period. Concurrently, total annual discharge to streams and rivers and total annual groundwater outflow from the Subbasin are projected to decrease by about 2,700 AF and 500 AF, respectively.

6.5.3.3 Future Sustainable Yield

The projected future groundwater budget shows a long-term imbalance between inflows and outflows, with projected groundwater inflows of about 69,500 AFY and projected groundwater outflows of about 83,200 AFY. The projected future imbalance indicates an average annual decrease in groundwater in storage of 13,700 AFY. A calculated annual volume for the projected future sustainable yield of the Subbasin was estimated by subtracting the average groundwater storage deficit of 13,700 AFY from the total projected future average amount of groundwater pumping of 74,800 AFY. In this case, the future sustainable yield for the Subbasin period is estimated to be approximately 61,100 AFY. The estimated future sustainable yield is similar to the estimated sustainable yield for the historic base period. This similarity indicates that potential future changes in climate are not projected to have a substantial impact on the amount of groundwater that can be sustainably used compared to historical conditions. The calculated sustainable yield of the Subbasin is a reasonable estimate of the long-term pumping that can be maintained without producing undesirable results. Sustainable yield looks to the presence or absence of undesirable results, not strictly inflows and outflows. The definitive sustainable yield can only be determined once undesirable results have been described and data show undesirable results have not occurred. The sustainable yield estimate will be revised in the future as new data become available from monitoring data that evaluate the presence or absence of undesirable results.

7 MONITORING NETWORKS

This chapter describes the monitoring networks that exist and improvements to the monitoring networks that will be developed in the Subbasin as part of GSP implementation. This chapter is prepared in accordance with the SGMA regulations §354.32 and §354.34 and includes monitoring objectives, monitoring protocols, and data reporting requirements.

The monitoring networks presented in this chapter are based on existing monitoring sites. It will be necessary to expand the existing monitoring networks and identify or install more monitoring sites to fully demonstrate sustainability, refine the hydrogeologic conceptual model, and improve the GSP model. Monitoring networks are described for each of the five applicable sustainability indicators, and data gaps are identified for every monitoring network. These data gaps will be addressed during GSP implementation. Addressing these data gaps and developing more extensive and complete monitoring networks will improve the GSAs' ability to track progress and demonstrate sustainability.

7.1 Monitoring Objectives

The SGMA regulations require monitoring networks be developed to promote the collection of data of sufficient quality, frequency, and spatial distribution to characterize groundwater and related surface water conditions in the Subbasin and to evaluate changing conditions that occur through implementation of the GSP. The monitoring network should accomplish the following:

- Demonstrate progress toward achieving measurable objectives described in the GSP.
- Monitor impacts to the beneficial uses and users of groundwater.
- Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds.
- Quantify annual changes in water budget components.
- The minimum thresholds and measurable objectives monitored by the networks are described in Chapter 8 - Sustainable Management Criteria.

7.1.1 Monitoring Networks

Monitoring networks are developed for each of the five sustainability indicators that are relevant to the Subbasin:

- Chronic lowering of groundwater levels
- Reduction in groundwater storage

- Degraded water quality
- Land subsidence
- Depletion of interconnected surface water

The Subbasin is isolated from the Pacific Ocean and is not threatened by seawater intrusion; therefore, this GSP does not provide monitoring for the seawater intrusion sustainability indicator.

The SGMA regulations allow the GSP to use existing monitoring sites for the monitoring network. Wells used for monitoring, however, are limited by restrictions in §352.4(c) of the SGMA regulations which requires the GSAs to provide various data for any wells used as monitoring wells, including but not limited to: CASGEM well identification number, well location, ground surface elevation, well depth, and perforated intervals. Wells for which these data were not available, or could not be easily inferred, could not be used in the current groundwater monitoring network.

The approach for establishing the monitoring network for this Subbasin is to leverage existing monitoring programs and incorporate additional monitoring locations that have been made available by cooperating entities. The monitoring networks are limited to locations with data that are publicly available and not collected under confidentiality agreements; the availability of well data and restrictions of existing confidentiality agreements results in a monitoring network with relatively few wells. This chapter identifies data gaps in each monitoring network and proposes locations for filling those data gaps.

7.1.2 Management Areas

The SGMA regulations require that if management areas are established, the quantity and density of monitoring sites in those areas shall be sufficient to evaluate conditions of the Subbasin setting and sustainable management criteria specific to that area. At this time, management areas have not been defined for the Subbasin. If management areas are developed in the future, the monitoring networks will be reevaluated to ensure that there is sufficient monitoring to evaluate conditions in each management area.

7.2 Groundwater Level Monitoring Network

The minimum thresholds and measurable objectives for the chronic lowering of groundwater levels sustainability indicator are evaluated by monitoring groundwater levels. The SGMA regulations require a network of monitoring wells sufficient to demonstrate groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features.

Existing well records and existing groundwater monitoring programs in the Subbasin are described in Chapters 3 and 5, respectively. Groundwater well construction data and water level data were obtained from the following public sources:

- San Luis Obispo County Flood Control and Water Conservation District (SLOFCWCD)
- USGS National Water Information System (NWIS)
- DWR Online System for Well Completion Reports (OSWCR)
- DWR SGMA Data Viewer
- DWR California Statewide Groundwater Elevation Monitoring (CASGEM)
- City of Paso Robles and San Miguel CSD for public drinking water supply wells

These data sources resulted in a dataset of thousands of wells. The dataset was analyzed using the following steps to assess whether individual wells could be included in the initial GSP groundwater level monitoring network:

1. **Include Only Currently Measured Wells**. To reduce the possibility of selecting a well that has not been monitored in many years or that may no longer be accessible, wells were excluded that did not have at least one groundwater level measurement from 2012 or later. All the groundwater level monitoring data available for the Subbasin that met this criterion were provided by SLOFCWCD or the USGS NWIS, which have monitored groundwater levels in approximately 130 wells since 2012.

2. **Remove Confidential Wells**. Most of the data from wells in the SLOFCWCD groundwater level monitoring network are subject to confidentiality agreements. Because monitoring data collected as part of this GSP will be publicly available, data from the wells subject to confidentiality agreements cannot be published and therefore these wells are currently excluded from the GSP monitoring network.

3. **Include Additional Wells Provided by GSAs**. The GSAs provided an additional set of wells after securing permission from well owners to be included in the monitoring network. Only wells that had measurements at least as recent at 2012, were included.

Within the group of wells that met the criteria listed above, there are two well clusters: each consisting of three wells in the same location. The wells in these two clusters are all screened in the Paso Robles Formation Aquifer at various depths. A comparison of hydrographs for each cluster indicates that water levels have been generally similar in the three wells in each cluster, as shown on Figure 7-1. Only one well was selected from each cluster for inclusion in the monitoring network because it is representative of all the wells in that cluster. The two wells selected for monitoring are wells 26S/15E-20B04 and 25S/12E-16K05.

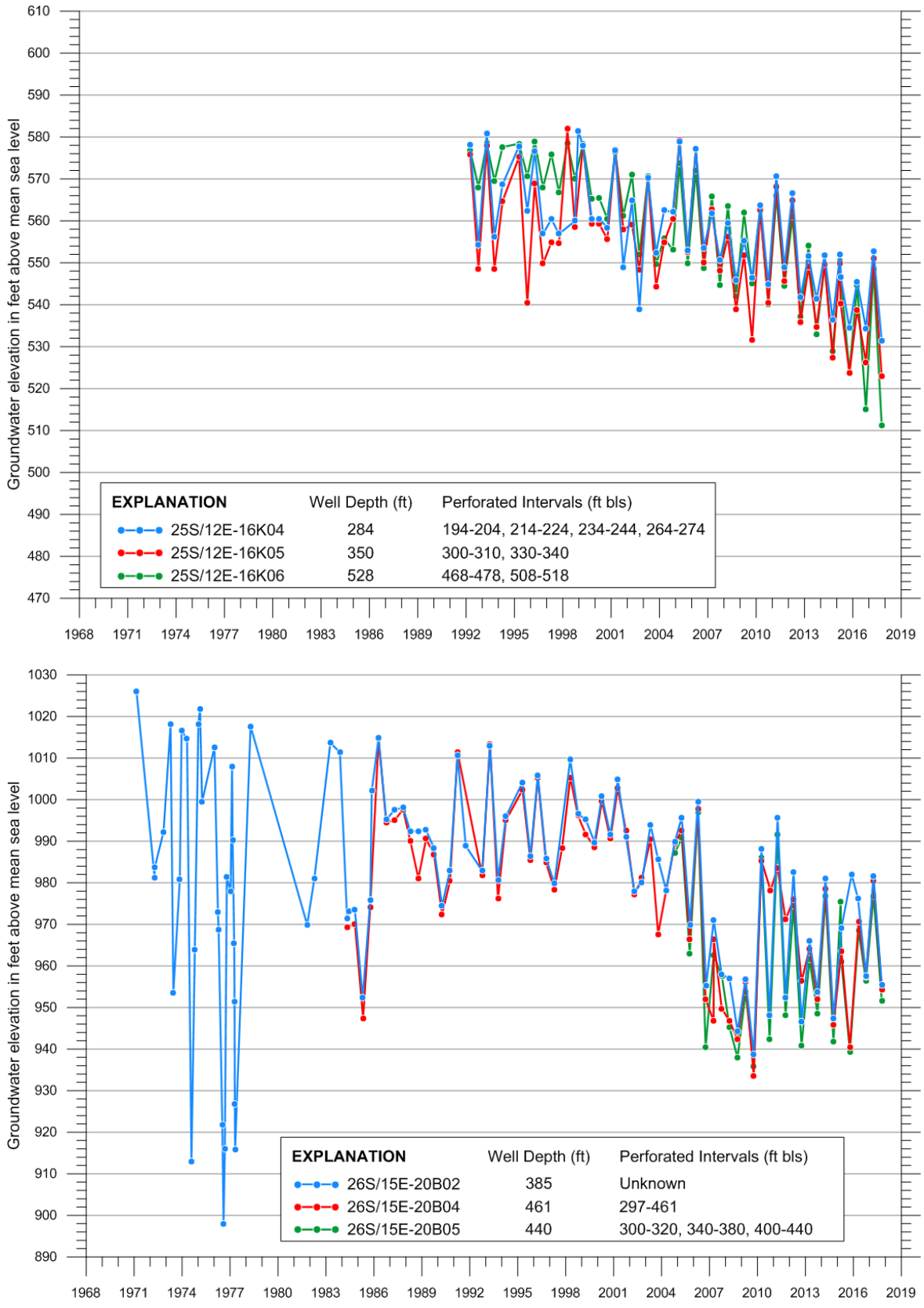


Figure 7-1. Hydrographs of Wells in Well Clusters

There are two principal aquifers in the Subbasin, as described in Chapter 4 – Hydrogeologic Conceptual Model. The Alluvial Aquifer occurs along stream channels and is generally up to about 100 feet thick. The Paso Robles Formation Aquifer occurs in thin discontinuous sand and gravel zones throughout the Subbasin. The wells in the proposed monitoring network are assigned to an aquifer according to these guidelines:

- The well location is compared to the surface geology map, Figure 4-4.
- If the well is located where the Paso Robles Formation is mapped at land surface on the surface geology map, then it is assumed to be monitoring the Paso Robles Formation Aquifer.
- If the well is located in the mapped extent of alluvium, and the screened interval or total well depth is less than 100 feet, then it was assumed to be monitoring the Alluvial Aquifer. If the top of the perforated interval is greater than 100 feet below land surface, then the well was assumed to be monitoring the Paso Robles Formation Aquifer.

The depths of several wells are unknown. Although well completion reports are available online via the State's OSWCR system, the well completion report numbers are unknown for these wells and therefore it is impossible to identify the associated well completion reports. Wells in which depth to water is greater than 100 feet below land surface on average are assumed to be monitoring the Paso Robles Formation Aquifer. Wells with depth to water less than 100 feet below land surface may be monitoring the alluvial aquifer, but their aquifer designations are unknown pending confirmation of screened interval and/or total depth. Wells for which an aquifer could not be assigned are considered potential future monitoring wells, and they will be included in the monitoring system when and if the well completion information and aquifer can be verified during GSP implementation. Likewise, there are also wells within the Alluvial Aquifer that could be included in the monitoring network when and if the data on depth and screened interval are obtained and confidentiality restrictions are lifted.

The wells in the water level monitoring network are listed in Table 7-1 and shown on Figure 7-2. As of 2019 there are 23 wells in the network, 22 wells monitor the Paso Robles Formation Aquifer and one well owned by the City of Paso Robles monitors the Alluvial Aquifer. Any of these wells that are missing well completion information will be assessed during GSP implementation to obtain well depth and/or screened interval. There are nine potential future monitoring wells listed on Table 7-2.

All 22 wells monitoring the Paso Robles Formation Aquifer are part of the SLOFCWCD monitoring network. These wells either are not subject to confidentiality agreements or the well data are located in a public database hosted by DWR and therefore are publicly available. The monitoring frequency indicates that water levels are presumably measured twice a year,

in accordance with the SLOFCWCD protocol of measuring depths to water in April and October of each year. The most recent available measurement was 2016 or 2017 in all wells.

Table 7-1. Groundwater Level Monitoring Well Network

Well ID (alt ID)	Well Depth (feet)	Screen Interval(s) (feet bls)	Reference Point Elevation (feet AMSL)	First Year of Data	Last Year of Data	Years Measured (years)	Number of Measurements	Aquifer
18MW-0191[1]	50	10-50	672 (LSE)	2018	2018	<1	1	Qa
25S/12E-16K05 (PASO-0345)	350	300-310, 330-340	669.8	1992	2017	25	52	PR
25S/12E-26L01 (PASO-0205)	400	200-400	719.72	1970	2017	47	103	PR
25S/13E-08L02 (PASO-0195)	270	110-270	1,033.81	2012	2017	5	11	PR
26S/12E-14G01 (PASO-0048)	740	---	789.3	1969	2017	48	117	PR
26S/12E-14G02 (PASO-0017)	840	640-840	787	1993	2012	19	27	PR
26S/12E-14H01 (PASO-0184)	1230	180-?	790	1969	2016	47	45	PR
26S/12E-14K01 (PASO-0238)	1100	---	786	1979	2017	38	80	PR
26S/12E-26E07 (PASO-0124)	400	---	835	1958	2017	59	128	PR
26S/13E-08M01 (PASO-0164)	400	260-400	827.92	2013	2017	4	11	PR
26S/13E-16N01 (PASO-0282)	400	200-400	890.17	2012	2017	5	11	PR
26S/15E-19E01 (PASO-0073)	512	223-512	1,020	1987	2017	30	52	PR
26S/15E-20B04 (PASO-0401)	461	297-461	1,036.36	1984	2017	33	66	PR
26S/15E-29N01 (PASO-0226)	350	---	1,135	1958	2017	59	122	PR
26S/15E-29R01 (PASO-0406)	600	180-600	1,109.5	2012	2017	5	9	PR
26S/15E-30J01 (PASO-0393)	605	195-605	1,123.3	1970	2017	47	80	PR
27S/12E-13N01 (PASO-0223)	295	195-295	972.42	2012	2017	5	11	PR
27S/13E-28F01 (PASO-0243)	212	118-212	1,072	1969	2017	48	104	PR
27S/13E-30F01 (PASO-0355)	310	200-310	1,043.2	2012	2017	5	8	PR
27S/13E-30J01 (PASO-0423)	685	225-685	1,095	2012	2015	3	6	PR
27S/13E-30N01 (PASO-0086)	355	215-235, 275-355	1,086.73	2012	2016	4	6	PR
27S/14E-11R01 (PASO-0392)	630	180-630	1,160.5	1974	2017	43	69	PR
28S/13E-01B01 (PASO-0066)	254	154-254	1,099.93	2012	2016	4	9	PR

NOTES: New alluvial monitoring well information provided by City of Paso Robles; well not included in County database.

"—" = unknown; AMSL – above mean sea level; PR Paso Robles Formation Aquifer; Qa Alluvial Aquifer

Table 7-2. Potential Future Groundwater Monitoring Well, Aquifer Unknown

Well ID (alt ID)	Well Depth (feet)	Screen Interval(s) (feet bls)	Reference Point Elevation (feet AMSL)	First Year of Data	Last Year of Data	Years Measured (years)	Number of Measurements	Aquifer
25S/12E-20K03 (PASO-0304)	---	---	625	1974	2017	43	82	---
26S/14E-24B01 (PASO-0302)	---	---	1001	1962	2017	55	93	---
26S/15E-33C01 (PASO-0314)	---	---	1095	1973	2017	44	75	---
26S/15E-33Q01 (PASO-0381)	---	---	1102	1973	2017	44	78	---
27S/15E-03E01 (PASO-0277)	---	---	1120.8	1968	2017	49	104	---
27S/14E-24B01 (PASO-0391)	---	---	1180.5	1973	2017	44	69	---
27S/14E-25J01 (PASO-0074)	---	---	1,225.5	1972	2017	45	67	--
27S/14E-29G01 (PASO-0041)	---	---	1201.5	1974	2017	43	73	---
27S/15E-35F01 (PASO-0053)	---	---	1230	1965	2017	52	78	---

NOTES: "—" = unknown

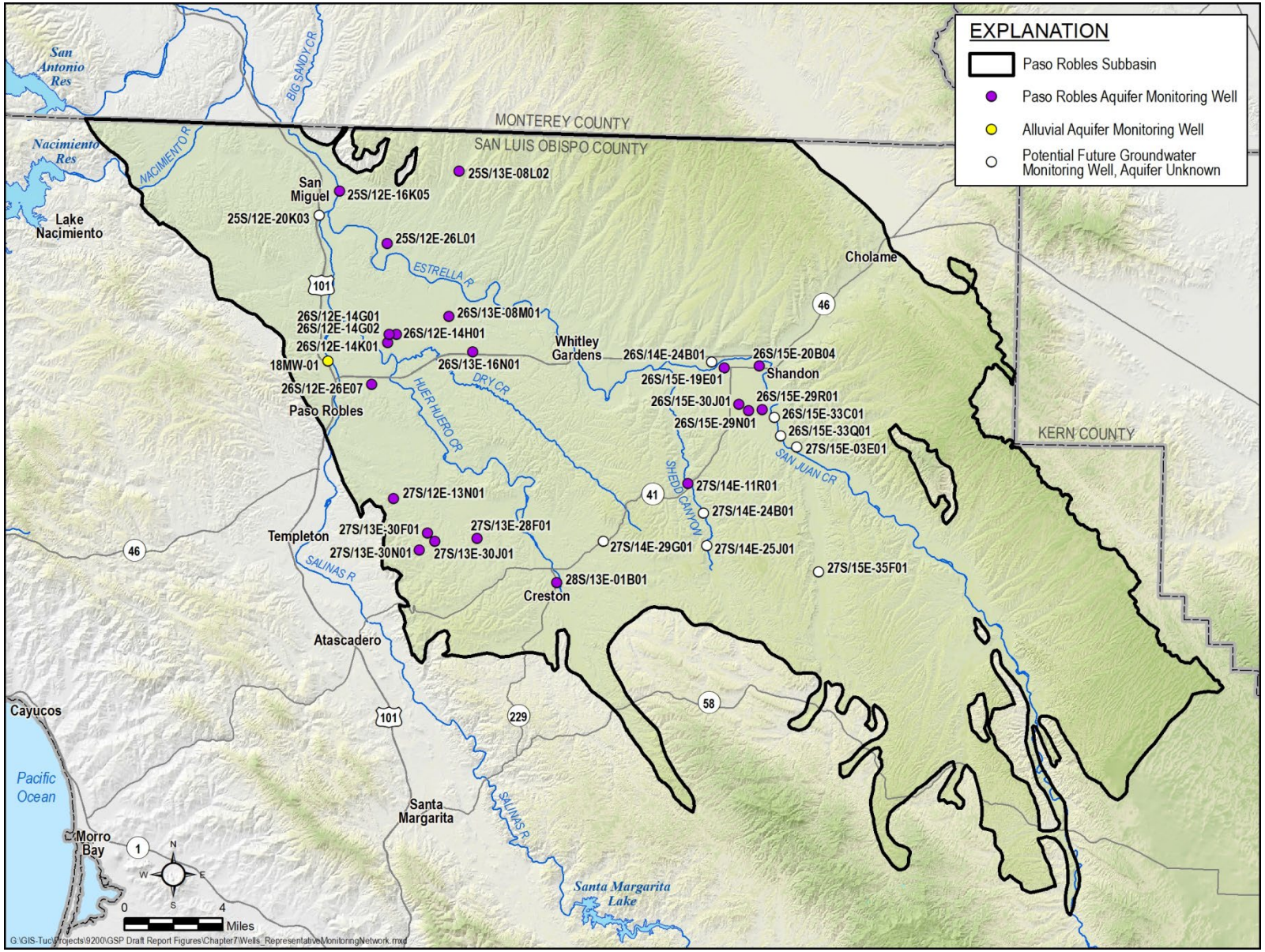


Figure 7-2. Groundwater Level Monitoring Well Network in Paso Robles Formation Aquifer

7.2.1 Groundwater Level Monitoring Network Data Gaps

The GSAs identified data gaps using guidelines in the SGMA regulations and BMPs published by DWR on monitoring networks (DWR, 2016b). Table 7-3 summarizes the suggested attributes of a groundwater level monitoring network from the BMPs in comparison to the current network, and identifies data gaps.

The SGMA regulations require a sufficient density of monitoring wells to characterize the groundwater table or potentiometric surface for each principal aquifer. Professional judgement is also used to determine an adequate level of monitoring density in areas of active groundwater pumping.

While there is no definitive rule on well density, the BMP cites a range of 0.2 to 10 wells per 100 square miles, with a median of 5 wells per 100 square miles from various cited studies. The CASGEM monitoring plan includes 10 to 20 wells per 100 square miles (SLOFCWCD, 2014). The Subbasin is 684 square miles, which equates to 34 wells at a median density of 5 wells per 100 square miles. The monitoring network of 22 wells in the Paso Robles Formation Aquifer is within the recommended range cited in the BMP (1 to 68 wells), but the number of monitoring wells may be considered low given the size and complexity of the Subbasin. The single monitoring well in the Alluvial Aquifer is insufficient. This is a data gap that will be addressed during plan implementation.

A program to increase monitoring frequency will be developed to determine seasonal high and low groundwater elevations and also monitor groundwater response to recharge and other activities. One method to increase monitoring frequency is to install continuous dataloggers in existing and new monitoring wells.

Groundwater level data must be sufficient to identify changes in groundwater flow directions and gradients. Groundwater contour maps are presented in Chapter 5 for both aquifers. These maps were prepared using available monitoring data, including data collected from wells subject to confidentiality agreements. To comply with the confidentiality agreements, the data and well locations are not included on the maps. The 23 wells in the proposed Paso Robles Formation Aquifer monitoring network are insufficient to develop representative and sufficiently detailed groundwater contour maps. The lack of publicly available data for both aquifers is identified as a data gap that will be addressed early in GSP implementation.

A recent study by GSI Water Solutions, Inc. (GSI) came to similar conclusions about data gaps in the Paso Robles Formation (GSI, 2018). The data gap areas developed by GSI are shown on Figure 7-3. These are areas where existing wells that can serve as monitoring wells should be identified, or new monitoring wells should be installed in the Paso Robles Formation Aquifer. Figure 7-3 also shows locations of data gaps and potential new well locations for the Alluvial Aquifer.

The data gap areas on Figure 7-3 will be addressed in the future by either identifying an existing well in the area that meets the criteria for a valid monitoring well, or drilling a new well in the area. There are approximately 90 confidential wells in the Subbasin that have been monitored since 2012 that could be used to fill some of these data gaps if the well owners agree to sign amended confidentiality agreements. SLOFCWCD will attempt to secure such amended agreements in areas where data gaps have been identified. The GSI data gap report identifies and targets specific confidential wells for consideration as new monitoring wells in a publicly accessible monitoring system. If an existing well cannot be identified to fill a data gap, it will be necessary to drill a new monitoring well for that data gap area.

Table 7-3. Summary of Best Management Practices, Groundwater Level Monitoring Well Network, and Data Gaps

Best Management Practice (DWR, 2016b)	Current Monitoring Network	Data Gap
Groundwater level data will be collected from each principal aquifer in the basin.	23 wells total. 22 wells are completed in the Paso Robles Formation Aquifer; one well is completed in the Alluvial Aquifer.	Additional wells are needed; well depth, screen interval, well log, and aquifer designation are unknown for candidate monitoring wells; renegotiate to release confidentiality from confidential wells with water level measurement more recent than 2000 in database
Groundwater level data must be sufficient to produce seasonal maps of groundwater elevations throughout the basin that clearly identify changes in groundwater flow direction and gradient (Spatial Density).	Confidential data from 43 wells and non-confidential data from 9 wells were used to create seasonal groundwater elevation maps for the Paso Robles Formation Aquifer (Chapter 5); Confidential data from 7 wells and data from 1 non-confidential well were used to create an annual groundwater elevation map for the Alluvial Aquifer (Chapter 5).	Some data used to prepare groundwater elevation maps in the GSP are confidential; in the future, only publicly available data will be used to develop contour maps. Additional wells are needed to develop representative contour maps.
Groundwater levels will be collected during the middle of October and March for comparative reporting purposes, although more frequent monitoring may be required (Frequency).	The 22 wells in the existing monitoring network that are screened in the Paso Robles Formation have been monitored twice a year, in spring (April) and fall (October), since at least 2012.	Seasonal monitoring is the protocol for SLOFCWCD (Appendix F); more frequent monitoring may be needed to identify actual seasonal high and low groundwater elevations and further characterize groundwater level fluctuations; instrumentation like transducers or other technology may be used in future to monitor groundwater elevations.
Data must be sufficient for mapping groundwater depressions, recharge areas, and along margins of basins where groundwater flow is known to enter or leave a basin.	Current network of 23 wells is insufficient for mapping all of these areas.	Additional monitoring wells are required in groundwater depressions, near recharge features such as rivers and streams, and along Subbasin margins; possibly install instrumentation like transducers or other technology in future monitoring wells.
Well density must be adequate to determine changes in storage.	Current network of 23 wells is insufficient for determining changes in groundwater storage.	Additional monitoring wells are required to adequately cover the Subbasin and determine changes in groundwater storage.
Data must be able to demonstrate the interconnectivity between shallow groundwater and surface water bodies, where appropriate.	One well in the existing monitoring network is confirmed to be completed in the Alluvial Aquifer. There is at least one additional well that may be completed in the Alluvial Aquifer if construction data were known.	Additional wells will be needed in the Alluvial Aquifer near reaches of interconnected surface water to characterize interconnectivity.
Data must be able to map the effects of management actions, i.e., managed aquifer recharge.	Current network of 23 wells is inadequate for mapping the effects of management actions.	Additional monitoring wells are required to map the effectiveness of management actions. This monitoring will be addressed as projects are implemented
Data must be able to demonstrate conditions near basin boundaries; agencies may consider coordinating monitoring efforts with adjacent basins to provide consistent data across basin boundaries. Agencies may consider characterization and continued impacts of internal hydraulic boundary conditions, such as faults, disconformities, or other internal boundary types.	Several wells in the existing monitoring network are used to monitor conditions on the southwestern boundary of the Subbasin.	Additional wells are likely necessary along the northern boundary with the Upper Valley Subbasin of the Salinas Valley. Additional wells may be necessary to map the structure and effect of internal faults.
Data must be able to characterize conditions and monitor adverse impacts to beneficial uses and users identified within the basin.	The current monitoring network characterizes only a portion of the Subbasin and the potential impacts.	Network will be expanded in accordance with the data gaps identified above.

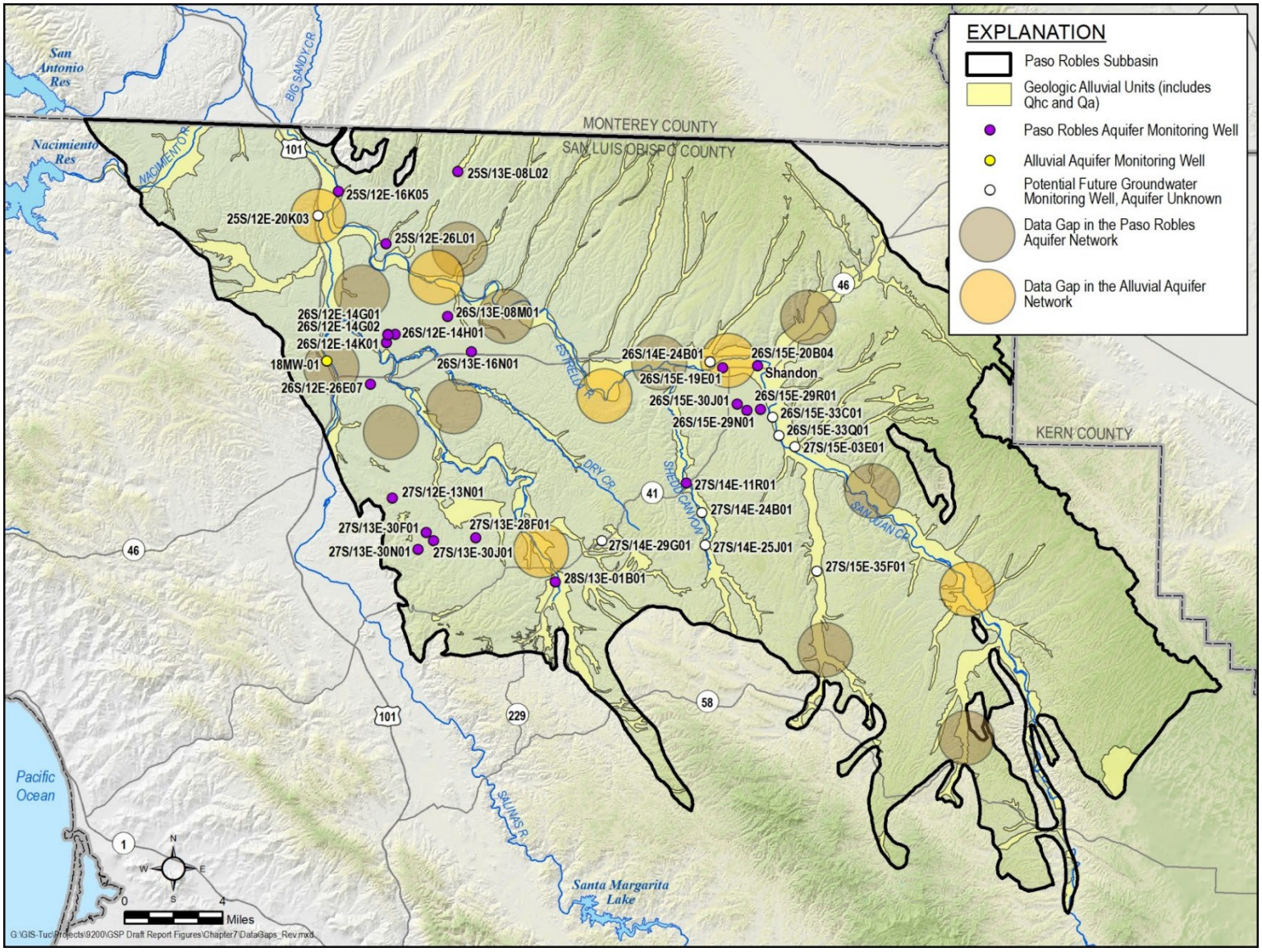


Figure 7-3. Data Gaps in the Groundwater Level Monitoring Well Network

7.2.2 Groundwater Level Monitoring Protocols

The groundwater level monitoring protocols established by SLOFCWCD are adopted by this GSP for manual groundwater level monitoring. The monitoring protocols are included in Appendix F.

There are various automated groundwater level monitoring devices in operation across the Subbasin and the GSP implementation phase will incorporate automated logging of groundwater elevations. Automated water level monitoring is already used in a number of private wells in the basin; these data may be used to supplement the current water level monitoring network in the future. As automated groundwater level monitoring systems are added to the monitoring network, appropriate protocols for each automated system will be incorporated into this GSP.

Automated groundwater level monitoring systems have the advantage of supplying more frequent groundwater levels with no increase in monitoring costs. The groundwater level monitoring BMP recommends more frequent monitoring in certain areas, including shallow, unconfined aquifers, in areas of rapid recharge, in areas of greater withdrawal rates, and in areas of more variable climatic conditions. More frequent monitoring may also be required in specific places where sustainability indicators are a concern or to track impacts of specific management actions and projects. The need for more frequent monitoring will be evaluated, and a program to increase monitoring frequency will be developed during the GSP implementation phase.

7.3 Groundwater Storage Monitoring Network

This GSP adopts groundwater levels as a proxy for assessing change in groundwater storage, as described in Chapter 8, Sustainable Management Criteria. To support the proxy, the relationship between change in groundwater levels and the change in the amount of groundwater in storage will be developed after GSP adoption and when additional data are available to develop the relationship. Groundwater level monitoring locations that are adequate for collecting the groundwater level data are identified in Section 7.2. Therefore, the network of wells providing groundwater level data for the reduction in groundwater storage sustainability indicator is the same wells shown on Table 7-1.

7.3.1 Groundwater Storage Monitoring Data Gaps

Data gaps in the groundwater storage monitoring network are similar to the data gaps identified for the groundwater level monitoring network discussed in Section 7.2.1. Because change in groundwater storage is predominantly influenced by changes in shallow water table elevations, more shallow wells than those discussed in Section 7.2.1 may be necessary. Additional water table wells may be needed throughout the Paso Robles Formation Aquifer.

The number of additional water table wells will not be known until there is an assessment of how many existing wells are screened at or near the existing water table in the Paso Robles Formation Aquifer. This is a data gap that will be addressed during GSP implementation.

7.3.2 Groundwater Storage Monitoring Protocols

The groundwater storage monitoring network is identical to the groundwater level monitoring network. Therefore, the protocols used for gathering water level data to assess changes in groundwater storage are identical to the protocols used for the chronic lowering of groundwater levels sustainability indicator. Protocols for the manual collection of groundwater levels are included in Appendix F. As automated groundwater level collection devices are added to the monitoring network, protocols will be developed for each of these automated systems and incorporated into the GSP.

7.4 Water Quality Monitoring Network

The sustainability indicator for degraded water quality is evaluated by monitoring groundwater quality at a network of existing supply wells. The SGMA regulations require sufficient spatial and temporal data from each applicable principal aquifer to determine groundwater quality trends for water quality indicators to address known water quality issues.

As described in Chapter 5, there are no known contaminant plumes in the Subbasin, therefore the monitoring network is monitoring only non-point source constituents of concern and naturally occurring water quality impacts.

Existing groundwater quality monitoring programs in the Subbasin are described in Chapter 3 and groundwater quality distribution and trends are described in Chapter 5. Constituents of concern were identified in Chapter 5 based on comparison to drinking water standards and levels that could impact crop production. As described in Chapter 8, separate minimum thresholds are set for agricultural constituents of concern and public supply well constituents of concern. Therefore, although there is a single groundwater quality monitoring network, different wells in the network will be assessed for different constituents. Constituents of concern for drinking water will be assessed at public water supply wells. Constituents of concern for crop health will be assessed at agricultural supply wells.

The public water supply wells included in the monitoring network were identified by reviewing data from the State Water Resources Control Board (SWRCB) Division of Drinking Water. Wells were selected that were sampled for at least one of the constituents of concern during 2015 or more recently. These wells are listed in Table 7-4 and shown on Figure 7-4. For the 41 public supply wells in the groundwater quality monitoring network, an assumed aquifer designation was assigned based on surficial geologic maps (Figure 4-4) and well depths when available. There are 31 wells that are in the Paso Robles Formation Aquifer,

seven wells in the Alluvial Aquifer, and three wells where the aquifer could not be estimated. Verifying the aquifer for these three wells is a data gap that will be addressed during plan implementation.

The agricultural supply wells included in the monitoring network were identified by reviewing data from the Irrigated Lands Regulatory Program (ILRP) that are stored in the SWRCB's Geotracker/GAMA database. Wells were selected that had detections of at least one of the agricultural constituents of concern reported from 2015 or more recently (GAMA, 2015). There are 28 ILRP properties with agricultural supply wells in the groundwater quality monitoring network. Since multiple wells of unknown depth are associated with a given IRLP ID, the aquifer monitored by these wells is unknown. These wells are listed in Table 7-4 and shown on Figure 7-4. If an IRLP property has multiple wells, the location of the well is shown at the average of these coordinates.

Table 7-4. Groundwater Quality Monitoring Well Network

Well ID	Type of Well	Well Depth[1] (feet)	Screen Interval (feet bls)	First Measurement Date	Last Measurement Date	Measurement Period (years)	Measurement Count	Assumed Aquifer
W0604000207-001	PWS	440	340-440	2002	2018	16	63	PR
W0604000210-001	PWS	117	87-117	2002	2015	13	9	---
W0604000512-001	PWS	60	30-60	2002	2015	13	13	AA
W0604000554-001	PWS	355	155-355	2002	2016	14	16	PR
W0604000554-003	PWS	237	174-237	2002	2016	14	16	PR
W0604000620-001	PWS	354	120-354	2001	2018	17	36	PR
W0604000620-002	PWS	510	310-510	2002	2018	16	41	PR
W0604000693-002	PWS	40	---	2005	2017	12	9	AA
W0604000708-001	PWS	80	80-80	2002	2018	16	10	AA
W0604000781-001	PWS	792	412-792	2002	2018	16	21	PR
W0604000781-011	PWS	670	380-670	2002	2018	16	21	PR
W0604000788-001	PWS	450	235-450	2002	2018	16	15	PR
W0604000788-005	PWS	920	400-920	2003	2018	15	14	PR
W0604000789-001	PWS	245	125-245	2002	2018	16	17	PR
W0604000790-001	PWS	175	126-175	2002	2018	16	62	---
W0604000803-001	PWS	420	100-420	2004	2018	14	10	PR
W0604000803-002	PWS	420	200-420	2004	2018	14	10	PR
W0604010007-003	PWS	400	200-400	1984	2016	32	36	PR
W0604010007-004	PWS	500	---	1984	2018	34	82	PR
W0604010007-006	PWS	344	---	1987	2018	31	34	PR
W0604010007-007	PWS	80	20-80	1984	2017	33	23	AA
W0604010007-008	PWS	80	20-80	1984	2018	34	24	AA

Well ID	Type of Well	Well Depth[1] (feet)	Screen Interval (feet bls)	First Measurement Date	Last Measurement Date	Measurement Period (years)	Measurement Count	Assumed Aquifer
W0604010007-009	PWS	---	---	1990	2018	28	8	---
W0604010007-010	PWS	600	260-600	1990	2017	27	17	PR
W0604010007-012	PWS	425	---	1984	2018	34	35	PR
W0604010007-013	PWS	317	---	1984	2018	34	34	PR
W0604010007-017	PWS	675	---	1993	2018	25	26	PR
W0604010007-018	PWS	535	---	1993	2016	23	23	PR
W0604010007-019	PWS	220	---	1995	2017	22	25	PR
W0604010007-020	PWS	610	---	1996	2017	21	22	PR
W0604010007-021	PWS	100	---	1998	2018	20	22	AA
W0604010007-038	PWS	1060	300-1060	2003	2018	15	18	PR
W0604010010-004	PWS	300	85-300	1984	2018	34	118	PR
W0604010010-005	PWS	360	162-360	1991	2018	27	105	PR
W0604010010-009	PWS	380	350-380	2007	2018	11	250	PR
W0604010028-002	PWS	342	297-342	1991	2018	27	46	PR
W0604010028-004	PWS	400	300-400	2002	2018	16	31	PR
W0604010831-001	PWS	840	640-840	1989	2016	27	24	PR
W0604010831-002	PWS	446	401-446	1989	2016	27	23	PR
W0604010831-003	PWS	475	410-475	1989	2016	27	24	PR
W0604010900-002	PWS	50	---	1999	2018	19	18	AA
AGL020000646	ILRP	660	---	2012	2017	5	---	---
AGL020000801	ILRP	---	---	2013	2017	4	---	---
AGL020001525	ILRP	---	---	2014	2017	3	---	---
AGL020001534	ILRP	---	---	2013	2017	4	---	---

Well ID	Type of Well	Well Depth[1] (feet)	Screen Interval (feet bls)	First Measurement Date	Last Measurement Date	Measurement Period (years)	Measurement Count	Assumed Aquifer
AGL020001605	ILRP	---	---	2015	2017	2	---	---
AGL020001689	ILRP	---	---	2014	2017	3	---	---
AGL020001800	ILRP	---	---	2015	2015	<1	---	---
AGL020003900	ILRP	---	---	2015	2015	<1	---	---
AGL020004014	ILRP	---	---	2014	2017	3	---	---
AGL020005173	ILRP	---	---	2015	2017	2	---	---
AGL020005268	ILRP	---	---	2015	2015	<1	---	---
AGL020007128	ILRP	---	---	2014	2017	3	---	---
AGL020007471	ILRP	---	---	2015	2015	<1	---	---
AGL020007593	ILRP	---	---	2015	2018	3	---	---
AGL020007721	ILRP	---	---	2017	2017	<1	---	---
AGL020007807	ILRP	---	---	2012	2017	5	---	---
AGL020007815	ILRP	---	---	2012	2017	5	---	---
AGL020007848	ILRP	---	---	2015	2015	<1	---	---
AGL020007872	ILRP	---	---	2015	2018	3	---	---
AGL020009803	ILRP	---	---	2014	2018	4	---	---
AGL020010282	ILRP	---	---	2012	2015	3	---	---
AGL020013814	ILRP	---	---	2015	2018	3	---	---
AGL020015242	ILRP	---	---	2015	2018	3	---	---
AGL020015302	ILRP	---	---	2013	2017	4	---	---
AGL020016382	ILRP	---	---	2015	2018	3	---	---
AGL020024742	ILRP	---	---	2016	2017	1	---	---
AGL020025402	ILRP	---	---	2015	2017	2	---	---

Well ID	Type of Well	Well Depth[1] (feet)	Screen Interval (feet bls)	First Measurement Date	Last Measurement Date	Measurement Period (years)	Measurement Count	Assumed Aquifer
AGL020028348	ILRP	---	---	2017	2017	<1	---	---

Notes

--- = Unknown

(1) = total well depth is assumed to be equivalent to bottom of perforated interval

AA = Alluvial Aquifer; PR = Paso Robles Formation Aquifer

PWS = Public water supply

ILRP = Irrigated Lands Regulatory Program

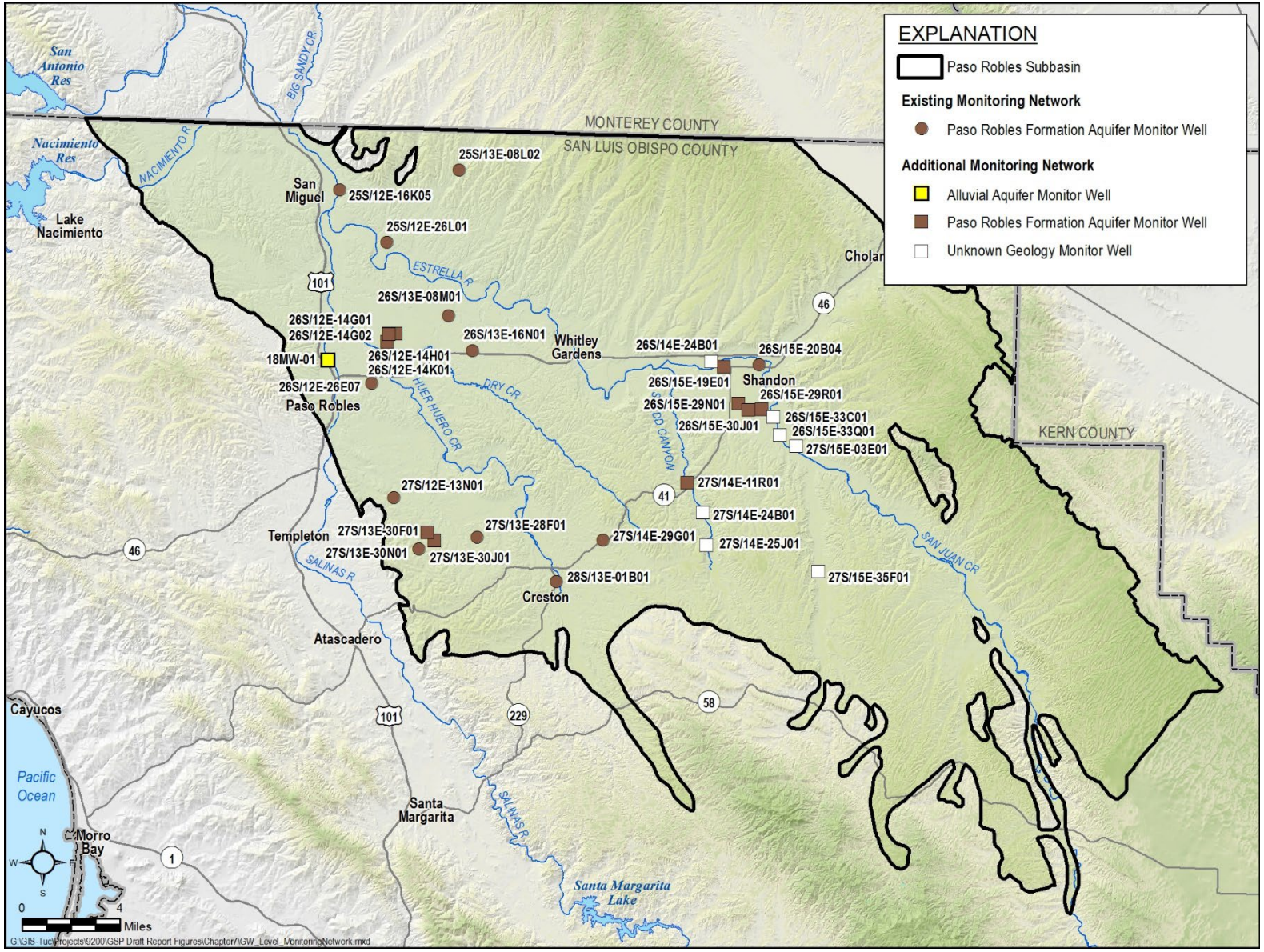


Figure 7-4. Groundwater Quality Monitoring Well Network

7.4.1 Groundwater Quality Monitoring Data Gaps

Because the groundwater quality monitoring network is based on existing supply wells, there are no spatial data gaps in the network. Table 7-5 summarizes the recommendations for groundwater quality monitoring from the BMPs, the current network, and data gaps. There is adequate spatial coverage in the network to assess impacts to beneficial uses and users. The primary data gap is that well construction info for many wells in the monitoring network is unknown. This is a data gap that will be addressed during GSP implementation.

7.4.2 Groundwater Quality Monitoring Protocols

Water quality samples are currently being collected according to SWRCB and ILRP requirements. ILRP data are currently collected under Central Coast RWQCB Ag Order 3.0. ILRP samples are collected under the Tier 1, Tier 2, or Tier 3 monitoring and reporting programs. Copies of these monitoring and reporting programs are included in Appendix F, and incorporated herein as monitoring protocols. These protocols will continue to be followed during GSP implementation for the groundwater quality monitoring.

Table 7-5. Summary of Groundwater Quality Monitoring, Best Management Practices, and Data Gaps

Best Management Practice (DWR, 2016b)	Current Network	Data Gap
Monitor groundwater quality data from each principal aquifer in the basin that is currently, or may be in the future, impacted by degraded water quality. • The spatial distribution must be adequate to map or supplement mapping of known contaminants. • Monitoring should occur based upon professional opinion, but generally correlate to the seasonal high and low groundwater level, or more frequent as appropriate.	There are 41 municipal wells and 28 IRLP wells within the plan area that have been regularly sampled since at least 2015 for groundwater quality.	None; the current monitoring network contains adequate spatial distribution to map water quality in the basin.
Collect groundwater quality data from each principal aquifer in the basin that is currently, or may be in the future, impacted by degraded water quality. • Agencies should use existing water quality monitoring data to the greatest degree possible. For example, these could include ILRP, GAMA, existing RWQCB monitoring and remediation programs, and drinking water source assessment programs.	Public databases provide adequate water quality information for degraded water quality.	Well depth and construction info for some wells in the monitoring network is unknown; however, there seems to be adequate coverage in both principal aquifers
Define the three-dimensional extent of any existing degraded water quality impact.	There are a large number of wells that are actively sampled.	Depth or construction information will need to be obtained to determine the vertical extent of contaminants
Data should be sufficient for mapping movement of degraded water quality.	There are a large number of wells that are actively sampled.	None
Data should be sufficient to assess groundwater quality impacts to beneficial uses and users.	Water quality monitoring program assesses impacts to both agricultural and municipal users.	None
Data should be adequate to evaluate whether management activities are contributing to water quality degradation.	There are a large number of wells that are actively sampled.	Projects and actions are being developed. Water quality network will be evaluated and augmented if necessary.

7.5 Land Subsidence Monitoring Network

The sustainability indicator for land subsidence is evaluated by monitoring land subsidence using InSAR data. As described in Chapter 5, land subsidence is monitored in the Subbasin by measuring ground elevation using microwave satellite imagery. This data is currently provided by DWR, covers the most recent three years of subsidence data (2015 - 2018), and is adequate to identify areas of recent subsidence. One or more GSA may opt to contract with USGS or others with expertise in subsidence to gather any additional datasets and evaluate the cause(s) of any identified subsidence. The GSAs will continue to annually assess subsidence using the DWR provided InSAR data.

7.5.1 Land Subsidence Monitoring Data Gaps

Available data indicate that there is currently no long-term subsidence occurring in the Subbasin that affects infrastructure. There are no data gaps identified with the subsidence network at this time.

7.5.2 Land Subsidence Monitoring Protocols

The BMP notes that no standard procedures exist for collecting subsidence data. The GSAs will continue to monitor data annually as part of GSP implementation. If additional relevant datasets become available, they will be evaluated and incorporated into the monitoring program. If the annual monitoring indicates subsidence is occurring at a rate greater than the minimum thresholds, then additional investigation and monitoring may be warranted. In particular, the GSAs will implement a study to assess if the observed subsidence can be correlated to groundwater elevations, and whether a reasonable causality can be established. The GSAs will also consider subsidence surveys published by the USGS in assessing land subsidence across the Subbasin if they become available.

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.

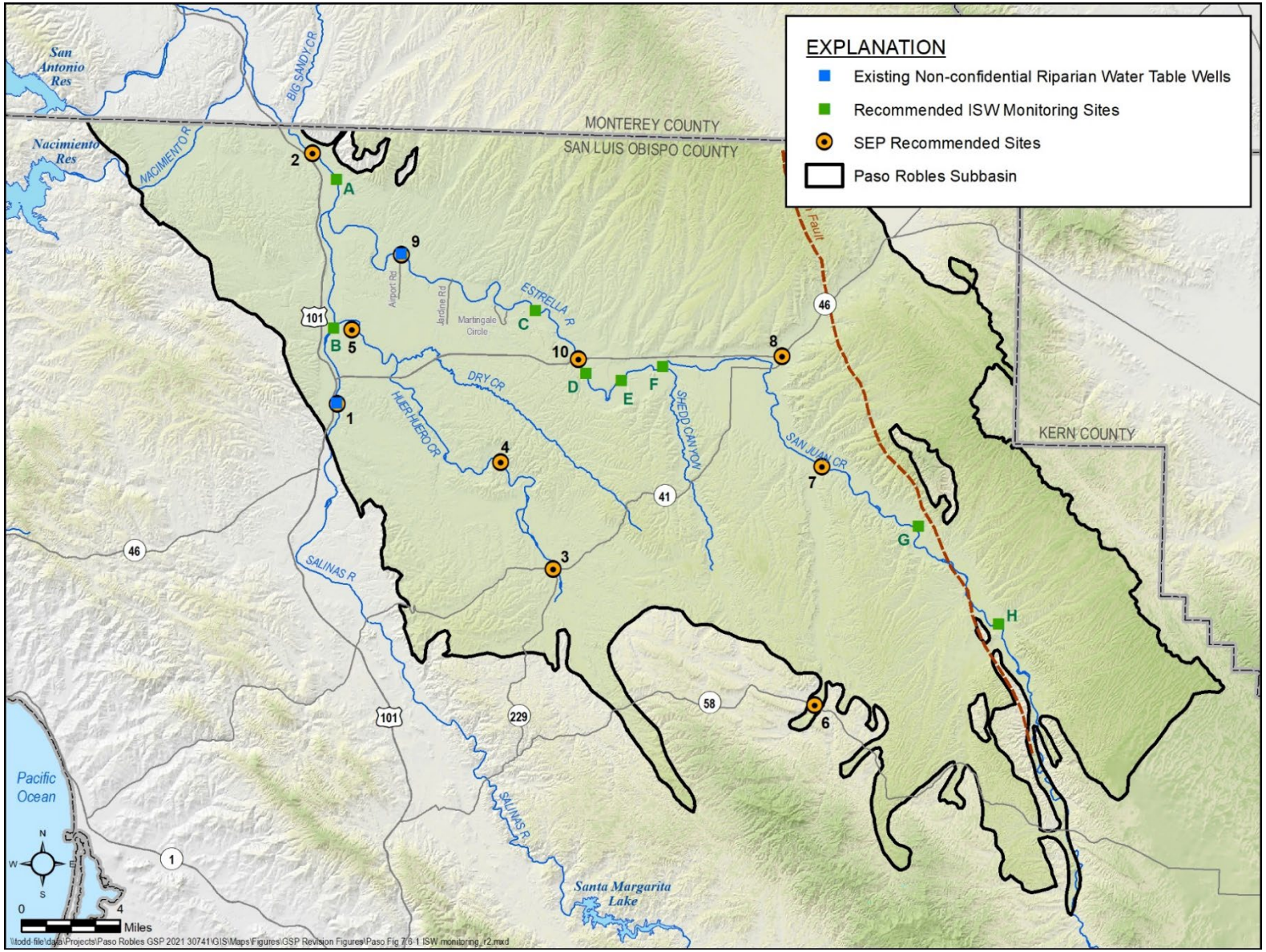


Figure 7-5. Interconnected Surface Water Monitoring Well Network

Table 7-6. 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.

7.6.2 Interconnected Surface Water Monitoring Protocols

Stream gauging is currently being conducted by the USGS according to the protocol outlined in the BMP. Water level monitoring will be conducted in accordance the protocols described in the water level monitoring network section of this chapter.

7.7 Representative Monitoring Sites

Representative monitoring sites (RMS) are defined in the SGMA regulations as a subset of monitoring sites that are representative of conditions in the Subbasin. All of the monitoring sites in this chapter are considered RMS.

7.8 Data Management System and Data Reporting

The SGMA regulations provide broad requirements on data management, stating that a GSP must adhere to the following guidelines for a DMS:

- Article 3, Section 352.6: Each Agency shall develop and maintain a data management system that is capable of storing and reporting information relevant to the development or implementation of the GSP and monitoring of the Subbasin.
- Article 5, Section 354.40: Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.

The Paso Robles Subbasin Data Management System (DMS) will be used for the organization, review, and uploading of data to implement the GSP. All data stored in the DMS have a unique identifier and a quality control check was performed on the data.

The Paso Robles Subbasin DMS was developed in Microsoft Access and contains the following main tables:

- **Well_Info** - General information about a well, including identifiers used by various agencies.
- **Site_Info** - Site information about a well, recharge site, or diversion; including location, elevation, and address information
- **Well_Constr** - Well construction information including depth, diameter, etc.
- **Well_Constr_Screen**- Supplements **Well_Constr** with well screen information. One well can have multiple screens.

- **Well_Geologic_Aquifer** - Information about the aquifer parameters of the well such as pumping test information, confinement, and transmissivity.
- **Well_Geologic_Lithology** - Lithologic information at a well site. Each well may have multiple lithologies at different depths.
- **Water_Level** - Water level measurements for wells
- **Well_Pumping** - Pumping measurements for wells, annual or monthly
- **SW_Recharge** - Recharge measurements for a recharge site, annual or monthly
- **SW_Diversion** - Diversion volume measurements for a diversion site, annual or monthly
- **Water_Quality** - Water quality data for wells or other type of site

Data sources used to populate the Paso Robles DMS are listed on Table 7-7. Categories marked with an X indicate datasets that are publicly accessible.

Table 7-7. Data Sources Used to Populate DMS

Data Sets	Data Category							
	Well and site info	Well construction	Aquifer properties and lithology (data to be added)	Water level	Pumping (data to be added)	Recharge (data to be added)	Diversion (data to be added)	Water quality
DWR (CASGEM)	X	X		X				
San Luis Obispo County	X	X		X				
Geotracker GAMA	X							X

Data were compiled and reviewed to comply with data quality objectives. The review included the following checks:

- Identifying outliers that may have been introduced during the original data entry process by others.
- Removing or flagging questionable data being uploaded in the DMS. This applies to historic water level data, water quality data, and water level over time.

The data were loaded into the database and checked for errors and missing data. Error tables were developed to identify water level and/or well construction data that were missing. For

water level data, another data quality check was completed by plotting well hydrographs to identify and remove anomalous data points.

In the future, well log information will be entered for selected wells and other information will be added as needed to satisfy the requirements of the SGMA regulations. It is anticipated that the DMS will be migrated to a web-based DMS currently being planned and developed by the County of San Luis Obispo.

8 SUSTAINABLE MANAGEMENT CRITERIA

This chapter defines the conditions that constitute sustainable groundwater management, discusses the process by which the four GSAs in the Subbasin will characterize undesirable results, and establishes minimum thresholds and measurable objectives for each sustainability indicator.

This is the fundamental chapter that defines sustainability in the Subbasin, and it addresses significant regulatory requirements. The measurable objectives, minimum thresholds, and undesirable results presented in this chapter define the future sustainable conditions in the Subbasin and commit the GSAs to actions that will achieve these future conditions.

Defining Sustainable Management Criteria requires significant analysis and scrutiny. This chapter presents the data and methods used to develop Sustainable Management Criteria and demonstrate how they influence beneficial uses and users. The Sustainable Management Criteria presented in this chapter are based on currently available data and application of the best available science. As noted in this GSP, data gaps exist in the hydrogeologic conceptual model. Uncertainty caused by these data gaps was considered when developing the Sustainability Management Criteria. Due to uncertainty in the hydrogeologic conceptual model, these Sustainable Management Criteria are considered initial criteria and will be reevaluated and potentially modified in the future as new data become available.

The Sustainable Management Criteria are grouped by sustainability indicator. The following sustainability indicators are applicable in the Subbasin:

- Chronic lowering of groundwater elevations levels
- Reduction in groundwater storage
- Degraded water quality
- Land subsidence
- Depletion of interconnected surface water

The sixth Sustainable Management Criteria, sea water intrusion, is not applicable in the Subbasin.

To retain an organized approach, this chapter follows the same structure for each sustainability indicator. The description of each Sustainable Management Criterion contains all the information required by Section 354.22 *et. seq* of the SGMA regulations and outlined in the Sustainable Management Criteria BMP (DWR, 2017), including:

- How locally defined significant and unreasonable conditions were developed

- How minimum thresholds were developed, including:
    - The information and methodology used to develop minimum thresholds (§354.28 (b)(1))
    - The relationship between minimum thresholds and the relationship of these minimum thresholds to other sustainability indicators (§354.28 (b)(2))
    - The effect of minimum thresholds on neighboring basins (§354.28 (b)(3))
    - The effect of minimum thresholds on beneficial uses and users (§354.28 (b)(4))
    - How minimum thresholds relate to relevant Federal, State, or local standards (§354.28 (b)(5))
    - The method for quantitatively measuring minimum thresholds (§354.28 (b)(6))
- How measurable objectives were developed, including:
    - The methodology for setting measurable objectives (§354.30)
    - Interim milestones (§354.30 (a), §354.30 (e), §354.34 (g)(3))
- How undesirable results were developed, including:
    - The criteria defining when and where the effects of the groundwater conditions cause undesirable results based on a quantitative description of the combination of minimum threshold exceedances (§354.26 (b)(2))
    - The potential causes of undesirable results (§354.26 (b)(1))
    - The effects of these undesirable results on the beneficial users and uses (§354.26 (b)(3))
- As noted above, the SGMA regulations address minimum thresholds before measurable objectives. This order was used for all applicable sustainability indicators except Chronic Lowering of Groundwater Levels. For this sustainability indicator, measurable objectives are presented first, followed by the minimum thresholds – the order in which they were developed.

8.1 Definitions

The SGMA legislation and SGMA regulations contain a number of new terms relevant to the Sustainable Management Criteria. These terms are defined below using the definitions included in the SGMA regulations (§ 351, Article 2). Where appropriate additional explanatory text is added in italics. This explanatory text is not part of the official definitions of these terms. To the extent possible, plain language, including limited use of overly

technical terms and acronyms, was used so that a broad audience will understand the development process and implications of the Sustainable Management Criteria.

- **Interconnected surface water** refers to surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water.
- Interconnected surface waters are parts of streams, lakes, or wetlands where the groundwater table is at or near the ground surface and there is water in the lakes, streams, or wetlands.
- **Interim milestone** refers to a target value representing measurable groundwater conditions, in increments of five years, set by an Agency as part of a Plan.
- Interim milestones are targets such as groundwater elevations that will be achieved every five years to demonstrate progress towards sustainability.
- **Management area** refers to an area within a basin for which the Plan may identify different minimum thresholds, measurable objectives, monitoring, or projects and management actions based on differences in water use sector, water source type, geology, aquifer characteristics, or other factors.
- **Measurable objectives** refer to specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Plan to achieve the sustainability goal for the basin.
- Measurable objectives are goals that the GSP is designed to achieve.
- **Minimum thresholds** refer to numeric values for each sustainability indicator used to define undesirable results.
- Minimum thresholds are established at representative monitoring sites. Minimum thresholds are indicators of where an unreasonable condition might occur. For example, a particular groundwater elevation might be a minimum threshold if lower groundwater elevations would result in a significant and unreasonable reduction in groundwater storage.
- **Representative monitoring** refers to a monitoring site within a broader network of sites that typifies one or more conditions within the basin or an area of the basin.
- **Sustainability indicator** refers to any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results, as described in Water Code Section 10721(x).
- The five sustainability indicators relevant to the Subbasin are listed in the introductory section of Chapter 8.

- **Uncertainty** refers to a lack of understanding of the basin setting that significantly affects an Agency's ability to develop sustainable management criteria and appropriate projects and management actions in a Plan, or to evaluate the efficacy of Plan implementation, and therefore may limit the ability to assess whether a basin is being sustainably managed.
- **Undesirable Result** Section 10721 of the Sustainable Groundwater Management Act states that
- Undesirable result means one or more of the following effects caused by groundwater conditions occurring throughout the basin:

    (1) Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon. Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.

    (2) Significant and unreasonable reduction of groundwater storage.

    (3) Significant and unreasonable seawater intrusion.

    (4) Significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies.

    (5) Significant and unreasonable land subsidence that substantially interferes with surface land uses.

    (6) Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water.

- Section § 354.26 of the SGMA regulations states that "The criteria used to define when and where the effects of the groundwater conditions cause undesirable results …shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin."

8.2 Sustainability Goal

Per Section §354.24 of the SGMA regulations, the sustainability goal for the Subbasin has three parts:

- A description of the sustainability goal;

- A discussion of the measures that will be implemented to ensure the Subbasin will be operated within sustainable yield, and;
- An explanation of how the sustainability goal is likely to be achieved.

The goal of this GSP is to sustainably manage the groundwater resources of the Paso Robles Subbasin for long-term community, financial, and environmental benefit of Subbasin users. This GSP outlines the approach to achieve a sustainable groundwater resource free of undesirable results within 20 years, while maintaining the unique cultural, community, and business aspects of the Subbasin. In adopting this GSP, it is the express goal of the GSAs to balance the needs of all groundwater users in the Subbasin, within the sustainable limits of the Subbasin's resources.

A number of management actions and conceptual projects are included in this GSP. Some combination of these management actions and conceptual projects will be implemented to ensure the Subbasin is operated within its sustainable yield and achieves sustainability. These management actions and conceptual projects include:

Management Actions

- Monitoring, reporting and outreach
- Promoting Best Water Use Practices
- Promoting stormwater capture
- Promoting voluntary fallowing of agricultural land
- Mandatory pumping limitations in specific areas
- Conceptual Projects
- City Recycled Water Delivery
- San Miguel CSD Recycled Water Delivery
- Nacimiento Water Project (NWP) Delivery at Salinas and Estrella River Confluence
- NWP Delivery North of City of Paso Robles
- NWP Delivery East of City of Paso Robles
- Expansion of Salinas Dam

The management actions and conceptual projects are designed to achieve sustainability within 20 years by one or more of the following means:

- Educating stakeholders and prompting changes in behavior to improve chances of achieving sustainability.

- Increasing awareness of groundwater pumping impacts to promote voluntary reductions in groundwater use through improved water use practices or fallowing crop land.
- Increasing basin recharge by capturing excess stormwater under approved permits.
- Developing new renewable water supplies for use in the Subbasin to offset groundwater pumping

8.3 General Process for Establishing Sustainable Management Criteria

The Sustainable Management Criteria presented in this chapter were developed using information from public input, received in public surveys, public meetings, comment forms; hydrogeologic analysis; and meetings with GSA staff and Cooperative Committee members. The process built on the Paso Robles Basin's long history of interested parties - including rural residents, farmers, local cities, and the County - holding public meetings to work on protecting the groundwater resource.

The general process for establishing Sustainable Management Criteria included:

- Holding a series of public outreach meetings that outlined the GSP development process and introduced stakeholders to Sustainable Management Criteria.
- Surveying the public and gathering input on minimum thresholds and measurable objectives. The survey questions were designed to get public input on all five sustainability indicators applicable to the Subbasin. A summary of the survey results is included in Appendix G.
- Analyzing survey results to assess preferences and trends relevant to Sustainable Management Criteria. Survey results and public comments from outreach meetings were analyzed to assess if different areas in the Subbasin had different preferences for minimum thresholds and measurable objectives.
- Combining survey results, outreach efforts, and hydrogeologic data to set initial conceptual minimum thresholds and measurable objectives.
- Conducting public meetings to present initial conceptual minimum thresholds and measurable objectives and receive additional public input. Three meetings on Sustainable Management Criteria were held in the Subbasin.
- Reviewing public input on preliminary Sustainable Management Criteria with GSAs.
- Addressing corrective actions provided by DWR with additional analyses relative to lowering of groundwater levels, identification of interconnected surface water, and establishment of sustainability criteria.

8.4 Chronic Lowering of Groundwater Levels Sustainable Management Criteria

This section is organized to first present the general concepts of the sustainable management criteria as developed in 2019. Responsive to the DWR Corrective Actions, this is supplemented by additional description of the undesirable results and additional explanation of the sustainability criteria with evaluation of the effects of the criteria on beneficial uses and users of groundwater.

8.4.1 Information and Methodology Used to Establish Measurable Objectives and Minimum Thresholds

The information used for establishing the chronic lowering of groundwater levels measurable objectives and minimum thresholds includes:

- Information about the public definition of significant and unreasonable conditions and preferred current and future groundwater elevations, gathered from the Sustainable Management Criteria survey and public outreach meetings.
- Historical groundwater elevation data from wells monitored by the County of San Luis Obispo
- Depths and locations from existing well records
- Maps of current and historical groundwater elevation data
- Results of modeling of various scenarios of future groundwater level conditions

Information and methods used to initially establish sustainable management criteria were supplemented using:

- The identified deficiencies and Corrective Actions defined by DWR in its June 3, 2021 letter reviewing the Paso Robles Area Subbasin – 2020 Groundwater Sustainability Plan (DWR, June 2021) and the January 21, 2022 "Incomplete" Determination of the 2020 Paso Robles Area Subbasin Groundwater Sustainability Plan (DWR, January 2022)

- Evaluation of existing well records with information on construction and locations (as of 2021) relative to the Representative Monitoring Site (RMS) wells

- Evaluation of the effects of the sustainability criteria on beneficial uses and users of groundwater, especially existing domestic well records

8.4.2 Locally Defined Significant and Unreasonable Conditions

This section provides the descriptions, definitions, and evaluation that are the basis for establishing sustainability criteria in the next section.

- Description of significant and unreasonable conditions
- Potential causes of significant and unreasonable conditions
- Definition of significant and unreasonable conditions

8.4.2.1 Description of Significant and Unreasonable Conditions

As groundwater levels decline in a well, a sequence of increasingly severe conditions will occur. These include an increase in pumping costs and a decrease in pump output (in gallons per minute). With further declines, the pump may break suction, which means that the water level in the well has dropped to the level of the pump intake. This can be remedied by lowering the pump inside the well, which can cost thousands of dollars. Chronically declining water levels will eventually drop below the top of the well screen. This exposes the screen to air, which can produce two adverse effects. In the first, water entering the well at the top of the screen will cascade down the inside of the well, entraining air; this air entrainment can result in cavitation damage to pump. The other potential adverse effect is accelerated corrosion of the well screen. Corrosion can reduce the efficiency and capacity of a well and eventually creates a risk of well screen collapse, which would likely render the well unusable. If water level declines significantly reduce the length of saturated well screen, water might not be able to flow into the well at the desired rate regardless of the capacity or depth setting of the pump. This might occur more frequently where the thickness of basin fill materials is relatively thin. While describing a progression of potential adverse effects, at some point the well no longer fulfills its water supply purpose and is deemed to have "gone dry." For the purposes of this discussion, a well going dry means that the entire well (to the reported total depth of the well) is unsaturated.

For purposes of setting the Measurable Objective and Minimum Threshold, significant and unreasonable conditions are defined in terms of an increased percentage of wells going dry. The rationale is based on four general assumptions summarized below, with more explanation in the following sections:

1. Accurate information on the location, elevation, use, status, and construction of most local supply wells is not readily available for detailed evaluation of the range of adverse effects. Analysis was initiated with the simple concept of the entire well depth as "going dry" and then applied to the set of existing wells that have available information on location and construction.

2. Responsibility for wells in a SGMA managed groundwater basin is shared between GSAs that manage groundwater levels to protect against significant and unreasonable conditions and well owners who have responsibility for their respective wells.

3. During the recent drought, many wells within the Subbasin were reported to have gone dry. The California Department of Water Resources (DWR) *Household Water Supply Shortage Reporting System* (DWR, April 2022) lists a total of 141 private household wells (i.e., domestic wells) that went dry as of the end of 2017, as shown on Figure 8-1.

4. Wells that went dry prior to 2017 are assumed to have either been replaced by deeper wells or an alternative water supply source. 2017 is used as the end of this analysis period to be consistent with the water level measurable objectives defined below.

8.4.2.2 Potential Causes of Significant and Unreasonable Conditions

With respect to chronic groundwater level declines, the primary cause of significant and unreasonable conditions is a water budget imbalance with pumping in excess of recharge. At any given time and place, this could involve multiple factors including local hydrogeologic conditions, cumulative pumping, reduced natural recharge due to drought, or reduction of surface water supplies used in lieu of groundwater and associated reduction in groundwater recharge from return flows.

The groundwater level declines in turn cause adverse conditions (i.e., loss of yield) that not only vary across the Subbasin and through time, but also differ in magnitude from well to well depending on its location, construction, operation, and conditions. Accurate information on the location, elevation, status, and construction of most local supply wells is not readily available and therefore, detailed evaluation of the range of adverse effects is not possible.

Moreover, the significant and unreasonable conditions of a well losing yield, experiencing damage, or "going dry" represent a complex interplay of causes and shared responsibility. Some of the potential causes are within the responsibility of the GSAs. Most notably, a GSA is responsible for groundwater basin management without causing significant and unreasonable conditions such as chronic groundwater level declines. SGMA also requires that a GSA address significant and unreasonable effects caused by groundwater conditions *throughout the basin.* This indicates that a GSA is not solely responsible for local or well-specific problems and furthermore that responsibility is shared with a well owner. A reasonable expectation exists that a well owner would construct, maintain, and operate the well to provide its expected yield over the well's life span, including droughts, and with some anticipation that neighbors also might construct wells (consistent with land use and well permitting policies).

8.4.2.3 Definition of Significant and Unreasonable Conditions

As context, the Sustainability Goal for the Paso Robles Subbasin is to sustainably manage groundwater resources for the long-term community, financial, and environmental benefit of users while maintaining the unique cultural, community, and business aspects of the Subbasin. Significant and unreasonable groundwater levels were initially defined in 2019 as those that:

- Impact the ability of existing domestic wells of average depth to produce adequate water for domestic purposes.
- Cause significant financial burden to those who rely on the groundwater basin
- Interfere with other SGMA sustainability indicators.

These have been modified. First, the limitation of existing domestic wells to those of average depth has been modified to conceptually include all existing well records, with a focus on domestic well records. This focus recognizes the importance of domestic wells as a source of potable supply (often the sole source to one or more households) and assumes that these are more likely to be shallow and thus susceptible to undesirable results from groundwater level declines. Data limitations in identifying domestic wells and evaluating impacts are acknowledged throughout this section. Second, financial burdens are not evaluated as a groundwater sustainability issue but are more appropriately addressed as part of the analysis of projects and management actions and implementation plan. Third, the effects on other SGMA sustainability indicators are addressed in Section 8.4.5.5.

For purposes of this supplementary analysis in response to DWR Corrective Actions and to support the sustainability criteria in this GSP, significant and unreasonable groundwater levels are defined as follows.

1. A significant number of wells throughout the Subbasin going dry with the following considerations:
    - As noted above, “going dry” means that the entire well length (to the bottom of the well) is unsaturated.
    - It is acknowledged that groundwater level declines involve a continuum of potential impacts that are specific to a well.
    - These include effects not noticed by the well owner and those that are noticed and reasonably handled by the well owner.
    - This significance criteria relates to dry wells that did not already go dry prior to 2017.

- The GSAs define a significant number of wells throughout the Subbasin as ten percent of all wells, as represented by wells with known location and construction information.

2. Chronic groundwater level declines that interfere with other SGMA sustainability indicators.

In that light, the definition of significant and unreasonable conditions would be the chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply equivalent to more than ten percent of wells going dry. This is defined by groundwater conditions occurring throughout the Subbasin. Additional temporal and spatial components defining undesirable results are presented in Section 8.4.6.

8.4.3 Measurable Objectives

The measurable objectives for chronic lowering of groundwater levels represent target groundwater elevations that are established to achieve the sustainability goal by at least 2040. Measurable objectives are groundwater levels established at each RMS. Measurable objective groundwater levels are higher than minimum threshold groundwater levels. Measurable objectives provide operational flexibility above minimum threshold levels to ensure that the Subbasin can be managed sustainably over a reasonable range of climate and hydrologic variability. Measurable objectives may change after GSP adoption as new information and hydrologic data become available.

8.4.3.1 Methodology for Setting Measurable Objectives

Initial measurable objectives were established based on historical groundwater level data along with input and preferences on future groundwater levels from domestic groundwater users, agricultural interests, environmental interests, and other Subbasin stakeholders. The input and preferences were used to formulate a range of conceptual measurable objective scenarios. These scenarios were evaluated using the GSP model to project the effect on future Subbasin operation and to select measurable objectives for the GSP.

8.4.3.2 Paso Robles Formation Aquifer Measurable Objectives

Initial measurable objectives for each groundwater level RMS in the Paso Robles Formation Aquifer were set at the approximate 2017 average groundwater levels. The measurable objectives are depicted on hydrographs in Appendix H.

8.4.3.3 Alluvial Aquifer Measurable Objectives

Only one RMS could be established for the Alluvial Aquifer. This RMS is associated with a new monitoring well (well name 18MW-0191) installed by the City of Paso Robles in June

2018. A measurable objective was not established for this RMS because it does not have sufficient historical groundwater level data. Additional measurable objectives will be established for the Alluvial Aquifer early after GSP adoption when the RMS network is expanded by either locating new candidate monitoring wells, modifying confidentiality agreements at known wells so that groundwater level data can be used, or by installing new monitoring wells.

8.4.4 Minimum Thresholds

Section §354.28(c)(1) of the SGMA regulations states that *"The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results."*

The Sustainable Management Criteria survey (Appendix G) provided general information on stakeholders' preferences for future groundwater levels. Initial minimum thresholds were developed based on the survey and public outreach results, hydrogeologic information including contours of 2017 groundwater levels and evaluation of historical groundwater level variability at the RMS, and information about well construction.

Average 2017 non-pumping groundwater levels have been selected as measurable objectives, and minimum thresholds are set below those levels. As stated in the Executive Summary section ES-7, a groundwater elevation minimum threshold for each monitoring well was set to an elevation 30 feet below the measurable objective. Analysis of historical groundwater elevation data suggested that 30 feet allows for reasonable operational flexibility that accounts for seasonal and anticipated climatic variations on groundwater elevation. Specific conditions such as well depths at each RMS were considered when establishing the groundwater level for the initial minimum threshold. Protecting a sustainable groundwater supply for existing wells was a guiding consideration. Minimum thresholds were selected to allow sufficient time for the GSAs to develop a broader and publicly accessible dataset that will give clear guidance to establish a reasonable justification for any potential management actions that would be triggered by exceedances of minimum thresholds.

As noted above, only one RMS could be established for the Alluvial Aquifer. This RMS is associated with a new monitoring well (well name 18MW-0191) installed by the City of Paso Robles in June 2018. A measurable objective was not established for this well; therefore, a minimum threshold is not established. A minimum threshold will be established after additional groundwater level data are available for the well. Additional minimum thresholds will be established for the Alluvial Aquifer early after GSP adoption when an expanded RMS network is developed.

8.4.4.1 Evaluation of Effect on Existing Wells of Sustainability Criteria

This section focuses on the sustainability criteria for the Paso Robles Formation Aquifer. As noted in Sections 8.4.3.3 and 8.4.4, only one well was identified in 2019 to represent the Alluvial Aquifer and no sustainability criteria were defined. This 2021 evaluation includes:

- identification of existing well records with construction information relative to RMS wells
- presentation of measurable objectives at RMS and analysis of effects on existing well records
- presentation of minimum thresholds at RMS and analysis of effects on existing well records

8.4.4.1.1 Evaluation of Existing Wells with Construction Information

Figure 8-2 shows the locations of the Representative Monitoring Site (RMS) wells along with locations of existing supply well records in their vicinity. Each of the existing well records (shown on the map as a colored dot) has an assigned location and documented construction details from available sources.

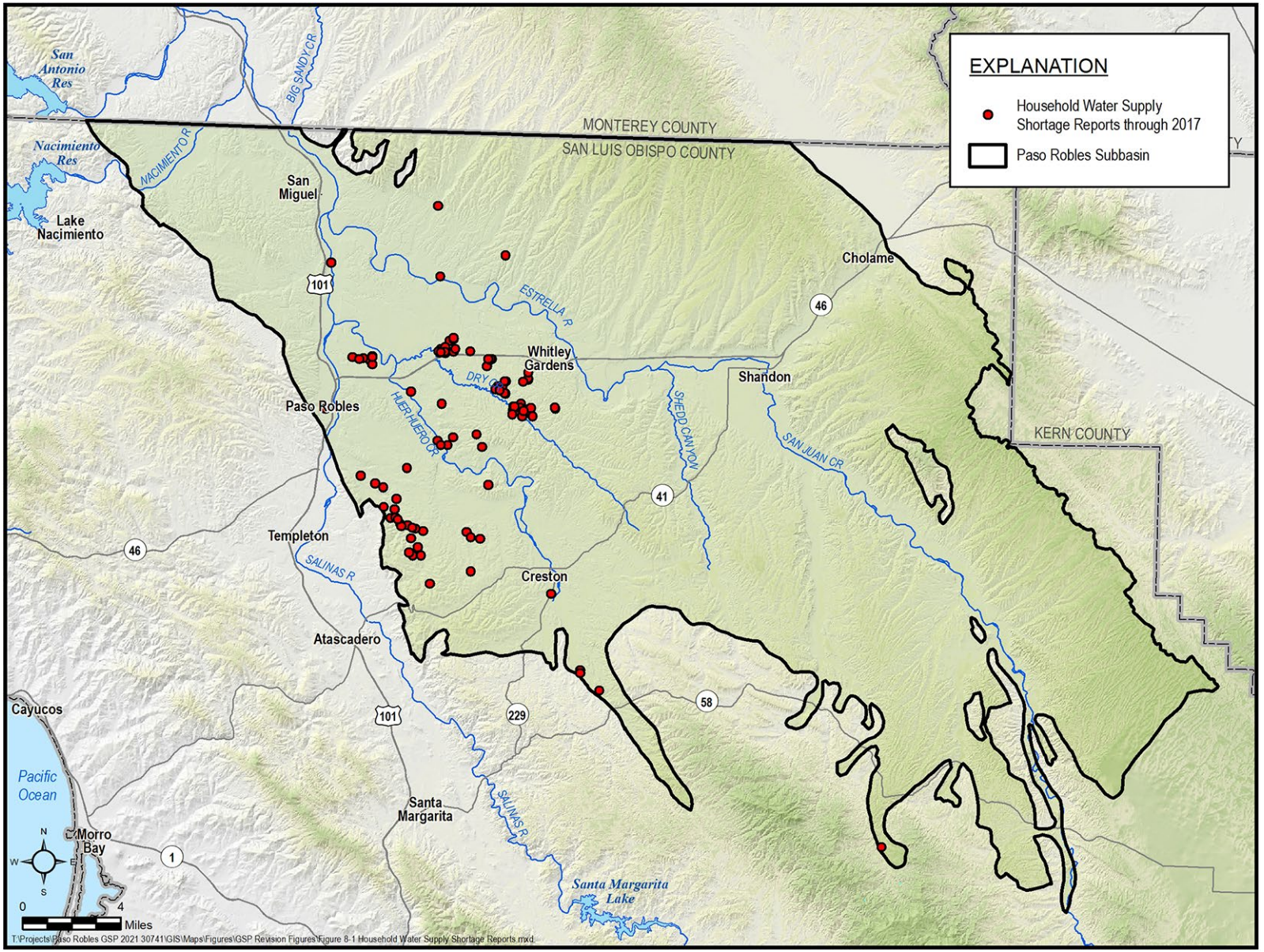


Figure 8-1. Household Water Supply Shortage Reports through 2017

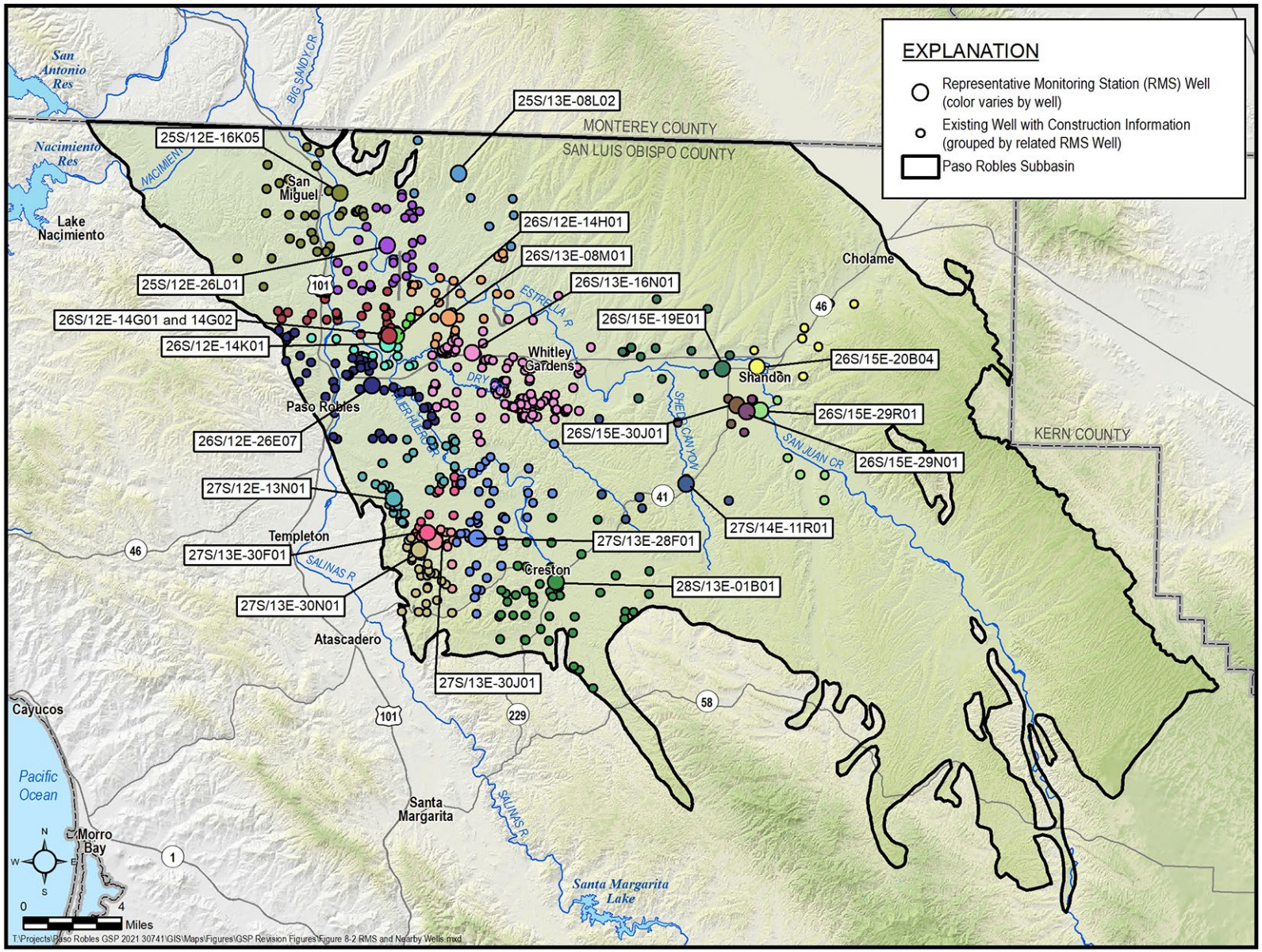


Figure 8-2. Representative Monitoring System (RMS) Wells and Existing Wells with Construction Information

Well locations and total depth information for existing wells in the Subbasin have been collected from three sources:

1. Records digitized as part of the Paso Robles Subbasin Data Management System (DMS)

2. Information from model development (GSSI 2016)

3. Records from DWR's Online System of Well Completion Reports (OSWCR, DWR October 2021)

A total of 1,593 wells with total depth information was identified within these three datasets: 71 from the DMS, 193 from model development, and 1,329 from OSWCR. While these datasets include significant well location and construction information, they also have limitations. Specifically:

- These datasets are solely records of well construction. None of the three indicate which wells have been replaced or destroyed, which still exist, or which are actively used for water supply.

- None of these records include information on pumping equipment, so assessment of the effects of water level changes on pumping costs is not possible.

- Very few of these records include complete screen interval information, and total well depth is the most commonly available information relating to well construction. Accordingly, assessment of water levels in comparison to saturated screen length is not possible, but comparison to total well depth is.

- The wells in these datasets represent a long history of well construction and groundwater conditions in the Subbasin. Older wells were typically shallower, corresponding to higher water levels and the drilling technology and practices at the time. Older wells have not been removed from these datasets, even though old shallow wells are likely no longer viable.

- While OSWCR includes the most wells by far, accurate locations for most of the wells in the OSWCR dataset are unknown. Only 4.5 percent of the OSWCR sourced wells with total depth information in the Subbasin are located by address. The remaining wells from this data source have been given Public Land Survey System (PLSS) section centers as their location. This location inaccuracy limits how these data can be used:

- Groundwater surface elevation from subbasin-wide contours or numerical model simulations interpolated at the mapped locations will be incorrect because the elevations would be different at the actual well location(s).

- The hydrogeologic conditions and aquifer in which these wells are completed cannot be accurately assessed because the conditions may be different at the actual well location(s).

- Assessment of the impacts of historical or future groundwater conditions on these wells is limited by the inaccurate locations and should be assumed to be representative in the aggregate and not on an individual-well basis.

The data from these three sources were combined into a single geographically-enabled dataset for evaluation in comparison to water levels in the RMS wells. These existing well recorded locations were mapped and the RMS well closest to each existing well record was identified. The existing well records were then grouped according to the nearest RMS well.

For each of the 22 groupings of wells around the RMS wells, the total depth of the wells was then compiled for comparison to depth to groundwater measurement in the respective RMS well. This allows the enumeration of how many wells theoretically would have been gone dry in historical and future periods.

Table 8-1 presents summary information for the 1,593 existing well records grouped by the nearest RMS well. As shown in Table 8-1, there is variability in the number and depths of existing wells nearest each RMS well. The number of nearby wells ranges from zero for RMS Well 26S/12E-14G02 (PASO-0017) to 310 for RMS Well 26S/13E-16N01 (PASO-0282). The shallowest well in this dataset is only 6 feet deep (nearest to RMS Well 26S/12E-26E07 (PASO-0124), while the deepest is 1,250 feet deep (nearest RMS Well 26S/13E-08M01 (PASO-0164). While there is a great deal of variability in the total depth of existing well records, the important observations from Table 8-1 are that:

1. The average depth of existing well records is over 400 feet, as shown by the weighted average at the bottom of the last column in the table.

2. The depth of the shallowest wells in the Subbasin varies widely with geography, as shown by the wide range of shallowest well total depths. However, the average depth of the shallowest wells in the Subbasin is only 76 feet, as indicated by the weighted average for the column showing the total depth of the shallowest wells.

These two statistics show that while most well records are for relatively deep wells, there have historically been shallow wells located in the Subbasin.

Table 8-1. RMS Wells and Nearby Existing Wells

RMS Well ID (alt ID)	Number of Nearby Wells	Total Depth of Shallowest Nearby Existing Well (feet)	Total Depth of Deepest Nearby Existing Well (feet)	Average Nearby Well Total Depth (feet)
25S/12E-16K05 (PASO-0345)	40	39	800	431
25S/12E-26L01 (PASO-0205)	92	70	890	377
25S/13E-08L02 (PASO-0195)	8	270	1,180	644
26S/12E-14G01 (PASO-0048)	99	30	870	362
26S/12E-14G02 (PASO-0017)	0	---	---	---
26S/12E-14H01 (PASO-0184)	11	100	1,090	585
26S/12E-14K01 (PASO-0238)	53	32	1,075	379
26S/12E-26E07 (PASO-0124)	174	6	1,004	347
26S/13E-08M01 (PASO-0164)	49	97	1,250	623
26S/13E-16N01 (PASO-0282)	310	120	1,220	610
26S/15E-19E01 (PASO-0073)	16	55	1,060	591
26S/15E-20B04 (PASO-0401)	36	39	475	304
26S/15E-29N01 (PASO-0226)	2	400	640	520
26S/15E-29R01 (PASO-0406)	23	210	867	419
26S/15E-30J01 (PASO-0393)	7	290	800	565
27S/12E-13N01 (PASO-0223)	62	92	980	442
27S/13E-28F01 (PASO-0243)	188	55	800	379
27S/13E-30F01 (PASO-0355)	55	104	810	398
27S/13E-30J01 (PASO-0423)	51	65	740	413
27S/13E-30N01 (PASO-0086)	111	100	660	348
27S/14E-11R01 (PASO-0392)	8	500	940	689
28S/13E-01B01 (PASO-0066)	198	62	750	381
Minimum:	**0**	**6**	**475**	**304**
Maximum:	**310**	**500**	**1,250**	**689**
Range:	**310**	**494**	**775**	**385**
Total / Weighted Average:	**1,593**	**76**	**927**	**437**

8.4.4.2 Effect of Paso Robles Formation Aquifer Measurable Objectives

Measurable objectives for groundwater level RMS wells in the Paso Robles Formation Aquifer are summarized in Table 8-2. Initial measurable objectives were set at the approximate 2017 average groundwater levels.

Assessment of the measurable objectives for the Paso Robles Formation Aquifer involved evaluation of the number of existing recorded wells that would have gone dry in 2017 when the measurable objective last occurred. The total depths of existing wells (with construction information) near the RMS wells were reviewed to identify which wells would have gone dry in average 2017 conditions, as represented by the nearest RMS well. The number and percentage of wells near each RMS well that would have gone dry are indicated on Table 8-2. As shown, a total of 225 wells within the available well information dataset would have gone dry in average 2017 groundwater level conditions, equivalent to 14.1 percent of the wells with construction information. This is more than the 141 wells that were reported to have gone dry in the *Household Water Supply Shortage Reporting System* (DWR, April 2022). This likely reflects three characteristics or limitations of the available information. First, the dataset includes well construction records for very old wells that have either been destroyed or are no longer in use and thus would not be reported to DWR. Second, not all of the existing wells for which construction information is available are household water supply sources, and thus this analysis likely includes wells for other purposes (e.g., irrigation). Finally, not all wells that went dry may have been reported to DWR; some well owners may not be aware of the reporting systems and some may have reported the conditions later.

Table 8-2. Chronic Lowering of Groundwater Levels Measurable Objectives for Paso Robles Formation Aquifer

RMS Well ID (alt ID)	Measurable Objective (feet NAVD88)	Number of Nearby Wells Dry at Measurable Objective	Percent of Nearby Wells Dry at Measurable Objective
25S/12E-16K05 (PASO-0345)	521	3	7.5%
25S/12E-26L01 (PASO-0205)	490	35	38.0%
25S/13E-08L02 (PASO-0195)	916	0	0.0%
26S/12E-14G01 (PASO-0048)	495	32	32.3%
26S/12E-14G02 (PASO-0017)	498	0	---
26S/12E-14H01 (PASO-0184)	505	2	18.2%
26S/12E-14K01 (PASO-0238)	483	17	32.1%
26S/12E-26E07 (PASO-0124)	648	38	21.8%
26S/13E-08M01 (PASO-0164)	613	4	8.2%
26S/13E-16N01 (PASO-0282)	588	4	1.3%
26S/15E-19E01 (PASO-0073)	929	1	6.3%
26S/15E-20B04 (PASO-0401)	967	1	2.8%
26S/15E-29N01 (PASO-0226)	993	0	0.0%
26S/15E-29R01 (PASO-0406)	986	0	0.0%
26S/15E-30J01 (PASO-0393)	959	0	0.0%
27S/12E-13N01 (PASO-0223)	716	10	16.1%
27S/13E-28F01 (PASO-0243)	894	19	10.1%
27S/13E-30F01 (PASO-0355)	766	16	29.1%
27S/13E-30J01 (PASO-0423)	806	12	23.5%
27S/13E-30N01 (PASO-0086)	810	31	27.9%
27S/14E-11R01 (PASO-0392)	1,028	0	0.0%
28S/13E-01B01 (PASO-0066)	1,040	0	0.0%
	Total:	225	14.1%

8.4.4.3 Effect of Paso Robles Formation Aquifer Minimum Thresholds

Minimum thresholds for groundwater level RMS wells in the Paso Robles Formation Aquifer are summarized on Table 8-3. Hydrographs for RMS wells with minimum thresholds are included in Appendix H. These minimum thresholds were selected to avoid the locally defined significant and unreasonable conditions.

As with the measurable objectives, the number of existing wells that would go dry at the minimum threshold was assessed. In this case, the assessment only included well records that would not have gone dry at the measurable objective. It is assumed that wells that would have gone dry in average 2017 groundwater conditions were either no longer active or were replaced with a deeper well or alternative water supply source. The number and percentage of additional wells near each RMS well that would go dry at the minimum threshold are

indicated on Table 8-3. A total of 62 additional wells, or 3.9 percent within the available well information dataset, would go dry at the minimum threshold.

As a qualitative comparison, the number of wells that were reported to have gone dry in the Household Water Supply Shortage Reporting System indicates that 95 wells have been reported to have gone dry between the end of 2017 and the start of 2022. Some of these well issues have been resolved by lowering the pump or deepening the well. Some of these wells may also have gone dry prior to the end of 2017, but the conditions may not have been reported until later. The total number of wells reported to have gone dry through the start of 2022 (236) is very similar to the number of existing wells with construction information predicted to go dry in average 2017 conditions (225). Therefore, the available data indicate that the minimum thresholds are protective of undesirable results as they relate to shallow domestic wells, defined as 10 percent of wells going dry after 2017.

Table 8-3: Chronic Lowering of Groundwater Levels Minimum Thresholds for Paso Robles Formation Aquifer

RMS Well ID (alt ID)	Minimum Threshold (feet NAVD88)	Number of Nearby Wells Dry at Minimum Threshold Not Dry at Measurable Objective	Percent of Nearby Wells Dry at Minimum Threshold Not Dry at Measurable Objective
25S/12E-16K05 (PASO-0345)	491	2	5.0%
25S/12E-26L01 (PASO-0205)	460	7	7.6%
25S/13E-08L02 (PASO-0195)	886	0	0.0%
26S/12E-14G01 (PASO-0048)	465	11	11.1%
26S/12E-14G02 (PASO-0017)	468	0	---
26S/12E-14H01 (PASO-0184)	475	0	0.0%
26S/12E-14K01 (PASO-0238)	453	3	5.7%
26S/12E-26E07 (PASO-0124)	618	4	2.3%
26S/13E-08M01 (PASO-0164)	583	0	0.0%
26S/13E-16N01 (PASO-0282)	558	1	0.3%
26S/15E-19E01 (PASO-0073)	899	0	0.0%
26S/15E-20B04 (PASO-0401)	937	0	0.0%
26S/15E-29N01 (PASO-0226)	963	0	0.0%
26S/15E-29R01 (PASO-0406)	956	0	0.0%
26S/15E-30J01 (PASO-0393)	929	0	0.0%
27S/12E-13N01 (PASO-0223)	686	3	4.8%
27S/13E-28F01 (PASO-0243)	864	4	2.1%
27S/13E-30F01 (PASO-0355)	736	4	7.3%
27S/13E-30J01 (PASO-0423)	776	4	7.8%
27S/13E-30N01 (PASO-0086)	780	15	13.5%
27S/14E-11R01 (PASO-0392)	998	0	0.0%
28S/13E-01B01 (PASO-0066)	1,010	4	2.0%
	Total:	62	3.9%

8.4.4.4 Minimum Thresholds Impact on Domestic Wells

The potential impacts of the minimum thresholds on domestic wells are included in the assessment presented above, while acknowledging that the available well information datasets do not necessarily differentiate which wells are domestic. The analysis indicates that no more than 3.9 percent of all wells in the Subbasin are susceptible to going dry in the event that the minimum threshold is reached in all RMS wells simultaneously. The methodologies used for the analysis, and methodologies used for forecasting occurrences of wells going dry, will be further refined during GSP implementation. As not all wells used in the analysis are for domestic supply, this indicates that a smaller number of domestic wells are susceptible to going dry at the minimum threshold.

8.4.4.5 Relationship between Individual Minimum Thresholds and Relationship to Other Sustainability Indicators

Section 354.28 of the SGMA regulations requires that the description of all minimum thresholds include a discussion about the relationship between the minimum thresholds for each sustainability indicator. In the SMC BMP (DWR, 2017), DWR has clarified this requirement. First, the GSP must describe the relationship between each sustainability indicator's minimum threshold; in other words, describe why or how a water level minimum threshold set at a particular RMS is similar to or different to water level thresholds in nearby RMS. Second, the GSP must describe the relationship between the selected minimum threshold and minimum thresholds for other sustainability indicators; in other words, describe how a water level minimum threshold would not trigger an undesirable result for land subsidence, for example.

Groundwater elevation minimum thresholds are derived from the measurable objectives, which are average 2017 groundwater elevations. Because the measurable objectives represent a historical and realistic groundwater elevation map, the minimum thresholds derived from these objectives (i.e., 30 feet lower) likely do not conflict with each other.

Groundwater elevation minimum thresholds can influence other sustainability indicators.

- **Change in groundwater storage**. Changes in groundwater elevations reflect changes in the amount of groundwater in storage. Pumping at or less than the sustainable yield will maintain or raise average groundwater elevations in the Subbasin. The groundwater elevation minimum thresholds are set to maintain a constant elevation over an extended period of time, consistent with the practice of pumping at or less than the sustainable yield. Therefore, the groundwater elevation minimum thresholds will not result in long term significant or unreasonable change in groundwater storage.
- **Seawater intrusion**. This sustainability indicator is not applicable to this Subbasin.

- **Degraded water quality**. Protecting groundwater quality is critically important to all who depend upon the groundwater resource, particularly for drinking water and agricultural uses. Maintaining groundwater levels protects against degradation of water quality or exceeding regulatory limits for constituents of concern in supply wells due to actions proposed in the GSP. Water quality could be affected through two processes:

    1. Low groundwater elevations in an area could cause deeper, poor-quality groundwater to flow upward into existing supply wells. Groundwater elevation minimum thresholds are set below current levels, meaning upward flow of deep, poor-quality groundwater could occur in the future. Should groundwater quality degrade due to lower groundwater elevations, the groundwater elevation minimum thresholds will be raised to avoid this degradation.
    2. Changes in groundwater elevation due to actions implemented to achieve sustainability could change groundwater gradients, which could cause poor quality groundwater to flow towards supply wells that would not have otherwise been impacted. These groundwater gradients, however, are only dependent on differences between groundwater elevations, not on the groundwater elevations themselves. Therefore, the minimum threshold groundwater elevations do not directly lead to a significant and unreasonable degradation of groundwater quality in production wells.

- **Subsidence**. A significant and unreasonable condition for subsidence is permanent pumping induced subsidence that substantially interferes with surface land use. Subsidence is caused by dewatering and compaction of clay-rich sediments in response to lowering groundwater levels. Very small amounts of land surface elevation fluctuations have been reported across the Basin. The groundwater elevation minimum thresholds are set below existing groundwater elevations, which could induce additional subsidence that has not already started. Should new subsidence be observed due to lower groundwater elevations, the groundwater elevation minimum thresholds will be raised to avoid this subsidence.
- **Depletion of interconnected surface water**. The set of monitoring wells used to evaluate interconnected surface water includes some overlap with the set of RMS wells used for the groundwater level minimum threshold. Depending on the local relationship between Alluvial Aquifer water levels and Paso Robles Formation Aquifer water levels, the minimum threshold for interconnected surface water could be more constraining than the minimum threshold for groundwater elevations. The interconnected surface water minimum threshold (no more than 10 feet below the spring 2017 water level) is higher than the groundwater elevation minimum threshold (30 feet below the average 2017 water level), but the former applies only to Alluvial

Aquifer wells. At locations along stream segments with riparian vegetation where the difference between Alluvial Aquifer and Paso Robles Formation Aquifer water levels is less than 20 feet, the interconnected surface water minimum threshold would likely constrain water levels. The only locations where existing data indicates a potential connection between the surface water system and the underlying Paso Robles Formation Aquifer include the middle reach of the Estrella River (from Shedd Canyon to Martingale Circle) and along San Juan Creek upstream of Spring Creek. At these locations the connection between surface waters 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.

8.4.4.6 Effect of Minimum Thresholds on Neighboring Basins

One neighboring groundwater basin is required to develop a GSP: the Upper Valley Subbasin of the Salinas Valley Basin. Additionally, the adjoining Atascadero Subbasin is currently developing a GSP under SGMA. The anticipated effect of the groundwater elevation minimum thresholds on each of the two subbasins is addressed below.

Upper Valley Subbasin of the Salinas Valley Basin. The Upper Valley Subbasin is required to develop a GSP by 2022. The Upper Valley Subbasin is hydrogeologically downgradient of the Paso Robles Subbasin: groundwater generally flows from the Paso Robles Subbasin into the Upper Valley Subbasin. Lower groundwater levels in the Paso Robles Subbasin as a result of GSP actions could reduce the amount of groundwater flowing into the Upper Valley Subbasin, affecting that Subbasin's ability to achieve sustainability. The groundwater elevation minimum thresholds are set at constant levels that are below current elevations; therefore, they could reduce groundwater flow into the adjacent Upper Valley Subbasin. If reduced groundwater flow is observed that impacts sustainability in the Upper Valley Subbasin of the Salinas Valley Basin, then minimum thresholds would be adjusted to avoid this impact.

The Paso Robles Subbasin GSAs have developed a cooperative working relationship with the Salinas Valley Basin GSA who will be developing the GSP for the Upper Valley Subbasin. The two GSAs will monitor and work together to ensure that minimum thresholds do not significantly affect each Subbasin's ability to achieve sustainability.

Atascadero Subbasin. The Paso Robles Subbasin is hydrogeologically separated from the Atascadero Subbasin by the Rinconada Fault. The fault acts as a barrier to groundwater flow in the Paso Robles Formation Aquifer as presented in Chapter 4. While minimum thresholds are set at levels below current groundwater levels, these lower levels are not expected to impact sustainability in the Atascadero Subbasin due to the limited groundwater flow between the two Subbasins. The Paso Robles Subbasin GSAs have a cooperative working relationship

with the Agencies managing the Atascadero Subbasin and will continue to work together to ensure that minimum thresholds do not significantly affect each Subbasin's ability to achieve sustainability.

8.4.4.7 Effects on Beneficial Users and Land Uses

The groundwater elevation minimum thresholds may have several effects on beneficial users and land uses in the Subbasin.

Agricultural land uses and users. The groundwater elevation minimum thresholds limit lowering of groundwater levels in the Subbasin. In the absence of other mitigating measures this has the effect of potentially limiting the amount of groundwater pumping in the Subbasin. Limiting the amount of groundwater pumping will limit the amount and type of crops that can be grown in the Subbasin, which could result in a proportional reduction in the economic viability of some properties. The groundwater elevation minimum thresholds could therefore limit expansion of the Subbasin's agricultural economy. This could have various effects on beneficial users and land uses:

- There will be an economic impact to employees and suppliers of production products and materials. Many parts of the local economy rely on a vibrant agricultural industry, and they too will be hurt proportional to the losses imparted to agricultural businesses.
- Growth of city, county and state tax rolls could be slowed or reduced due to the limitations imposed on agricultural growth.

Urban land uses and users. The groundwater elevation minimum thresholds effectively limit the amount of groundwater pumping in the Subbasin. This may limit urban growth or result in urban areas obtaining alternative sources of water. This may result in higher water costs for municipal water users.

Domestic land uses and users. The groundwater elevation minimum thresholds protect most domestic wells. Therefore, the minimum thresholds will likely have an overall beneficial effect on existing domestic land uses by protecting the ability to pump from domestic wells. However, limited water in some of the shallowest domestic wells may require owners to drill deeper wells. Additionally, the groundwater elevation minimum thresholds may limit the increase of non-*de minimis* groundwater use in order to limit future declines in groundwater levels caused by more non *de minimis* domestic pumping. Policies allowing offsets of existing use to allow new construction or bringing in new sources of water can mitigate against this effect.

Ecological land uses and users. Historical reductions in the extent and density of riparian vegetation in certain stretches of rivers and creeks may have been associated with declines in groundwater levels. The additional 30 feet of water-level decline allowed by the water-level

minimum threshold could cause further reduction in riparian vegetation in areas where the Alluvial Aquifer is hydraulically connected with the Paso Robles Formation Aquifer. Groundwater elevation minimum thresholds effectively protect the groundwater resource including those existing ecological habitats that rely upon it because they are set to avoid long term declines in groundwater levels in a short amount of time. The sustainability criteria for interconnected surface water (see Section 8.8) include minimum thresholds defined as groundwater levels that are in some locations higher than the groundwater elevation minimum thresholds.

8.4.4.8 Relevant Federal, State, or Local Standards

No Federal, State, or local standards exist for chronic lowering of groundwater elevations.

8.4.4.9 Method for Quantitative Measurement of Minimum Thresholds

Groundwater elevation minimum thresholds will be directly measured from existing or new monitoring wells. The groundwater level monitoring will be conducted in accordance with the monitoring plan outlined in Chapter 7. Furthermore, the groundwater level monitoring will meet the requirements of the technical and reporting standards included in the SGMA regulations.

As noted in Chapter 7, the current groundwater monitoring network in the Paso Robles Formation Aquifer currently only includes 24 wells. For the Alluvial Aquifer, only one RMS was established. The GSAs will expand the monitoring network in both aquifers during GSP implementation.

8.4.5 Interim Milestones

Initial interim milestones were developed for the 24 RMS established for the Paso Robles Formation Aquifer based on the results of modeling conducted to evaluate management actions and select measurable objectives (Chapter 9). Because measurable objectives have not been established at RMS for the Alluvial Aquifer, interim milestones cannot be developed. Interim milestones will be developed in the future (after GSP adoption) when the RMS network is expanded in the Alluvial Aquifer.

Conceptually, the following actions and groundwater conditions are expected to occur during implementation.

- Monitoring of Subbasin conditions using an expanded monitoring network and continuous monitoring devices will provide additional information to refine interim milestones

- Pumping cutbacks in some areas of the Subbasin will begin about five years after adoption of the GSP. During this five-year period, current groundwater levels trends would continue to be tracked by the RMS.

- After about 5 years, groundwater levels will begin trending toward measurable objectives as a result of management actions and possibly pumping cutbacks in some area of the Subbasin.

Table 8-4 summarizes the interim milestones for the RMS in the Paso Robles Formation Aquifer.

Table 8-4: Chronic Lowering of Groundwater Levels Interim Milestones for Paso Robles Formation Aquifer

Well ID (alt ID)	Interim Milestones (feet NAVD88)		
	2025	2030	2035
25S/12E-16K05 (PASO-0345)	521	521	520
25S/12E-26L01 (PASO-0205)	499	496	492
25S/13E-08L02 (PASO-0195)	911	905	901
26S/12E-14G01 (PASO-0048)	526	532	534
26S/12E-14G02 (PASO-0017)	523	531	533
26S/12E-14H01 (PASO-0184)	513	521	524
26S/12E-14K01 (PASO-0238)	527	533	535
26S/12E-26E07 (PASO-0124)	644	644	645
26S/13E-08M01 (PASO-0164)	620	619	617
26S/13E-16N01 (PASO-0282)	595	594	593
26S/15E-19E01 (PASO-0073)	935	937	938
26S/15E-20B04 (PASO-0401)	972	976	978
26S/15E-29N01 (PASO-0226)	1,009	1,012	1,014
26S/15E-29R01 (PASO-0406)	997	1,001	1,003
26S/15E-30J01 (PASO-0393)	972	976	978
27S/12E-13N01 (PASO-0223)	711	710	709
27S/13E-28F01 (PASO-0243)	896	899	900
27S/13E-30F01 (PASO-0355)	770	768	765
27S/13E-30J01 (PASO-0423)	817	815	812
27S/13E-30N01 (PASO-0086)	804	799	794
27S/14E-11R01 (PASO-0392)	1,029	1,030	1,030
28S/13E-01B01 (PASO-0066)	1,052	1,055	1,055

Interim milestones may be revised during implementation as new data and understanding of the hydrogeologic conditions in the Subbasin become available.

8.4.6 Undesirable Results

8.4.6.1 Criteria for Defining Undesirable Results

The chronic lowering of groundwater elevation undesirable result is a quantitative combination of groundwater elevation minimum threshold exceedances. For chronic lowering of groundwater elevations, an exceedance is defined by the annual average (e.g., spring and fall) water level below the well's defined minimum threshold. For the Paso Robles Subbasin, the groundwater elevation undesirable result is:

Over the course of two years, no more than two exceedances for the groundwater elevation minimum thresholds within a 5-mile radius or within a defined area of the Basin for any single aquifer. A single monitoring well in exceedance for two consecutive years also represents an undesirable result for the area of the Basin represented by the monitoring well. Geographically isolated exceedances will require investigation to determine if local or Basin wide actions are required in response.

This compound definition of undesirable results provides flexibility in defining sustainability. Increasing the number of allowed minimum threshold exceedances provides more flexibility but may lead to significant and unreasonable conditions for a number of beneficial users. Reducing the number of allowed minimum threshold exceedances ensures strict adherence to minimum thresholds but reduces flexibility due to unanticipated hydrogeologic conditions. The undesirable result was set to balance the interests of beneficial users with the practical aspects of groundwater management under uncertainty.

Use of this definition of undesirable results in combination with the minimum threshold for groundwater elevation will avoid the significant and unreasonable conditions discussed above. Specifically, it will be impossible to cause a significant percentage of the wells in the Subbasin to go dry because the undesirable result includes geographic and temporal components that prevent the entire Subbasin from reaching the minimum thresholds in the RMS wells simultaneously.

As the monitoring system is expanded, the number of exceedances allowed may be adjusted. One additional exceedance will be allowed for approximately every seven new monitoring wells. This was considered a reasonable number of exceedances given the hydrogeologic uncertainty of the Subbasin. Close monitoring of groundwater data over the following years will allow actual numbers to be refined based on observable data. Management of the Subbasin will adapt to specific conditions and to a growing understanding of basin conditions and processes to adopt appropriate responses. When additional data and a better understanding of hydrogeologic conditions are available in the future, the GSAs may adjust measurable objectives and minimum thresholds and adaptively manage sustainability actions to avoid undesirable results.

8.4.6.2 Potential Causes of Undesirable Results

Conditions that may lead to an undesirable result include the following:

- Localized pumping clusters. Even if regional pumping is maintained within the sustainable yield, clusters of high-capacity wells may cause excessive localized drawdowns that lead to undesirable results in specific areas.
- Expansion of *de-minimis* pumping. Individual *de-minimis* pumpers, individually, do not have a significant impact on Subbasin-wide groundwater elevations. However, many
  de-minimis pumpers are often clustered in specific residential areas. Pumping by these *de-minimis* users is not currently regulated under this GSP. Adding additional domestic *de-minimis* pumpers in specific areas may result in excessive localized drawdowns and undesirable results.
- Extensive drought and climate change. Minimum thresholds were established based on historical groundwater elevations and reasonable estimates of future groundwater elevations. Extensive droughts may lead to excessively low groundwater elevations and undesirable results.

8.4.6.3 Effects on Beneficial Users and Land Uses

The primary detrimental effect on beneficial users from allowing multiple exceedances occurs if more than one exceedance occurs in a small geographic area. Exceedances of the minimum thresholds for groundwater elevation are reasonable as long as the exceedances are spread out across the Subbasin. If the exceedances are clustered in a small area, it will indicate that significant and unreasonable effects are being born by a localized group of landowners.

8.5 Reduction in Groundwater Storage Sustainable Management Criteria

8.5.1 Locally Defined Significant and Unreasonable Conditions

Locally defined significant and unreasonable conditions were assessed based on the Sustainable Management Criteria survey, public meetings, available data, and discussions with GSA staff. Significant and unreasonable changes in groundwater storage in the Subbasin are those that:

- Lead to long-term reduction in groundwater storage
- Interfere with other sustainability indicators

Responses to the Sustainable Management Criteria survey and public input suggest that most areas of the basin would like to see more groundwater in storage to help with droughts, and some areas of the basin would like to see significantly more groundwater in storage. Public input on which concessions would be acceptable to increase the amount of groundwater in storage revealed two highly ranked concessions:

1. New pumping be offset with new recharge or reduced pumping
2. Pumping be reduced in dry years

However, the concession that agricultural pumping be reduced in all years ranked relatively low. This suggests that, while stakeholders would prefer more groundwater in storage, they also would not prefer to reduce existing agricultural pumping during average years. Stakeholders also prefer that groundwater storage be increased by retaining wet year flows for local recharge and/or importing water.

8.5.2 Minimum Thresholds

Section §354.28(c)(2) of the SGMA regulations states that "*The minimum threshold for reduction of groundwater storage shall be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results. Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.*"

The reduction of groundwater in storage minimum threshold is established for the Subbasin as a whole, not for individual aquifers. Therefore, one minimum threshold for groundwater in storage is established for the entire Subbasin, but any reduction in storage that would cause an undesirable result in only a limited portion of the Subbasin shall be addressed in that area or areas where declining well levels indicate management actions or projects will be effective.

In accordance with the SGMA regulation cited above, the minimum threshold metric is a volume of pumping per year, or an annual pumping rate. Conceptually, the sustainable yield is the total volume of groundwater that can be pumped annually from the Subbasin without leading to undesirable results. As discussed in Chapter 6, absent the addition of supplemental water, the future estimated long-term sustainable yield of the Subbasin under reasonable climate change assumptions is 61,100 AFY. This estimated sustainable yield will change in the future as additional data become available.

This GSP adopts changes in groundwater level as a proxy for the change in groundwater storage metric. As allowed in §354.36(b)(1) of the SGMA regulations, an average of the semiannual groundwater elevation data at the RMSs will be reported annually as a proxy to track changes in the amount of groundwater in storage. A quantitative relationship between

water level changes and volumetric changes in storage will be developed after the RMS network is expanded, new hydrogeologic data are developed, and the model is updated and recalibrated.

Based on well-established hydrogeologic principles, stable groundwater elevations maintained above the minimum threshold will limit depletion of groundwater from storage. Therefore, using groundwater elevations as a proxy, the minimum threshold is that the groundwater surface elevation averaged across all the wells in the groundwater level monitoring network will remain stable above the minimum threshold for chronic lowering of groundwater levels.

Exceedances of this minimum threshold, if limited to specific areas of the Basin, shall be addressed by management actions or projects developed where they affect those areas of exceedance. Multiple exceedances appearing across the Basin will require proportional Subbasin-wide responses.

8.5.2.1 Information Used and Methodology for Establishing Reduction in Storage Minimum Thresholds

The monitoring network and protocols used to measure groundwater elevations at the RMS are presented in Chapter 7, Monitoring Networks. These data will be used to monitor groundwater elevations and assess changes in groundwater storage.

8.5.2.2 Relationship between Individual Minimum Thresholds and Relationship to Other Sustainability Indicators

The minimum threshold for reduction in groundwater storage is a single value of average groundwater elevation over the entire Subbasin. Therefore, the concept of potential conflict between minimum thresholds at different locations in the Subbasin is not applicable.

The reduction in groundwater storage minimum threshold could influence other sustainability indicators. The reduction in groundwater storage minimum threshold was selected to avoid undesirable results for other sustainability indicators, as outlined below.

- **Chronic lowering of groundwater levels**. Because groundwater elevations will be used as a proxy for estimating groundwater pumping and changes in groundwater storage, the reduction in groundwater storage would not cause undesirable results for this sustainability indicator.
- **Seawater intrusion**. This sustainability indicator is not applicable to this Subbasin.
- **Degraded water quality**. The minimum threshold proxy of stable groundwater levels will not directly lead to a degradation of groundwater quality.

- **Subsidence**. Because future average groundwater levels will be stable, they will not induce any additional subsidence.
- **Depletion of interconnected surface waters**. The alluvial aquifer and the Paso Robles Formation both store groundwater. The minimum threshold for groundwater elevations involves water levels in the Paso Robles Formation, while the minimum threshold for interconnected surface water involves water levels in the alluvial aquifer. Both minimum thresholds limit minimum groundwater elevations to a finite depth below the 2017 elevations and thereby prevent long-term depletion in groundwater storage.

8.5.2.3 Effect of Minimum Thresholds on Neighboring Basins

The anticipated effect of the groundwater storage minimum thresholds on each of the two neighboring subbasins is addressed below.

Upper Valley Subbasin of the Salinas Valley Basin. Removing groundwater from storage in the Paso Robles Subbasin would reduce flow into the Upper Valley Subbasin, potentially affecting the ability of that Subbasin to achieve sustainability. The reduction in storage minimum threshold is set to prevent long-term reduction in storage and therefore maintain flow into the Upper Valley Subbasin. This minimum threshold will not prevent the Upper Valley Subbasin from achieving sustainability.

Atascadero Subbasin. The Paso Robles Subbasin is hydrogeologically separated from the Atascadero Subbasin by the Rinconada Fault. The fault acts as a partial barrier to groundwater flow as presented in Chapter 4. Removing groundwater from storage in the Paso Robles Subbasin could induce additional groundwater flow from the Atascadero Subbasin into the Paso Robles Subbasin, affecting the ability to achieve sustainability in the Atascadero Subbasin. The reduction in storage minimum threshold is set to prevent long term reduction in storage and will be monitored using groundwater elevation proxies, therefore will not induce lowering of groundwater elevations that could cause additional groundwater flows from the Atascadero Subbasin. The minimum threshold will therefore not prevent the Atascadero Subbasin from achieving sustainability.

8.5.2.4 Effect on Beneficial Uses and Users

The reduction in groundwater storage minimum threshold of maintaining stable average groundwater elevations will potentially require a reduction in the amount of groundwater pumping in the Subbasin. Reducing pumping may impact the beneficial uses and users of groundwater in the Subbasin.

Agricultural land uses and users. Reducing the amount of groundwater pumping may limit or reduce non-*de minimis* production in the Subbasin by reducing the amount of available

water. Owners of agricultural lands that are currently not irrigated may be particularly impacted because the additional groundwater pumping needed to irrigate these lands could increase the Subbasin pumping beyond the sustainable yield, violating the minimum threshold.

Urban land uses and users. Reducing the amount of groundwater pumping may increase the cost of water for municipal users in the Subbasin because municipalities may need to find other, more expensive water sources.

Domestic land uses and users. Existing domestic groundwater users may generally benefit from this minimum threshold. Many domestic groundwater users are *de-minimis* users whose pumping may not be restricted by the projects and management actions adopted in this GSP. By restricting the amount of groundwater that is pumped from the Subbasin, the *de-minimis* users would be protected from overdraft that could impact their ability to pump groundwater.

Ecological land uses and users. Groundwater dependent ecosystems would generally benefit from this minimum threshold. Maintaining groundwater levels close to current levels maintains groundwater supplies similar to present levels which will continue to support groundwater dependent ecosystems.

8.5.2.5 Relation to State, Federal, or Local Standards

No federal, state, or local standards exist for reductions in groundwater storage.

8.5.2.6 Methods for Quantitative Measurement of Minimum Threshold

The quantitative metric for assessing compliance with the reduction in groundwater storage minimum threshold is monitoring groundwater elevations. The approach for quantitatively evaluating compliance with the minimum threshold for reduction in groundwater storage will be based on evaluating groundwater elevations annually. All groundwater elevations collected from the groundwater level monitoring network will be analyzed and averaged.

8.5.3 Measurable Objectives

The change in storage sustainability indicator uses groundwater levels as a proxy, using the same minimum thresholds and measurable objectives to protect against significant and unreasonable reduction in groundwater storage as it does protecting against chronic lowering of groundwater levels. The measurable objective, using the groundwater level proxy, is stable average groundwater levels.

8.5.3.1 Method for Setting Measurable Objectives

As discussed in Section 8.5.1, input from stakeholders suggested that they would prefer more groundwater in storage. However, stakeholders also suggested that they would prefer not to attain this increase in groundwater storage by reducing existing pumping during years with average climate conditions. Instead, they prefer to increase groundwater storage through increasing local recharge or importing water for recharge. Therefore, the conservative approach of simply maintaining stable groundwater levels was adopted for the measurable objective.

8.5.3.2 Interim Milestones

Interim milestones for groundwater storage are the same as those established for chronic lowering of groundwater elevations. Achieving the groundwater elevation interim milestones will also eliminate long term reductions in groundwater in storage.

8.5.4 Undesirable Results

8.5.4.1 Criteria for Defining Undesirable Results

The reduction in groundwater storage undesirable result is a quantitative combination of reduction in groundwater storage minimum threshold exceedances. There is only one reduction in groundwater storage minimum threshold. Therefore, no minimum threshold exceedances are allowed to occur and the reduction in groundwater storage undesirable result is:

During average hydrogeologic conditions, and as a long-term average over all hydrogeologic conditions, there shall be no persistent exceedances of the groundwater level proxy minimum threshold for change in groundwater storage.

8.5.4.2 Potential Causes of Undesirable Results

Conditions that may lead to an undesirable result for the reduction in groundwater storage sustainability indicator include the following:

- **Expansion of non-*de minimis* pumping.** Additional non-*de minimis* pumping may result in continued decline in groundwater elevations and exceedance of the proxy minimum threshold.
- **Expansion of *de minimis* pumping**. Pumping by *de minimis* users is not regulated under this GSP. Adding domestic *de minimis* pumpers in the Subbasin may result in lower groundwater elevations, and an exceedance of the proxy minimum threshold.

- **Extensive, unanticipated drought**. Minimum thresholds are established based on reasonable anticipated future climatic conditions. Extensive, unanticipated droughts may lead to excessively low groundwater recharge and unanticipated high pumping rates that could cause lower groundwater elevations and an exceedance of the proxy minimum threshold.

8.5.4.3 Effects on Beneficial Users and Land Use

The practical effect of this GSP for protecting against the reduction in groundwater storage undesirable result is that it encourages no net change in groundwater elevations and storage during average hydrologic conditions and over the long-term. Therefore, during average hydrologic conditions and over the long-term, beneficial uses and users will have access to the same amount of groundwater in storage that currently exists, and the beneficial users and uses of groundwater are protected from undesirable results. Pumping at the long-term sustainable yield during dry years would likely temporarily lower groundwater elevations and reduce the amount of groundwater in storage. Such short-term impacts, due to drought, are anticipated in SGMA and management actions should contain sufficient flexibility to accommodate them by ensuring they are offset by increases in groundwater levels or storage during normal or wet periods. Prolonged reductions in the amount of groundwater in storage could lead to undesirable results affecting beneficial users and uses of groundwater. In particular, groundwater pumpers that rely on water from shallow wells may be temporarily impacted by temporary reductions in the amount of groundwater in storage drops and lower water levels in their wells.

8.6 Seawater Intrusion Sustainable Management Criteria

The seawater intrusion sustainability indicator is not applicable to this Subbasin.

8.7 Degraded Water Quality Sustainable Management Criteria

8.7.1 Locally Defined Significant and Unreasonable Conditions

Locally defined significant and unreasonable conditions were assessed based on federal and state mandated drinking water and groundwater quality regulations, the Sustainable Management Criteria survey, public meetings, and discussions with GSA staff. Significant and unreasonable changes in groundwater quality in the Subbasin are increases in a chemical constituent that either:

- Result in groundwater concentrations in a public supply well above an established primary or secondary MCL, or
- Lead to reduced crop production.

8.7.2 Minimum Thresholds

Section §354.28(c)(2)of the SGMA regulations states that "*The minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin*."

As stated above, the SGMA regulations allow three options for setting degraded water quality minimum thresholds. In the Subbasin, degraded water quality minimum thresholds are based on a number of supply wells that exceed concentrations of constituents determined to be of concern for the Subbasin. The purpose of the minimum thresholds for constituents of concern with a primary or secondary MCL is to avoid furthering the migration of these constituents towards municipal or other drinking water wells. Therefore, the definition of supply wells for constituents of concern that have a primary or secondary MCL are public supply wells.

The purpose of the minimum thresholds for constituents of concern that may reduce crop productivity is to avoid furthering the migration of these constituents towards agricultural supply wells. Therefore, the definition of supply wells for constituents of concern that may lead to reduced crop production are agricultural supply wells.

As noted in Section 354.28 (c)(4) of the SGMA regulations, minimum thresholds are based on a degradation of groundwater quality, not an improvement of groundwater quality. Therefore, this GSP was developed to avoid taking actions that may inadvertently move groundwater constituents that have already been identified in the Subbasin in such a way that they have a significant and unreasonable impact that would not otherwise occur. Constituents of concern must meet two criteria:

1. They must have an established level of concern such as a primary or secondary MCL or a concentration that reduces crop production
2. They must have previously been found in the Subbasin at levels above the level of concern

Based on the review of groundwater quality in Chapter 5, different constituents of concern exist for both agricultural wells and public supply wells. The constituents of concern for agricultural wells are:

- Chloride
- Boron

The constituents of concern for public supply wells are:

- Total Dissolved Solids

- Chloride
- Sulfate
- Nitrate
- Gross Alpha Radiation

As noted in Section 5.6.3, based on available information there are no mapped groundwater contamination plumes in the Subbasin. Therefore, only potential impacts of diffuse or naturally occurring constituents listed above are addressed in this GSP.

The bases for establishing minimum thresholds for each constituent of concern in the Paso Robles Formation Aquifer and Alluvial Aquifer are listed in Table 8-5. This table does not identify the number of supply wells that will exceed the level of concern, but rather identifies how many additional wells will be allowed to exceed the level of concern. Wells that already exceed this limit are not counted against the minimum thresholds. In the table, minimum thresholds are generally set to the number of existing exceedances plus 10%. When the additional 10% reflects less than one exceedance, one additional exceedance is allowed. For example, if there are currently three exceedances of a constituent in an aquifer, the minimum threshold is set to

$$Exceedences = 3\ x\ 1.1 = 3.3\ where\ 1.1\ represents\ 110\%$$

$$Rounded\ Up\ To\ 4$$

The UC Cooperative Extension Guidelines state "Unlike most annual crops, tree and vine crops are generally susceptible to boron and chloride toxicity. Tolerances vary among species and rootstocks. Tolerant varieties and rootstocks restrict the uptake and accumulation of boron and chloride in leaf tissue. Boron concentrations in the irrigation water exceeding 0.5 to 0.75 mg/L can reduce plant growth and yield. Climatic effects are also important. In the cool moist coastal climates, irrigation waters with boron concentrations exceeding 1 mg/L are used successfully on tree and vine crops. Chloride moves readily with the soil water and is taken up by the roots. It is then transported to the stems and leaves. Sensitive berries and avocado rootstocks can tolerate only up to 120 ppm of chloride, while grapes can tolerate up to 700 ppm or more."

Current sample size is small (more wells will be added in the future), but known conditions in the Subbasin include these constituents. To reduce crop production to a significant and unreasonable extent would require levels of boron to exceed 0.75 mg/L in 10% more wells of total wells sampled and chloride to exceed 350 mg/L in 10% more wells of total wells sampled.

Table 8-5. Groundwater Quality Minimum Thresholds Bases

Constituent of Concern	Minimum Threshold Based on Number of Production Wells
Agricultural Wells in Monitoring Program	
Chloride	Fewer than 10% of additional agricultural production wells that are in the GSP monitoring program shall exceed 350 milligrams per liter (mg/L).
Boron	Fewer than 10% of additional agricultural production wells that are in the GSP monitoring program shall exceed 0.5 mg/L.
Municipal Wells in Monitoring Program	
Total Dissolved Solids	Fewer than 10% of additional municipal or domestic production wells that are in the GSP monitoring program shall exceed the TDS secondary MCL of 500 mg/L.
Chloride	Fewer than 10% of additional municipal or domestic production wells that are in the GSP monitoring program shall exceed the chloride secondary MCL of 250 mg/L.
Sulfate	Fewer than 10% of additional municipal or domestic production wells that are in the GSP monitoring program shall exceed the sulfate secondary MCL of 250 mg/L.
Nitrate	Fewer than 10% of additional municipal or domestic production wells that are in the GSP monitoring program shall exceed the nitrate MCL of 45 mg/L, measured as nitrate.
Gross Alpha Radiation	Fewer than 10% of additional municipal or domestic production wells that are in the GSP monitoring program shall exceed the gross alpha radiation MCL of 15 pCi/L.

8.7.2.1 Paso Robles Formation Aquifer

The minimum thresholds for degraded water quality in the Paso Robles Formation Aquifer are based on the goal of fewer than 10% of additional exceedances can occur in the future. However, some exceedances already exist in Paso Robles Formation Aquifer wells, and these exceedances will likely continue into the future. The minimum threshold for the number of allowed exceedances is therefore equal to the current number of exceedances plus 10%. In cases where incorporating the increase of 10% results in a fraction of a well less than one, one additional well exceedance was allowed. Based on the number of agricultural and municipal supply wells in the existing water quality monitoring network that is described in Chapter 7, the number of existing exceedances plus the 10% (or a minimum of one well) for each constituent is shown in Table 8-6. The exceedance numbers in this table are the minimum thresholds. This table additionally includes the percentage of existing wells that exceed the minimum thresholds for each constituent. The percentage defines the upper bound of wells that can exceed the minimum thresholds as additional wells are added to the monitoring program. Existing State, Federal, Public Health or Municipal regulations supersede this. Wells in exceedance of those Regulations will have to comply if they occur. AG Order 4.0 for Central Coast Region is under review and this GSP will comply with its findings.

Table 8-6. Minimum Thresholds for Degraded Groundwater Quality in Paso Robles Formation Aquifer Supply Wells Under the Current Monitoring Network [1]

Constituent of Concern	Number of Existing Supply Wells in Monitoring Network	Minimum Threshold Based on Existing Monitoring Network	Percentage of Wells with Exceedances
Agricultural Wells			
Chloride	28	4	14%
Boron	28	10	36%
Municipal Wells			
Total Dissolved Solids	34	12	35%
Chloride	34	2	6%
Sulfate	34	2	6%
Nitrate	34	2	6%
Gross Alpha Radiation	32	0	0%

1 – Data for this table were obtained from the following website: geotracker.waterboards.ca.gov/gama/gamamap/public/

8.7.2.2 Alluvial Aquifer

The minimum thresholds for degraded water quality in the Alluvial Aquifer are similarly based on the goal of fewer than 10% of additional exceedances shown in Table 8-5. Following the same process as the Paso Robles Formation Aquifer, the minimum thresholds for degraded water quality in the Alluvial Aquifer are shown in Table 8-7. All agricultural supply wells are assumed to pump from the Paso Robles Formation Aquifer, and therefore there are no agricultural well minimum thresholds set in the Alluvial Aquifer. As with the Paso Robles Formation Aquifer, as additional wells are added to the monitoring program, the percentage of wells exceeding the minimum threshold will not increase.

Table 8-7. Minimum Thresholds for Degraded Groundwater Quality in Alluvial Aquifer Supply Wells Under the Current Monitoring Network [1]

Constituent of Concern	Number of Existing Supply Wells in Monitoring Network	Minimum Threshold Based on Existing Monitoring Network	Percentage of Wells with Exceedances
Public Supply Wells			
Total Dissolved Solids	8	5	63%
Chloride	8	3	38%
Sulfate	8	3	38%
Nitrate	9	0	0%
Gross Alpha Radiation	7	0	0%

1 – Data for this table were obtained from the following website: geotracker.waterboards.ca.gov/gama/gamamap/public/

8.7.2.3 Information Used and Methodology for Establishing Water Quality Minimum Thresholds

The information used for establishing the degraded groundwater quality minimum thresholds included:

- Historical groundwater quality data from production wells in the Subbasin
- Federal and state drinking water quality standards
- Feedback about significant and unreasonable conditions from GSA staff members and the public

The historical groundwater quality data used to establish groundwater quality minimum thresholds are presented in Chapter 5.

Based on the review of historical and current groundwater quality data, federal and state drinking water standards, and irrigation water quality needs, GSAs agreed that these standards are appropriate to define degraded groundwater quality minimum thresholds.

8.7.2.4 Relationship between Individual Minimum Thresholds and Relationship to Other Sustainability Indicators

The groundwater quality minimum thresholds were set for each of six constituents that are currently found in the Subbasin above water quality standards or irrigation guidance levels. These minimum thresholds were derived from existing data measured at individual wells. There are no conflicts between the existing groundwater quality data; and therefore, the minimum thresholds represent a reasonable and realistic distribution of groundwater quality.

Because the underlying groundwater quality distribution is reasonable and realistic, there is no conflict that prevents the Subbasin from simultaneously achieving all six minimum thresholds.

Because SGMA regulations do not require projects or actions to improve groundwater quality, there will be no direct actions under the GSP associated with the groundwater quality minimum thresholds. Therefore, there are no actions that directly influence other sustainability indicators. However, preventing migration of poor groundwater quality may limit activities needed to achieve minimum thresholds for other sustainability indicators.

- **Change in groundwater levels**. Groundwater quality minimum thresholds could influence groundwater level minimum thresholds by limiting the types of water that can be used for recharge to raise groundwater levels. Water used for recharge cannot exceed any of the groundwater quality minimum thresholds.
- **Change in groundwater storage**. Nothing in the groundwater quality minimum thresholds promotes pumping in excess of the sustainable yield. Therefore, the groundwater quality minimum thresholds will not result in an exceedance of the groundwater storage minimum threshold.
- **Seawater intrusion**. This sustainability indicator is not applicable to this Subbasin
- **Subsidence**. Nothing in the groundwater quality minimum thresholds promotes a condition that will lead to additional subsidence and therefore, the groundwater quality minimum thresholds will not result in a significant or unreasonable level of subsidence.
- **Depletion of interconnected surface waters**. Nothing in the groundwater quality minimum thresholds promotes additional pumping or lower groundwater elevations in areas where interconnected surface waters may exist. Therefore, the groundwater quality minimum thresholds will not result in a significant or unreasonable depletion of interconnected surface waters.

8.7.2.5 Effect of Minimum Thresholds on Neighboring Basins

The anticipated effect of the degraded groundwater quality minimum thresholds on each of the two neighboring subbasins is addressed below.

Upper Valley Subbasin of the Salinas Valley Basin. The Upper Valley Subbasin is hydrogeologically down gradient of the Paso Robles Subbasin, thus groundwater generally flows from the Paso Robles Subbasin into the Upper Valley Subbasin. Poor groundwater quality in the Paso Robles Subbasin could flow into the Upper Valley Subbasin, affecting the ability to achieve sustainability in that Subbasin. The degraded groundwater quality minimum threshold is set to prevent unreasonable movement of poor-quality groundwater that could

impact overall beneficial uses of groundwater. Therefore, it is unlikely that the groundwater quality minimum thresholds established for the Paso Robles Subbasin will prevent the Upper Valley Subbasin from achieving sustainability.

Atascadero Subbasin. Groundwater generally flows from the Atascadero Subbasin into the Paso Robles Subbasin. Therefore, poor quality groundwater in the Paso Robles Subbasin is not expected flow into the Atascadero Subbasin in the future, thus the Paso Robles Subbasin groundwater quality minimum thresholds will not likely prevent the Atascadero Subbasin from achieving sustainability.

8.7.2.6 Effect on Beneficial Uses and Users

Agricultural land uses and users. The degraded groundwater quality minimum thresholds generally benefit the agricultural water users in the Subbasin. For example, limiting the number of additional agricultural supply wells that could exceed constituent of concern concentrations that could reduce crop production ensures that a supply of usable groundwater will exist for beneficial agricultural use.

Urban land uses and users. The degraded groundwater quality minimum thresholds generally benefit the urban water users in the Subbasin. Limiting the number of additional wells where constituents of concern could exceed primary or secondary MCLs ensures an adequate supply of groundwater for municipal use.

Domestic land uses and users. The degraded groundwater quality minimum thresholds generally benefit the domestic water users in the Subbasin.

Ecological land uses and users. Although the groundwater quality minimum thresholds do not directly benefit ecological uses, it can be inferred that the degraded groundwater quality minimum thresholds generally benefit the ecological water uses in the Subbasin. Preventing constituents of concern from migrating will prevent unwanted contaminants from impacting ecological groundwater supply.

8.7.2.7 Relation to State, Federal, or Local Standards

The degraded groundwater quality minimum thresholds specifically incorporate federal and state drinking water standards.

8.7.2.8 Method for Quantitative Measurement of Minimum Thresholds

Degraded groundwater quality minimum thresholds will be directly measured from existing or new municipal or agricultural supply wells. Groundwater quality will initially be measured using existing monitoring programs.

- Exceedances of primary or secondary MCLs will be monitored by reviewing annual water quality reports submitted to the California Division of Drinking water by municipalities and small water systems.
- Exceedances of crop production minimum thresholds will be monitored as part of the ILRP as presented in Chapter 7.

8.7.3 Measurable Objectives

Groundwater quality should not be degraded due to actions taken under this GSP and, therefore, the measurable objectives were set to the number of exceedances present in 2017.

8.7.3.1 Paso Robles Formation Aquifer

Based on the existing monitoring network, the measurable objectives for degraded groundwater quality in the Paso Robles Formation Aquifer are shown in Table 8-8.

Table 8-8. Measurable Objectives for Degraded Groundwater Quality in Paso Robles Formation Aquifer Supply Wells Under the Current Monitoring Network

Constituent of Concern	Number of Existing Supply Wells in Monitoring Network	Measurable Objective Based on Existing Monitoring Network	Percentage of Wells with Exceedances
Agricultural Wells			
Chloride	28	3	14%
Boron	28	9	36%
Municipal Wells			
Total Dissolved Solids	34	10	35%
Chloride	34	1	6%
Sulfate	34	1	6%
Nitrate	34	1	6%
Gross Alpha Radiation	32	0	0%

8.7.3.2 Alluvial Aquifer

Based on the existing monitoring network, the measurable objectives for degraded groundwater quality in the Paso Robles Formation Aquifer are shown in Table 8-9.

Table 8-9. Measurable Objectives for Degraded Groundwater Quality in Alluvial Aquifer Supply Wells Under the Current Monitoring Network

Constituent of Concern	Number of Existing Supply Wells in Monitoring Network	Measurable Objective Based on Existing Monitoring Network	Percentage of Wells with Exceedances
Public Supply Wells			
Total Dissolved Solids	8	4	63%
Chloride	8	2	38%
Sulfate	8	2	38%
Nitrate	9	0	0%
Gross Alpha Radiation	7	0	0%

8.7.3.3 Method for Setting Measurable Objectives

Because improving groundwater quality is not a goal under SGMA, and protecting it is important to the beneficial users and uses of the resource, the measurable objectives were set to the number of exceedances present in 2017 (as identified in Tables 8-7 and 8-8).

8.7.3.4 Interim Milestones

Interim milestones show how the GSAs anticipate moving from current conditions to meeting the measurable objectives. For water quality, measurable objectives are set at the current number of water quality exceedances. Interim milestones are set for each five-year interval following GSP adoption.

The interim milestones for degraded groundwater quality were set at the measurable objectives for 5, 10 and 15 years after GSP adoption. The interim milestones for the constituents in the Paso Robles Formation Aquifer are shown in Table 8-10.

Table 8-10. Interim Milestone Groundwater Quality Exceedances in Paso Robles Formation Aquifer Supply Wells Under the Current Monitoring Network

Constituent of Concern	Five Year Number of Groundwater Quality Exceedances	Ten Year Number of Groundwater Quality Exceedances	Fifteen Year Number of Groundwater Quality Exceedances
Agricultural Supply Wells			
Chloride	3	3	3
Boron	9	9	9

Public supply wells			
Total Dissolved Solids	10	10	10
Chloride	1	1	1
Sulfate	1	1	1
Nitrate	1	1	1
Gross Alpha Radiation	0	0	0

The interim milestones for the constituents in the Alluvial Aquifer are shown in Table 8-11.

Table 8-11. Interim Milestone Groundwater Quality Exceedances in Alluvial Aquifer Supply Wells Under the Current Monitoring Network

Constituent of Concern	5-Year Number of Groundwater Quality Exceedances	10-Year Number of Groundwater Quality Exceedances	15-Year Number of Groundwater Quality Exceedances
Public supply wells			
Total Dissolved Solids	4	4	4
Chloride	2	2	2
Sulfate	2	2	2
Nitrate	0	0	0
Gross Alpha Radiation	0	0	0

8.7.4 Undesirable Results

8.7.4.1 Criteria for Defining Undesirable Results

By SGMA regulations, the degraded groundwater quality undesirable result is a quantitative combination of groundwater quality minimum threshold exceedances. For the Subbasin, groundwater quality degradation is unacceptable only as a direct result of actions taken as part of GSP implementation. Therefore, the degraded groundwater quality undesirable result is:

On average during any one year, no groundwater quality minimum threshold shall be exceeded in any aquifer as a direct result of projects or management actions taken as part of GSP implementation.

8.7.4.2 Potential Causes of Undesirable Results

Conditions that may lead to an undesirable result include the following:

- **Required Changes to Subbasin Pumping**. If the location and rates of groundwater pumping change as a result of projects implemented under the GSP, these changes could cause movement of one of the constituents of concern towards a supply well at concentrations that exceed relevant water quality standards.
- **Groundwater Recharge**. Active recharge with imported water or captured runoff could cause movement of one of the constituents of concern towards a supply well in concentrations that exceed relevant water quality standards.
- **Recharge of Poor-Quality Water**. Recharging the Subbasin with water that exceeds a primary or secondary MCL or concentration that reduces crop production could lead to an undesirable result.

8.7.4.3 Effects on Beneficial Users and Land Use

The practical effect of the degraded groundwater quality undesirable result is that it deters any significant changes to groundwater quality. Therefore, the undesirable result will not impact the use of groundwater and will not have a negative effect on the beneficial users and uses of groundwater.

8.8 Land Subsidence Sustainable Management Criteria

8.8.1 Locally Defined Significant and Unreasonable Conditions

Locally defined significant and unreasonable conditions for land subsidence were assessed based on public meetings and discussions with GSA staff. Significant and unreasonable rates of land subsidence in the Subbasin are those that lead to a permanent subsidence of land surface elevations that impact infrastructure. For clarity, this Sustainable Management Criterion adopts two related concepts:

- **Land Subsidence** is a gradual settling of the land surface caused by, among other processes, compaction of subsurface materials due to lowering of groundwater elevations from groundwater pumping. Land subsidence from dewatering subsurface clay layers can be an inelastic process, and the potential decline in land surface could be permanent.
- **Land Surface Fluctuation** is the periodic or annual measurement of the ground surface elevation. Land surface may rise or fall in any one year. Declining land surface fluctuation may or may not indicate long-term permanent subsidence.

Currently, InSAR data provided by DWR shows that meaningful land subsidence did not occur during the period between June 2015 and June 2018 in the Paso Robles Subbasin.

8.8.2 Minimum Thresholds

Section 354.28(c)(5) of the SGMA regulations states that "*The minimum threshold for land subsidence shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results.*"

Based on an analysis of potential errors in the InSAR data, as discussed in the following section, the subsidence minimum threshold is:

The InSAR measured subsidence between June of one year and June of the subsequent year shall be no more than 0.1 foot in any single year and a cumulative 0.5 foot in any five-year period, resulting in no long-term permanent subsidence.

8.8.2.1 Information Used and Methodology for Establishing Subsidence Minimum Thresholds

Minimum thresholds were established to protect groundwater supply, land uses and property interests from substantial subsidence that may lead to undesirable results. Changes in surface elevation are measured using InSAR data available from DWR. The general minimum threshold is the absence of long-term land subsidence due to pumping in the Subbasin. The InSAR data provided by DWR, however, are subject to measurement error. DWR has stated that, on a statewide level, for the total vertical displacement measurements between June 2015 and June 2018, the errors are as follows (Benjamin Brezing, personal communication):

1. The error between InSAR data and continuous GPS data is 16 mm (0.052 feet) with a 95% confidence level

2. The measurement accuracy when converting from the raw InSAR data to the maps provided by DWR is 0.048 feet with 95% confidence level.

By simply adding errors 1 and 2, we arrive at a combined error of 0.1 foot. While this is not a robust statistical analysis, it does provide an estimate of the potential error in the InSAR maps provided by DWR. A land surface change of less than 0.1 feet is therefore within the noise of the data, and is equivalent to no subsidence in this GSP.

Additionally, the InSAR data provided by DWR reflects both elastic and inelastic subsidence. While it is difficult to compensate for elastic subsidence, visual inspection of monthly changes in ground elevations suggest that elastic subsidence is largely seasonal. Figure 8-3 shows the ground level changes at a randomly selected point in the area where InSAR data are available. This figure demonstrates the general seasonality of the elastic subsidence. To minimize the influence of elastic subsidence on our assessment of long-term, permanent subsidence, changes in ground level will be measured annually from June of one year to June of the following year.

Figure 8-3: Example Seasonal Ground Surface Change

8.8.2.2 Relationship between Individual Minimum Thresholds and Relationship to Other Sustainability Indicators

Subsidence minimum thresholds have little or no impact on other minimum thresholds, as described below.

- **Chronic lowering of groundwater elevations**. Subsidence minimum thresholds will not result in significant or unreasonable groundwater elevations.
- **Change in groundwater storage**. The subsidence minimum thresholds will not change the amount of pumping, and will not result in a significant or unreasonable change in groundwater storage.
- **Seawater intrusion**. This sustainability indicator is not applicable in the Paso Robles Subbasin.
- **Degraded water quality**. The subsidence minimum thresholds will not change the groundwater flow directions or rates, and therefore and will not result in a significant or unreasonable change in groundwater quality.
- **Depletion of interconnected surface waters**. The ground level subsidence minimum thresholds will not change the amount or location of pumping and will not result in a significant or unreasonable depletion of interconnected surface waters.

8.8.2.3 Effect of Minimum Thresholds on Neighboring Basins

The anticipated effect of the subsidence minimum thresholds on each of the two neighboring subbasins is addressed below.

- **Upper Valley Subbasin of the Salinas Valley Basin**. The ground surface subsidence minimum thresholds are set to prevent any long-term subsidence that could harm infrastructure. Therefore, the subsidence minimum thresholds will not prevent the Upper Valley Subbasin from achieving sustainability.
- **Atascadero Subbasin**. The subsidence minimum thresholds are set to prevent any long-term subsidence that could harm infrastructure. Therefore, the subsidence minimum thresholds will not prevent the Atascadero Subbasin from achieving sustainability.

8.8.2.4 Effects on Beneficial Uses and Users

The subsidence minimum thresholds are set to prevent subsidence that could harm infrastructure. Available data indicate that there is currently no subsidence occurring in the Subbasin that affects infrastructure, and reductions in pumping are already required by the reduction in groundwater storage sustainability indicator. Therefore, the subsidence minimum

thresholds do not require any additional reductions in pumping and there is no negative impact on any beneficial user.

8.8.2.5 Relation to State, Federal, or Local Standards

There are no federal, state, or local regulations related to subsidence.

8.8.2.6 Method for Quantitative Measurement of Minimum Threshold

Minimum thresholds will be assessed using DWR supplied InSAR data.

8.8.3 Measurable Objectives

The measurable objectives for subsidence represent target subsidence rates in the Subbasin. Long-term ground surface elevation data do not suggest the occurrence of permanent subsidence in the Subbasin. Therefore, the measurable objective for subsidence is maintenance of current ground surface elevations.

8.8.3.1 Method for Setting Measurable Objectives

The measurable objectives are set based on maintaining current conditions and changes are measured by DWR-supplied InSAR data.

8.8.3.2 Interim Milestones

Interim milestones show how the GSAs anticipate moving from current conditions to meeting the measurable objectives. Interim milestones are set for each five-year interval following GSP adoption.

Subsidence measurable objectives are set at current conditions of no long-term subsidence. Therefore, there is no change between current conditions and sustainable conditions. Therefore, the interim milestones are identical to the minimum thresholds and measurable objectives.

8.8.4 Undesirable Results

8.8.4.1 Criteria for Defining Undesirable Results

By regulation, the ground surface subsidence undesirable result is a quantitative combination of subsidence minimum threshold exceedances. For the Subbasin, no long-term subsidence that impacts infrastructure is acceptable. Therefore, the ground surface subsided undesirable result is:

Pumping induced subsidence of greater than 0.1 foot in any single year and a cumulative 0.5 foot in any five-year period could, if left unchecked, substantially interfere with surface land use.

Should potential subsidence be observed, the GSAs will first assess whether the subsidence may be due to elastic processes. If the subsidence is not elastic, the GSAs will undertake a program to correlate the observed subsidence with measured groundwater levels.

8.8.4.2 Potential Causes of Undesirable Results

Conditions that may lead to an undesirable result include a shift in pumping locations, which could lead to a substantial decline in groundwater levels. Shifting a significant amount of pumping and causing groundwater levels to fall in an area that is susceptible to subsidence could trigger subsidence in excess of the minimum thresholds.

8.8.4.3 Effects on Beneficial Users and Land Use

Staying above the minimum threshold will avoid the subsidence undesirable result and protect the beneficial uses and users from impacts to infrastructure and interference with surface land uses.

8.9 Depletion of Interconnected Surface Water SMC

8.9.1 Locally Defined Significant and Unreasonable Conditions

The two manifestations of depletion of interconnected surface water are reduced surface flow in streams and a lowering of the water table next to streams. The potential effects of depletion on beneficial uses of surface water and groundwater in the Subbasin are:

- Reduction in Salinas River outflow that decreases groundwater recharge in the Salinas Valley,
- Reduction in the extent, density, and health of riparian vegetation and animal species that use riparian habitat, and
- Reduction in passage opportunity for steelhead trout.

Each of these issues was considered in setting sustainable management criteria for interconnected surface water. In the case of habitat uses, the basis for the SMCs relies on the quantitative evaluation of groundwater effects on habitat presented in GSP Section 5.5.

8.9.2 Minimum Thresholds

The minimum threshold for interconnected surface water is a decline in the alluvial water table elevation as measured at Alluvial Aquifer RMS wells in the spring measurement round

along the Salinas River, middle reach of the Estrella River (from Shedd Canyon to Martingale Circle) or San Juan Creek upstream of Spring Creek that is 1) likely caused by groundwater pumping in the Paso Robles Formation Aquifer, 2) is more than 10 feet below the spring 2017 elevation, 3) persists for more than two consecutive years, and 4) occurs along more than 15 percent of the length of any of the three stream reaches. It is noted that the potential connection along the Salinas River is between the surface water system and the adjacent alluvial deposits. 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.

SGMA regulations specify that the minimum threshold for interconnected surface water shall be defined as "the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results" (Regulations §354.28(c)(6)). However, the regulations also allow the use of groundwater elevations as a reasonable proxy for the rate of flow depletion if such approach is "supported by adequate evidence" (Regulations §354.28(d)). In the Paso Robles Subbasin, depth to water is a reasonable proxy because the resource most likely to be impacted is phreatophytic riparian vegetation, which is sensitive to depth to water but not to the rate of percolation. Also, analysis of potentially impacted beneficial uses that do depend on the rate of stream flow—downstream water users and steelhead trout migration—indicates that the likely magnitude of impact is negligibly small. Finally, from a practical standpoint, induced percolation from streams is difficult to measure, particularly if it is a small percentage of total flow and varies substantially from reach to reach along a stream.

There presently are too few Alluvial Aquifer monitoring wells along the middle reach of the Estrella River and the upper reach of San Juan Creek to evaluate the minimum threshold. For the first five years of GSP implementation, the minimum threshold will be evaluated only for the Salinas River reach. New monitoring wells will be installed along the Estrella River and San Juan Creek during that period (see Section 7.6.1), allowing the minimum threshold to be applied to those reaches in subsequent implementation periods.

8.9.3 Measurable Objectives

Measurable objectives are specific, quantifiable goals for the maintenance or improvement of groundwater conditions. They represent a desirable condition with respect to interconnected surface water. With respect to riparian vegetation, the measurable objective is a five-year moving average of spring groundwater elevations in Alluvial Aquifer wells along the Salinas

River, the middle reach of the Estrella River (from Shedd Canyon to Martingale Circle) and San Juan Creek upstream of Spring Creek that are no more than 5 feet below the spring 2017 groundwater elevations. This objective is expected to maintain the extent and density of riparian vegetation at the 2017 level. It would also maintain Salinas River outflow and steelhead passage opportunity at existing levels, at least as far as they are affected by depletion from groundwater pumping.

There presently are too few Alluvial Aquifer monitoring wells along the middle reach of the Estrella River and the upper reach of San Juan Creek to evaluate the measurable objective. For the first five years of GSP implementation, the measurable objective will be evaluated only for the Salinas River reach. New monitoring wells will be installed along the Estrella River and San Juan Creek during that period (see Section 7.6.1), allowing the measurable objective to be applied to those reaches in subsequent implementation periods.

8.9.4 Relationship of Minimum Threshold to Other Sustainability Indicators

8.9.4.1 Groundwater Elevations

The measurable objective and minimum threshold for interconnected surface water involve groundwater elevations in the Alluvial Aquifer. They do not conflict with the SMCs for Alluvial Aquifer groundwater elevations because those are not yet quantified (see Sections 8.4.3.3 and 8.4.4.2). The interconnected surface water SMCs could potentially be more restrictive than the SMCs for Paso Robles Formation Aquifer groundwater elevations if the latter would allow large declines in water table elevations along protected reaches of riparian vegetation. Specifically, the Paso Robles Formation Aquifer minimum threshold allows for 30 feet of additional water-level decline below the 2017 groundwater elevation.

8.9.4.2 Groundwater Storage

Groundwater storage is inherently connected to groundwater levels. Based on the logic presented above for groundwater elevation SMCs, the interconnected surface water SMCs could potentially constrain temporary or sustained reductions in groundwater storage in some locations that would otherwise be allowed by the groundwater storage minimum threshold, which is defined as groundwater elevations averaged over the entire Subbasin that are above the groundwater elevation minimum threshold (see Section 8.5.2).

8.9.4.3 Subsidence

Subsidence is not related to Alluvial Aquifer water levels because the Alluvial Aquifer is too thin and coarse-grained to experience significant compaction of clay layers due to 10 feet of water-level decline. Subsidence is a function of Paso Robles Formation Aquifer water levels, which are not directly involved in the interconnected surface water SMCs. To the extent that

the interconnected surface water SMCs constrain the permissible amount of decline in Paso Robles Formation Aquifer water-levels, they decrease the risk of subsidence.

8.9.4.4 Water Quality

The interconnected surface water SMCs would not affect groundwater gradients and recharge rates, and they would not introduce contaminants or cause changes in aquifer geochemistry. Thus, they would not affect the water quality SMCs.

8.9.5 Effect of SMCs on Neighboring Basins

The mechanism by which the interconnected surface water SMCs could affect the Upper Valley Subbasin in the Salinas Valley (adjacent to and downstream of the Paso Robles Subbasin) would be by decreased groundwater recharge resulting from decreased flow in the Salinas River. However, that effect would be negligibly small (see Section 8.9.7.1 under "Undesirable Results" below).

The interconnected surface water SMCs would not affect groundwater in the Atascadero Subbasin because any changes in Salinas River flow would not propagate upstream to that Subbasin. By maintaining GDEs in the Paso Robles Subbasin in good condition, the SMCs would support the regional maintenance of GDEs, especially animals that move up and down the river and riparian corridors.

8.9.6 Relationship of SMCs to Federal, State and Local Regulations

The only federal, state or local regulation that directly applies to stream flow gains and losses is the "live stream" requirement imposed by the State Water Resources Control Board in the water rights permit for operating Salinas Dam upstream of the Subbasin. However, that requirement reflects a concern that changes in surface flow might impact groundwater availability, not the opposite, which is the concern here.

The state and federal endangered species acts protect animal species listed as threatened or endangered against "take", which is to capture, harm, wound or kill the animal. Harm includes significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. The listed animals that appear to actually be present in the Subbasin and potentially vulnerable to depletion of interconnected surface water are steelhead trout and California red-legged frog. The SMCs for interconnected surface water are designed to sustain populations of GDE animals, including these listed species, at 2017 levels. This would avoid take.

8.9.7 Undesirable Results

Undesirable results are adverse effects on beneficial users and uses of water that reach a magnitude considered significant and unreasonable. This section defines undesirable results for surface water users, riparian vegetation and fish passage. Generally, undesirable results are defined in terms of the percent of all interconnected surface water reaches that exceed the minimum threshold.

8.9.7.1 Surface Water Users

Decreased groundwater discharge to the Salinas River would be significant and unreasonable if it prevented groundwater users in the Salinas Valley—where groundwater is primarily recharged by Salinas River percolation—from continuing their existing, economically viable agricultural or urban uses of land. This is not expected to occur because of the combined effects of the groundwater storage and interconnected surface water SMCs. A decrease in groundwater storage would be associated with lower groundwater elevations and decreased groundwater discharge to the Salinas River. The groundwater storage SMC allows for a reduction in storage to an amount associated with Paso Robles Formation Aquifer groundwater elevations 30 feet below 2017 groundwater elevations but does not allow further declines beyond that. Annual water budgets for 1981-2011 produced by the groundwater model show that groundwater discharge to the Salinas River is dominated by contributing flows from the alluvial deposits and clearly correlated with year type (it increases in wet years) but is not obviously correlated with changes in pumping and storage from the Paso Robles Formation Aquifer (see Figure 6-3), which are strongly correlated with each other (Figure 5-12). Average annual groundwater discharge to streams (7,400 AFY) equals about 1.5 percent of annual groundwater pumping downstream in the Salinas Valley. If pumping in the Paso Robles Subbasin were to change, its effect on groundwater discharge to the Salinas River would likely be small, and hence much less than 1.5 percent of downstream water use. This is because the connection along the Salinas River is between the surface water system and the adjacent alluvial deposits. There is no evidence that the Salinas River surface water flows are connected to the underlying Paso Robles Formation Aquifers. Furthermore, to achieve the groundwater level management objective it will be necessary to balance the Subbasin water budget, which means that groundwater pumping will not cause increased depletion of stream flow in the future. As stated in Section 6.5.1 “An overarching assumption is that any future increases in groundwater use within the Subbasin will be offset by equal reductions in groundwater use in other parts of the Subbasin, or in other words, groundwater use will remain neutral through implementation of the GSP.” In any event, the interconnected surface water minimum threshold would tend to restrict rather than increase the amount of future storage depletion and thus be more protective of Salinas River outflow and downstream users.

8.9.7.2 Groundwater Dependent Vegetation

The qualitative undesirable result for riparian vegetation is mortality. The minimum threshold definition for interconnected surface water specifies a quantitative depth and duration of low water table conditions that are considered likely to cause riparian tree stress and potential mortality, based on observed limited mortality patterns during 2013 to 2017[1].

An exceedance of the minimum threshold at a single location would not necessarily be undesirable if riparian vegetation in other parts of the Subbasin remained in good condition. Regional ecological function would continue, and the locally impacted area would likely recover when the water table rises back to more normal elevations above the minimum threshold. However, widespread exceedance of the minimum threshold could impair regional ecological function and retard the recovery process. Accordingly, an undesirable result is when water levels along more than 15 percent of the length of any of the three stream reaches with abundant riparian vegetation exceed the minimum threshold (defined in Section 8.9.3) as a result of groundwater pumping in the Paso Robles Formation Aquifer. The three reaches are the Salinas River from Paso Robles to the Subbasin boundary below San Miguel, the middle reach of the Estrella River (Shedd Canyon to Martingale Circle), and San Juan Creek upstream of Spring Creek.

8.9.7.3 Groundwater Dependent Animals

Animals that depend on riparian vegetation are assumed to suffer population declines if the extent of riparian vegetation decreases and thus are implicitly covered by the SMCs and undesirable results for vegetation. The undesirable result for steelhead trout—which uses surface flow in the Salinas River for migration—is a long-term decrease in population as a result of flow depletion caused by groundwater pumping. As explained in section 5.5.10, groundwater pumping has little effect on passage opportunity. Because the SMCs for groundwater levels and storage preclude ongoing future increases in pumping or decreases in groundwater levels, undesirable results with respect to steelhead passage are not expected to occur.

8.10 Management Areas

Management areas have not been established in the Subbasin. For planning purposes, the concepts for future management areas are provided below.

[1] Results of a riparian vegetation EVI trend analysis indicate that riparian vegetation health has generally remained stable over the long term from January 2009 through present (see Section 5.5.3).

8.10.1 Future Management Area Concept

Management areas may be developed in the future based on the existence of a geologic and geographic divide in the Subbasin. The Subbasin is dominated by two main watersheds and many smaller watersheds that drain into and recharge the Subbasin. The western portion of the Subbasin is fed by the Salinas watershed, including the Huer Huero watershed. The eastern portion of the Subbasin is fed by the Estrella River watershed, including Cholame Creek and San Juan Creek watersheds. These two watersheds have different geologic and climatic conditions. Both watersheds drain to the confluence of the Estrella and Salinas Rivers near San Miguel in the northern end of the Subbasin. A distinct geologic ridge divides the Huer Huero portion of the Salinas River watershed from the Shed Canyon portion of the Estrella River watershed. This uplifted ridge bisects the Subbasin and the Estrella River cuts through this ridge near Whitley Gardens. The Subbasin may be divided into western and eastern management areas along the uplifted ridge in the future.

The nature of this divide and the underlying geology within the Subbasin needs to be better understood before the GSAs can delineate and justify any management area. The GSAs will initiate and support electromagnetic resonance surveys to help delineate local geology. Reports from well owners throughout the Subbasin suggest that some areas of the Subbasin are distinctly isolated from neighboring areas. Analysis of static groundwater levels from as many wells as possible will help to define areas where groundwater conditions appear to be hydrologically connected and areas where these conditions seem to be hydrologically isolated. This will help form the basis of defining the management area. This effort will also assist in defining where future monitoring wells should be located. The GSAs in the proposed management areas may undertake distinct management approaches which would be appropriately designed to protect the local groundwater resource without adversely impacting other areas of the Subbasin or neighboring Subbasins.

Each area of the Subbasin will be managed in conjunction with all other areas using the same set of undesirable results and minimum thresholds, tied to specific RMSs as described in this chapter. The Subbasin wide monitoring networks will be used to assure compliance with the GSP. Using management areas to assure long-term sustainability protects all beneficial uses and users in all parts of the Subbasin.

8.10.2 Minimum Thresholds and Measurable Objectives

The minimum thresholds that will be established in potential management areas will use the same process and criteria described above in this chapter. The minimum thresholds and measurable objectives will be developed to ensure groundwater levels remain above historical water levels in each management area, and to maintain historical groundwater flow conditions to downstream portions of the Subbasin and other downstream basins. By managing groundwater sustainably in each management area, the groundwater resource remains

available for beneficial uses and users. Groundwater quality will not be degraded due to poor quality water moving into productive aquifers.

8.10.3 Monitoring

Because of the large size and distinctly separate drainages of the watersheds draining into each of management area, there is a need for a robust network of monitoring wells that provide data representative of specific portions of each management area. Initially, existing wells with known depths and known perforated intervals will be selected and used. Where needed, dedicated new monitoring wells may be added to improve the monitoring network.

8.10.4 How Management Areas Will Avoid Undesirable Results

The undesirable results described in the sections above are applicable in any management area that may be established in the future. As long as minimum thresholds are avoided and measurable objectives continue to be met within each management area, beneficial uses and users of the groundwater resource will be assured of continued access to a sustainable groundwater resource. The projects and management actions in each management area will be proportional to the need to avoid undesirable results.

8.10.5 Management

The establishment and implementation of Management Areas would follow the agreement among the four GSAs (see GSP Chapter 12).

9 MANAGEMENT ACTIONS AND PROJECTS

9.1 Introduction

The GSAs agree herein to work together in protecting the groundwater resource and in complying with SGMA, and further agree that this GSP makes no determination of water rights. GSP management actions undertaken to achieve sustainability under SGMA shall not result in or be construed as a forfeiture of or limitation on groundwater rights under common law.

This chapter describes the management actions that will be developed and implemented in the Subbasin to attain sustainability in accordance with §354.42 and §354.44 of the SGMA regulations. Management actions described herein are non-structural programs or policies that are intended to reduce or optimize local groundwater use. Consistent with SGMA regulations §354.44, this chapter also describes projects in process and conceptual projects involving new or improved infrastructure to make new water supplies available to the Subbasin that may be implemented by willing project participants to offset pumping and lessen the degree to which the management actions would be needed. The concept projects referenced are based on previous publicly vetted feasibility studies[2]. The need for management actions (and projects if implemented) is based on the following Subbasin conditions that were described in previous chapters.

- Groundwater levels are declining in many parts of the Subbasin, indicating that the amount of groundwater pumping is more than the natural recharge (Chapter 5)
- Water budgets (Chapter 6) indicate that amount of groundwater in storage will continue to decline in the future at an estimated rate of nearly 14,000 acre-feet per year (AFY), which assumes no net increase in pumping demand on the basin. If there is a net increase in demand due to e.g., the development of currently undeveloped properties in a way that requires the use of additional groundwater, the deficit would be greater.

To stop persistent declines in groundwater levels, achieve the sustainability goal before 2040, and avoid undesirable results as required by SMGA regulations, reducing groundwater pumping will be needed. Reductions in pumping will be required in amounts and locations which will prevent groundwater level declines that would result in undesirable results. A reduction in groundwater pumping will occur as a result of management actions, except where a new water supply becomes available and is used in lieu of pumping groundwater.

[2] Paso Robles Groundwater Basin Supplemental Supply Options Feasibility Study, January 2017

SGMA regulations §354.44 require that each management action and conceptual project described in the GSP include a discussion about:

- Relevant measurable objectives it would address
- The expected benefits of the action
- The circumstances under which management actions or projects will be implemented
- How the public will be noticed
- Relevant regulatory and permitting considerations
- Implementation schedules
- Legal authority required to take the actions
- Estimated costs

The groundwater management actions are intended to stabilize groundwater elevations, avoid undesirable results, and address all other sustainability indicators described in Chapter 8. Management actions to directly reduce groundwater pumping will be implemented where necessary. If groundwater levels are stabilized and/or sustained, many of the associated undesirable results described in Chapter 8 will be avoided.

The management actions (and projects if implemented) identified in this GSP will achieve groundwater sustainability by avoiding Subbasin-specific undesirable results.

De Minimis Groundwater Users

While the number of *de minimis* groundwater users in the basin is significant, they are not currently regulated under this GSP. Growth of *de minimis* groundwater extractors could warrant regulated use in this GSP in the future. Growth will be monitored and reevaluated periodically.

9.2 Implementation Approach and Criteria for Management Actions

Using authorities outlined in Sections 10725 to 10726.9 of the California Water Code, the GSAs would ensure the maximum degree of local control and flexibility consistent with this GSP to commence management actions. Because the amount of groundwater pumping in the Subbasin is more than the estimated sustainable yield of about 61,000 AFY (see Chapter 6 and Appendix E)[3] and groundwater levels are persistently declining in certain areas, the GSAs

[3] Chapter 6 and Appendix E describe the process used to estimate sustainable yield. Sustainable yield is estimated based on the groundwater budget. The updated GSP model was used to develop the water budget and sustainable yield. Appendix E provides information on why the estimate of sustainable yield in the GSP differs from previous estimates.

will begin to implement management actions as early as possible after GSP adoption. The effect of the management actions will be reviewed annually, and additional management actions will be implemented as necessary to avoid undesirable results. Management actions fall into two categories, basin-wide and area specific, as described in more detail in the subsequent sections. Appendix L describes other programs that individual GSAs, pumpers and/or other entities may choose to fund and implement if they have the authority to do so.

In general, basin-wide management actions will apply to all Subbasin areas and reflect basic GSP implementation requirements such as monitoring, reporting and outreach, including necessary studies and early planning work, monitoring and filling data gaps with additional monitoring sites, annual reports and GSP updates, and promoting voluntary limitations in groundwater pumping aimed at both keeping groundwater levels stable and avoiding undesirable results.

Area specific management actions will also be implemented in areas experiencing persistent declines after the development of an appropriate regulation. Because developing and adopting the regulation will require substantial negotiations between the GSAs, public hearings, environmental review (CEQA) and legal risks that need to be addressed, efforts to define and gain approvals for the scope and detail associated with a regulation for area specific management actions will begin soon after GSP adoption. There is a strong need for adequate information to justify area specific management actions and considering that information will be a critical part of initial GSP implementation. Regulations adopted by GSAs related to identifying the specific areas for pumping limitations would need to be substantially identical to assure a consistent methodology for identifying those areas across the Subbasin. Individual pumpers in those areas will then need to choose how to comply with the necessary pumping limitations in those areas.

Figure 9-1 shows a flowchart of the conceptual GSP implementation approach. Public meetings and hearings will be held during the process of determining when and where in the Subbasin management actions are needed. A proportional and equitable approach to funding implementation of the GSP and any optional actions will be developed in accordance with all State laws and applicable public process requirements. During these meetings and hearings, input from the public, interested stakeholders, and groundwater pumpers will be considered and incorporated into the decision-making process.

At a time in the future when the effects of management actions have stabilized groundwater levels, the GSAs will reassess the need for continuing these actions. At a minimum, the reassessment process would be done as part of the 5-year review and report to the regulatory agencies.

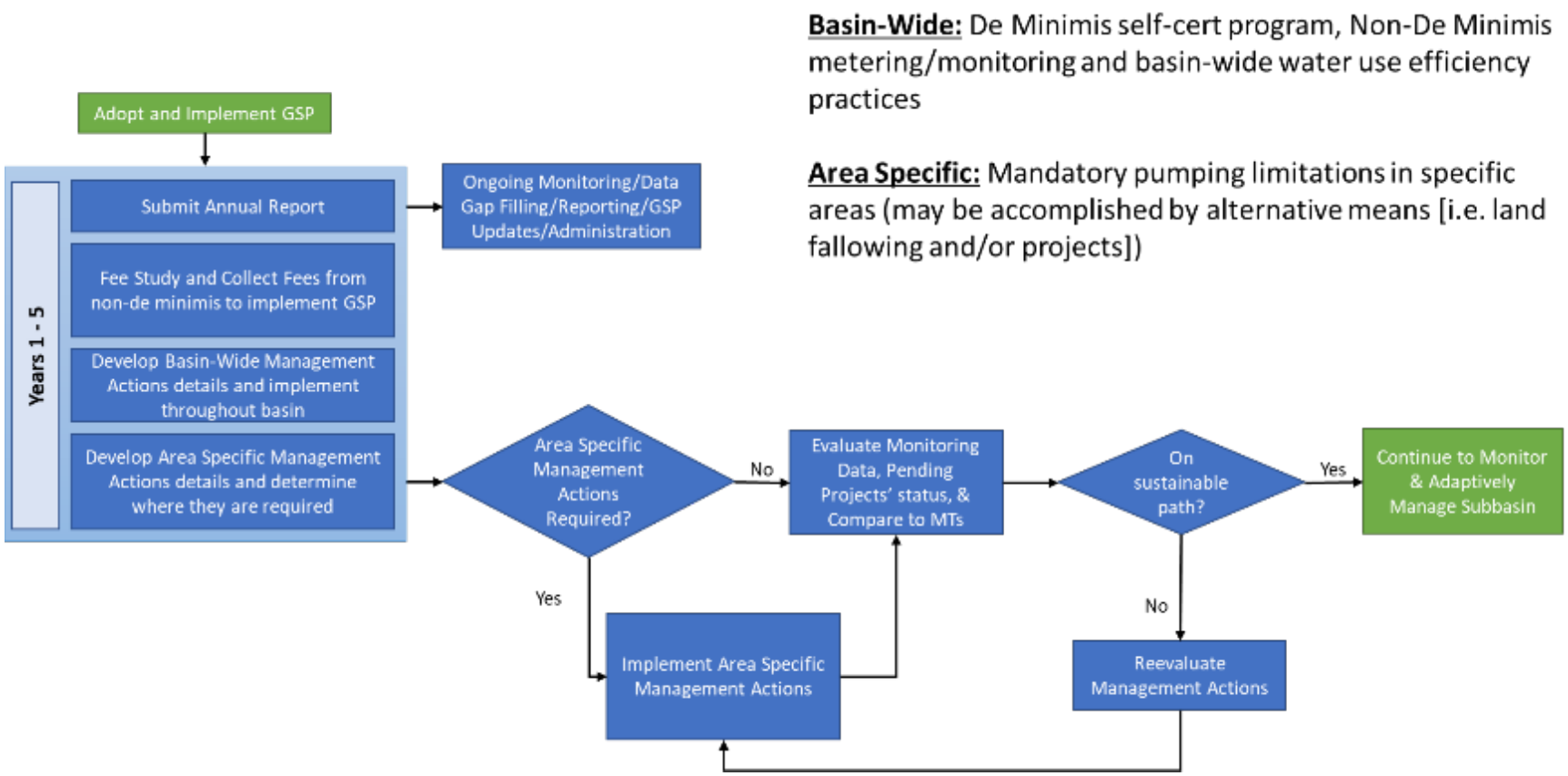


Figure 9-1: Conceptual Implementation Approach for Management Actions and Projects

9.3 Basin-Wide Management Actions

The following subsections outline the various basin-wide management actions. Basin-wide management actions will be implemented using input from stakeholders and in a data-driven process.

Basin-wide management actions include:

- Monitoring, reporting and outreach
- Promoting best water use practices
- Promoting stormwater capture
- Promoting voluntary fallowing of irrigated crop land

Sections required by SGMA regulations §354.44 follow the description of each management action below. Grant funding has been procured though the SGMA Round 1 Implementation Grant for implementation of the management actions listed above. Each management action was scored and ranked using a set of scoring criteria. The scores of individual management actions, as well as management action descriptions and justifications are included as a table in Appendix O.

9.3.1 Monitoring, Reporting and Outreach

Monitoring, reporting and outreach reflects the core functions that the GSAs need to provide to comply with SGMA regulations. The GSAs will direct the monitoring programs outlined in Chapter 7 to track Subbasin conditions related to the five applicable sustainability indicators. Data from the monitoring programs will be routinely evaluated to ensure progress is being made toward sustainability or to identify whether undesirable results are occurring. Data will be maintained in the Data Management System (DMS). Data from the monitoring program will be used by the GSAs to guide decisions on management actions and to prepare annual reports to Subbasin stakeholders and DWR and by individual entities to guide decisions on projects. SGMA regulations require that the reports comply with DWR forms and submittal requirements that will be published by DWR, and that all transmittals are signed by an authorized party. Data will be organized and available to the public to document Subbasin conditions relative to Sustainability Management Criteria (Chapter 8).

9.3.1.1 *De Minimis* Self Certification

A system for *de minimis* basin extractors to self-certify that they extract, for domestic purposes, two acre-feet or less per year will be developed in order to differentiate extractors for the purposes of implementing the GSP.

9.3.1.2 Non-*De* Minimis Metering and Reporting Program

This GSP calls for a program that will require all non-*de minimis* extractors to report extractions annually and use a water-measuring method satisfactory to the GSAs in accordance with Water Code Section 10725.8. It is anticipated that the GSAs will develop and adopt a regulation to implement this program, which is expected to include a system for reporting and accounting for land fallowing, stormwater capture projects, or other activities that individual pumpers implement. The information collected will be used to account for pumping that would have otherwise occurred, for analyzing projected Subbasin conditions and completing annual reports and five-year GSP assessment reports.

9.3.1.3 Annual Reports (SGMA Regulation §356.2)

Annual reports will be submitted to DWR starting on April 1, 2020. The purpose of the report is to provide monitoring and total groundwater use data to DWR, compare monitoring data to the sustainable management criteria, to report on management actions and projects implemented to achieve sustainability, and to promote best water use practices, stormwater capture and voluntary irrigated land fallowing. Annual reports will be available to Subbasin stakeholders.

9.3.1.4 5-Year GSP Updates and Amendments (SGMA Regulation §356.2)

In accordance with SGMA regulatory requirements (§356.4), five-year GSP assessment reports will be provided to DWR starting in 2025. The GSAs shall evaluate the GSP at least every five years to assess whether it is achieving the sustainability goal in the Subbasin. The assessment will include a description of significant new information that has been made available since GSP adoption or amendment and whether the new information or understanding warrants changes to any aspect of the plan.

Although not required by SGMA regulations, the GSAs anticipate that an amendment to the GSP will be prepared within the first five years to integrate new information. Updates may include incorporating additional monitoring data, updating the sustainable management criteria, documenting any projects that are being implemented and facilitating adaptive management of management actions.

9.3.1.5 Data Gaps

SGMA regulations require identification of data gaps and a plan for filling them (§ 354.38). Monitoring data will be collected and reported for each of the five sustainability indicators that are relevant to the Subbasin: chronic lowering of groundwater levels, reduction in groundwater storage, degraded water quality, land subsidence, and depletion of interconnected surface water. As noted in Chapter 7, the approach for establishing the

monitoring networks was to leverage existing monitoring programs and, where data gaps existed, incorporate additional monitoring locations that have been made available by cooperating entities or that have been established by the GSAs. Appendix L identifies the plan for addressing data gaps in each monitoring network and the computer model of the Subbasin.

9.3.1.6 Relevant Measurable Objectives

Monitoring, Reporting, and Outreach would help achieve measurable objectives by keeping basin users informed about Subbasin conditions and the need to avoid undesirable results.

9.3.1.7 Expected Benefits and Evaluation of Benefits

The primary benefit from Monitoring, Reporting and Outreach is increasing hydrogeologic understanding of basin conditions and how management affects those conditions. Outreach, public education and associated changes in behavior improve the chances of achieving sustainability. Because it is unknown how much behavior will change as a result of Monitoring, Reporting and Outreach, it is difficult to quantify the expected benefits at this time.

Reductions in groundwater pumping will be measured directly through the metering and reporting program and recorded in the Data Management System (DMS). Changes in groundwater elevation will be measured with the groundwater level monitoring program. Subsidence will be measured using InSAR data. Changes in groundwater storage will be estimated using changes in groundwater levels (via proxy). Information about the monitoring programs is provided in Chapter 7. Isolating the effect of Monitoring, Reporting and Outreach on groundwater levels will be challenging because they are only one of several management actions that may be implemented concurrently in the Subbasin.

9.3.1.8 Circumstances for Implementation

Monitoring, Reporting and Outreach will begin upon adoption of the GSP. No other triggers are necessary or required.

9.3.1.9 Public Noticing

Public meetings will be held to inform the groundwater pumpers and other stakeholders about Subbasin conditions and the need for behavior changes. Groundwater pumpers and interested stakeholders will have the opportunity at these meetings to provide input and comments on how the Monitoring, Reporting and Outreach are being implemented in the Subbasin. Information on Monitoring, Reporting and Outreach will also be provided through annual GSP reports and links to relevant information on GSA websites.

9.3.1.10 Permitting and Regulatory Process

It is anticipated that the GSAs will adopt a regulation governing the metering and reporting program.

9.3.1.11 Implementation Schedule

Monitoring, Reporting and Outreach efforts will begin upon GSP adoption.

9.3.1.12 Legal Authority

The legal authority to conduct Monitoring, Reporting and Outreach is included in SGMA. For example, Water Code § 10725.8 authorizes GSAs to require through their GSPs that the use of every groundwater extraction facility (except those operated by *de minimis* extractors) be measured.

9.3.1.13 Estimated Cost

The total estimated cost for Monitoring, Reporting, and Outreach is $1,150,000.

9.3.2 Promoting Best Water Use Practices

This GSP calls for the GSAs to encourage pumpers to implement the most effective water use efficiency methods applicable, often referred to as Best Management Practices (BMPs). It is anticipated that industry leaders would facilitate workshops or other programs designed to communicate what the latest best water use practices are for their industry. Effective BMPs could result in:

- Efficient irrigation practices.
- A better accounting of annual precipitation and its contribution to soil moisture in all irrigation decisions and delay commencing irrigation until soil moisture levels require replenishment.
- Optimization of irrigation needs for frost control if sprinklers are used.
- More optimal irrigation practices by monitoring crop water use with soil and plant monitoring devices and tie monitoring data to evapotranspiration (ET) estimates.
- Conversion from high water demand crops to lower water demand crops.

Many growers already use BMPs, but improvements can be made. A goal of promoting BMPs is to broaden their use to more growers in the Subbasin. *De minimis* groundwater users will be encouraged to use BMPs as well. Promoting BMPs will include broad outreach to groundwater pumpers in the Subbasin to emphasize the importance of utilizing BMPs and

understanding their positive benefits for mitigating declining groundwater levels and forestalling mandated limitations in groundwater extraction on their property.

9.3.2.1 Relevant Measurable Objectives

BMPs would help achieve the groundwater elevation, groundwater storage, and land subsidence measurable objectives.

9.3.2.2 Expected Benefits and Evaluation of Benefits

The primary benefit from initiating BMPs is mitigating the decline, or raising, groundwater elevations. An ancillary benefit from stable or rising groundwater levels may include avoiding pumping induced subsidence. Because it is unknown how much pumping will be reduced from promoting BMPs, it is difficult to quantify the expected benefits at this time.

Reductions in groundwater pumping will be measured directly through the metering and reporting program and recorded in the Data Management System (DMS). Changes in groundwater elevation will be measured with the groundwater level monitoring program. Subsidence will be measured with the InSAR network. Changes in groundwater storage will be estimated using the groundwater level proxy. Information about the monitoring programs is provided in Chapter 7. Isolating the effect of BMPs on groundwater levels will be challenging because they are only one of several management actions that may be implemented concurrently in the Subbasin.

9.3.2.3 Circumstances for Implementation

BMPs and related outreach will be promoted soon after adoption of the GSP. No other triggers are necessary or required.

9.3.2.4 Public Noticing

Public meetings will be held to inform the groundwater pumpers and other stakeholders about Subbasin conditions and the need for BMPs. Groundwater pumpers and interested stakeholders will have the opportunity at these meetings to provide input and comments on how the BMPs are being implemented in the Subbasin. The BMPs will also be promoted through annual GSP reports and links to relevant information on GSA websites.

9.3.2.5 Permitting and Regulatory Process

No permitting or regulatory process is needed for promoting BMPs.

9.3.2.6 Implementation Schedule

The GSAs envision that BMPs will be promoted within a year of GSP adoption.

9.3.2.7 Legal Authority

No legal authority is needed to promote BMPs.

9.3.2.8 Estimated Cost

The estimated cost for promoting BMPs and understanding the extent to which they are being implemented in the Subbasin is included in the cost of the metering and reporting program and developing annual reports.

9.3.3 Promote Stormwater Capture

Stormwater and dry weather runoff capture projects, including Low Impact Development (LID) standards for new or retrofitted construction, will be promoted as priority projects to be implemented as described in the San Luis Obispo County Stormwater Resource Plan (SWRP). The SWRP outlines an implementation strategy to ensure valuable, high-priority projects with multiple benefits. While the benefits are not easily quantified, the State is very supportive of such efforts. Stormwater capture projects in several areas of the Basin, including reaches of the Huer Huero, San Juan and Estrella drainages are likely to be pursued.

This management action covers two types of stormwater capture activities. The first stormwater capture activity involves retaining and recharging onsite runoff. Examples of this type of activity include LID and on-farm recharge of local runoff. The second stormwater capture activity involves recharge of unallocated storm flows. These actions require temporary diversions of storm flows from streams, and transport of those flows to recharge locations. State programs and grants (e.g., FLOOD-MAR, Proposition 68) and local entities (e.g., Resource Conservation Districts) can be utilized as resources to move forward on stormwater capture and percolation efforts.

9.3.3.1 Relevant Measurable Objectives

Stormwater capture would benefit the groundwater elevation, groundwater storage, and land subsidence measurable objectives.

9.3.3.2 Expected Benefits and Evaluation of Benefits

The primary benefit from promoting stormwater capture is to mitigate the decline of, or possibly raise, groundwater elevations through additional recharge. An ancillary benefit from stable or rising groundwater elevations may include avoiding pumping induced subsidence. Because the amount of recharge that could be accomplished from the program is unknown at this time, it is difficult to quantify the expected benefits.

Changes in groundwater elevation will be measured with the groundwater level monitoring program. Subsidence will be measured with the InSAR network. Changes in groundwater storage will be estimated using the groundwater level proxy. Information about the monitoring programs is provided in Chapter 7. Isolating the effect of the stormwater capture on groundwater levels will be challenging because it will be only one of several management actions that may be implemented concurrently in the Subbasin.

9.3.3.3 Circumstances for Implementation

Stormwater capture will be promoted as soon as possible after adoption of the GSP.

9.3.3.4 Public Noticing

Public meetings will be held to inform the groundwater pumpers and other stakeholders about Subbasin conditions and the need for stormwater capture. Groundwater pumpers and interested stakeholders will have the opportunity at these meetings to provide input and comments on how stormwater capture projects are being implemented in the Subbasin. Stormwater capture will also be promoted through annual GSP reports and links to relevant information on GSA websites.

9.3.3.5 Permitting and Regulatory Process

Recharge of stormwater by retaining and recharging onsite runoff does not require permits. Recharge of unallocated storm flows is currently subject to the SWRCB's existing temporary permit for groundwater recharge program. The SWRCB is currently developing five-year permits for capturing high flow events. Recharge of unallocated storm flows will be subject to the terms of these five-year permits if and when they are enacted. Stormwater capture may also be subject to CEQA permitting. A regulation will need to be adopted by the GSAs to account for projects that recharge unallocated storm flows as a part of the metering and reporting program. Regulations are subject to CEQA.

9.3.3.6 Implementation Schedule

The GSAs envision that stormwater capture will be promoted within two years of GSP adoption.

9.3.3.7 Legal Authority

Other than acquiring required permits and the right to divert stormwater, there are no other legal authorities required to implement stormwater capture.

9.3.3.8 Estimated Cost

The estimated cost for promoting stormwater capture and understanding the extent to which it is being implemented in the Subbasin is included in the cost of the metering and reporting program and developing annual reports.

9.3.4 Promote Voluntary Fallowing of Agricultural Land

This GSP calls for the GSAs to promote voluntary fallowing of crop land to reduce overall groundwater demand. For example, the GSAs could develop a Subbasin-wide accounting system that tracks landowners who decide to voluntarily fallow their land and cease groundwater pumping or otherwise refrain from using groundwater. If given the opportunity to create a "place holder" for their ability to pump under regulations adopted by the GSAs, some property owners currently irrigating crops or that might want to irrigate in the future may choose to forego the expense of farming and extracting water if those rights can be accounted for and protected. A regulation would need to be adopted by the GSAs for the metering and reporting program, and the program could include provisions related to land fallowing.

9.3.4.1 Relevant Measurable Objectives

The voluntary fallowing of irrigated land would benefit the groundwater elevation, groundwater storage, and land subsidence measurable objectives.

9.3.4.2 Expected Benefits and Evaluation of Benefits

The primary benefit of voluntary fallowing would be mitigating the decline of groundwater elevations by reducing pumping. An ancillary benefit from stable or rising groundwater elevations may include avoiding pumping induced subsidence. Because it is unknown how many landowners will willingly fallow their land, it is difficult to quantify the expected benefits at this time.

Reductions in groundwater pumping will be measured directly through the metering and reporting program and recorded in the DMS. Changes in groundwater elevation will be measured with the groundwater level monitoring program. Subsidence will be measured with the InSAR network. Changes in groundwater storage will be estimated using the groundwater level proxy. Information about the monitoring programs is provided in Chapter 7. Isolating the effect of voluntary fallowing on sustainability metrics will be challenging because it will be only one of several management actions that may be implemented concurrently in the Subbasin.

9.3.4.3 Circumstances for Implementation

The GSAs envision that voluntary fallowing of land will be promoted as soon as possible after GSP adoption.

9.3.4.4 Public Noticing

Public meetings will be held to inform the groundwater pumpers and other stakeholders about Subbasin conditions and the need for voluntary fallowing. Landowners, groundwater pumpers and interested stakeholders will have the opportunity at these meetings to provide input and comments on how voluntary fallowing is being implemented in the Subbasin. Voluntary fallowing will also be promoted through annual GSP reports and links to relevant information on GSA websites.

9.3.4.5 Permitting and Regulatory Process

Regulations are subject to CEQA.

9.3.4.6 Implementation Schedule

The GSAs envision that voluntary fallowing will be promoted within two years of GSP adoption.

9.3.4.7 Legal Authority

California Water Code §10726.2(c) provides GSAs the authorities to provide for a program of voluntary land fallowing.

9.3.4.8 Estimated Cost

The estimated cost for promoting and accounting for land fallowing is included in the cost of the metering and reporting program and developing annual reports.

9.4 Area Specific Management Actions

Implementation of area specific management actions may be necessary to address areas of persistent groundwater level decline (Figure 9-1). Through a regulatory program, GSAs will conduct extensive data analysis to delineate where pumping needs to be limited to stabilize levels. With this information, affected pumpers will need to decide how to achieve these limitations. This may include land fallowing/retirement or paying for projects and/or programs that can be effectively implemented proportional to the recognized volume of groundwater necessary to avoid undesirable results in each area of the Subbasin. Sections

required by SGMA regulations §354.44 follow the description of each management action below.

9.4.1 Mandatory pumping limitations in specific areas

The GSAs will establish a regulatory program to identify and enforce required pumping limitation as necessary to arrest persistent groundwater level declines in specific areas. The amount of mandatory pumping limitations is uncertain and will depend on the effectiveness and timeliness of voluntary actions by pumpers and the success of other measures outlined in the GSP. The water budget presented in Chapter 6 suggests that an estimated shortfall of 13,700 AFY will need to be addressed by a combination of increased water supply, conservation and reduction in pumping in order to achieve sustainability. After GSP adoption, developing the program would likely require the following steps:

5. Establishing a methodology for determining baseline pumping in specific areas considering:
    a. Groundwater level trends in areas of decline and estimated available volume of water in those areas
    b. Land uses and corresponding irrigation requirements
6. Establishing a methodology to determine whose use must be limited and by how much considering, though not limited to, water rights and evaluation of anticipated benefits from projects bringing in supplemental water or other relevant actions individual pumpers take.
7. A timeline for limitations on pumping ("ramp down") in specific areas as required to avoid undesirable results
8. Approving a formal regulation to enact the program

Determination of baseline pumping in specific areas will need to be established and guidance developed by DWR in response to legislative directives for consistent implementation of the Water Conservation Act of 2009, as is used in Urban Water Management Plans, may be helpful. Baseline pumping would be ramped down to meet water use targets in specific areas until it is projected that groundwater levels will stabilize. Analyses will be updated periodically as new data are developed. The ramp down schedule would be developed during program development; the rate of ramp down would depend on when the program starts, and projections of how long lower pumping rates are required in specific areas in order to avoid undesirable results. The specific ramp down amounts and timing would be reassessed periodically by the GSAs as needed to achieve sustainability. These adjustments would occur when additional data and analyses are available.

9.4.1.1 Relevant Measurable Objectives

Mandatory limitations to groundwater pumping in specific areas would benefit the groundwater elevation, groundwater storage, and land subsidence measurable objectives in those areas.

9.4.1.2 Expected Benefits and Evaluation of Benefits

The primary benefit from the mandatory pumping limitations is mitigating the decline of groundwater levels through reduced total pumping. An ancillary benefit from stable or increasing groundwater elevations may include avoiding pumping induced subsidence. The program is designed to ramp down total pumping to the sustainable yield; therefore, the quantifiable goal is to maintain pumping within the sustainable yield.

Limitations on groundwater pumping will be measured directly through the metering and reporting program and recorded in the DMS. Changes in groundwater elevation are an important metric for the mandatory pumping limitation program and will be measured with the groundwater level monitoring program. Subsidence will be measured using InSAR data. Changes in groundwater storage will be estimated using the groundwater level proxy. Information about the monitoring programs is provided in Chapter 7. Isolating the effect of the mandatory pumping limitation program on sustainability metrics will be challenging because it will be only one of several management actions that may be implemented concurrently in the Subbasin. However, as the pumping ramp down is initiated, the correlation between reduced pumping and higher groundwater levels may become more apparent.

9.4.1.3 Circumstances for Implementation

Because there are areas where groundwater levels are persistently declining and undesirable results could occur, the mandatory pumping limitation program will be implemented after the GSAs adopt the regulation governing the program.

9.4.1.4 Public Noticing

Public meetings will be held to inform groundwater pumpers and other stakeholders that the mandatory pumping limitation program is being developed. The mandatory pumping limitation program will be developed in an open and transparent process. Landowners, groundwater pumpers and other stakeholders will have the opportunity at these meetings to provide input and comments on the process and the program elements.

9.4.1.5 Permitting and Regulatory Process

The mandatory pumping limitation program is subject to CEQA. The mandatory pumping limitation program would be developed in accordance with all applicable groundwater laws and respect all groundwater rights.

9.4.1.6 Implementation Schedule

Developing the mandatory pumping limitation program and adopting the regulation would likely take up to five years. Once the regulation is adopted, the program will be implemented.

9.4.1.7 Legal Authority

California Water Code §10726.4 (a)(2) provides GSAs the authorities to control groundwater extractions by regulating, limiting, or suspending extractions from individual groundwater wells or extractions from groundwater wells in the aggregate.

9.4.1.8 Estimated Cost

The cost to develop and implement the mandatory pumping limitation program is estimated to be $350,000. This does not include the cost of the CEQA permitting or any ongoing program oversight.

9.5 Projects

Projects involve new or improved infrastructure to make new water supplies available to the Subbasin. Best Management Practices and developing projects that will enhance supply will mitigate groundwater level decline. Several potential projects are described in this GSP that may be implemented by willing entities to offset pumping and lessen the degree to which the management actions would be needed. The implementation of projects depends on willing participants and/or successful funding votes.

There are six potential sources of water for projects:

1. Tertiary treated wastewater supplied and sold by City of Paso Robles and the San Miguel CSD to private groundwater extractors to use in lieu of groundwater. This water is commonly referred to as recycled water (RW).
2. State Water Project (SWP) water
3. Nacimiento Water Project (NWP) water
4. Salinas Dam/Santa Margarita Reservoir water
5. Local recycled water
6. Flood flows/stormwater from local rivers and streams

These six water sources are described in more detail in Appendix I. Of these six sources, only RW, SWP, NWP, and Salinas Dam currently have sufficiently reliable volumes of unused water to justify the expense of new infrastructure to be used on a regular basis for supplementing water supplies in the Subbasin. Since there are uncertainties associated with securing agreements to utilize SWP and related infrastructure, descriptions of concept projects associated with the use of this water supply are included in Appendix L. Capturing flood flows/stormwater from streams in permitted projects will be pursued. Specific elements of these projects will be developed in the near future. Use of the Salinas Dam to capture flood flows/stormwater is presently the only conceptual project included in the GSP. In summary, the initial focus of new supply is on developing RW, NWP, and Salinas Dam projects in the Subbasin. Grant funding has been procured though the SGMA Round 1 Implementation Grant for implementation of the projects listed above. Each project was scored and ranked using a set of scoring criteria. The scores of individual projects, as well as project descriptions and justifications are included as a table in Appendix O.

9.5.1 General Project Provisions

Many of the priority projects listed below are subject to similar requirements. These general provisions that are applicable to all projects include certain permitting and regulatory requirements, public notice requirements, and the legal authority to initiate and complete the projects. This section assumes the development of projects are led by one or more GSAs in order to complete the sections below that are required by SGMA regulations §354.44.

9.5.1.1 Summary of Permitting and Regulatory Processes

Although the provisions of this GSP do not require projects to be subject to a particular set of requirements, projects envisioned in the GSP may require an environmental review process via CEQA and may require an Environmental Impact Report, a Negative Declaration, or a Mitigated Negative Declaration.

There will be a number of local, county and state permits, right of ways, and easements required depending on pipeline alignments, stream crossings, and project type.

Projects must adhere to the Salt/Nutrient Management Plan for the Paso Robles Groundwater Basin (RMC 2015).

9.5.1.2 Public Noticing

All projects are subject to the public noticing requirements per CEQA.

9.5.1.3 Legal Authority Required for Projects and Basis for That Authority within the Agency

California Water Code §10726.2 provides GSAs the authority to purchase, among other things, land, water rights, and privileges. Additionally, an assessment of the legal rights to acquire and use various water sources is included in Appendix I.

9.5.2 Conceptual Projects

Six conceptual projects are included in this GSP and have been identified after many public meetings and studies over the last decade and currently ongoing. All six projects will not necessarily be implemented, but they represent six reasonable projects that could help achieve sustainability throughout the Subbasin. Conceptual projects were developed for different regions in the Subbasin to address localized declines in groundwater elevations. Projects were sized based on the locations of available supplies and pumping demands in different areas of the Subbasin. Actual projects will be highly dependent on the ability of the GSAs and/or individual entities to negotiate with water suppliers and purchase the surface waters described in Appendix I. Four other conceptual projects that are not being developed currently are included in Appendix L for future consideration.

Table 9-1. Conceptual Projects

Project Name	Water Supply	Project Type	Approximate Location	Average Volume (AFY)
City Recycled Water Delivery	RW	Direct Delivery	Near City of Paso Robles	2,200
San Miguel Recycled Water Delivery	RW	Direct Delivery	Near San Miguel	200 [a]
NWP Delivery at Salinas and Estrella River Confluence	NWP	Direct Delivery	Near the confluence of the Salinas and Estrella Rivers	2,800
NWP Delivery North of City of Paso Robles	NWP	Direct Delivery	North of Huer Huero Creek, due west of the airport	1,000
NWP Delivery East of City of Paso Robles	NWP	Direct Delivery	East of the City of Paso Robles	2,000
Expansion of Salinas Dam	Salinas River	River Recharge	Along the Salinas River	1,000

Notes: (a) Average volume amounts may be updated in final GSA based on more recent information
(b) Approximate locations are assumed to establish the benefit calculations required by SGMA

Short descriptions of each concept project are included below, along with a map showing general project locations. Sections required by SGMA regulations §354.44 follow the description of each project. Generalized costs are also included for planning purposes. Components of these projects including facility locations, pipeline routes, recharge mechanisms, and other details may change in future analyses. Therefore, each of the projects

listed below should be treated as a generalized project that represents a number of potential detailed projects.

9.5.2.1 Assumptions Used in Developing Projects

Assumptions that were used to develop projects and cost estimates are provided in Appendix J. Assumptions and issues for each project need to be carefully reviewed and revised during the pre-design phase of each project. Project designs, and therefore costs, could change considerably as more information is gathered.

The cost estimates included below are class 5, order of magnitude estimates. These estimates were made with little to no detailed engineering data. The expected accuracy range for such an estimate is within +50 percent or –30 percent. The cost estimates are based on the engineering assessment of current conditions at the project location. They reflect a professional opinion of costs at this time and are subject to change as project designs mature.

Capital costs include major infrastructure including pipelines, pump stations, customer connections, turnouts and storage tanks. Capital costs also include 30% contingency for plumbing appurtenances, 15% increase for general conditions, 15% for contractor overhead and profit, and 8% for sales tax. Engineering, legal, administrative, and project contingencies was assumed as 30% of the total construction cost and included within the capital cost. Land acquisition at $30,000/acre was also included within capital costs.

Annual operations and maintenance (O&M) fees include the costs to operate and maintain new project infrastructure. O&M costs also include any pumping costs associated with new infrastructure. O&M costs do not include O&M or pumping costs associated with existing infrastructure, such as existing NWP O&M costs because these are assumed to be part of water purchase costs. Water purchase costs were assumed to include repayment of loans for existing infrastructure; however, these purchase costs will need to be negotiated. The terms of such a negotiation could vary widely.

Capital costs were annualized over thirty years and added with annual O&M costs and water purchase costs to determine an annualized dollar per acre-foot ($/AF) cost for each project. This $/AF value might not always represent the $/AF of basin benefit ($/AF-benefit).

9.5.2.2 Preferred Project 1: City Recycled Water Delivery

This project will use up to 2,200 AFY of disinfected tertiary effluent for in-lieu recharge in the central portion of the basin near and inside the City of Paso Robles. Water that is not used for recycled water purposes will be discharged to Huer Huero Creek with the potential for additional recharge benefits. The general layout of this project and relevant monitoring wells are shown on Figure 9-2. Infrastructure includes upgraded wastewater treatment plant and

pump station, 5.8 miles of pipeline, a storage tank, numerous turnouts, and a discharge to Huer Huero Creek. Additionally, a conceptual pipeline to the north of the main line will deliver recycled water to a larger geographical area. The cost to upgrade the wastewater treatment plant is also not included in the cost estimate, since the upgrades were required per the NPDES permit regardless of use for recycled water. Since this project is already in the predesign phase, the predesign project cost estimate is provided for this GSP.

9.5.2.2.1 Relevant Measurable Objectives

The measurable objectives benefiting from this groundwater project include:

- Groundwater elevation measurable objectives in the central portion of the Subbasin
- The groundwater storage measurable objective
- Land subsidence measurable objectives in the central portion of the Subbasin

9.5.2.2.2 Expected Benefits and Evaluation of Benefits

The primary benefit from the Paso Robles RW project is higher groundwater elevations in the Central portion of the Subbasin due to in-lieu recharge from the direct use of the RW and recharge through Huer Huero Creek. Ancillary benefits of shallower groundwater elevations may include an increase in groundwater storage, improved groundwater quality from recharge of high-quality water, and avoiding pumping induced subsidence. The GSP model was used to quantify the expected benefit from this project. Figure 9-3 shows the expected groundwater level benefit predicted by the GSP model after 10 years of project operation. Figure 9-3 expresses the benefit as feet of groundwater. The groundwater level benefit shown on Figure 9-3 is a measure of how much higher groundwater elevations are expected to be with the project rather than without the project.

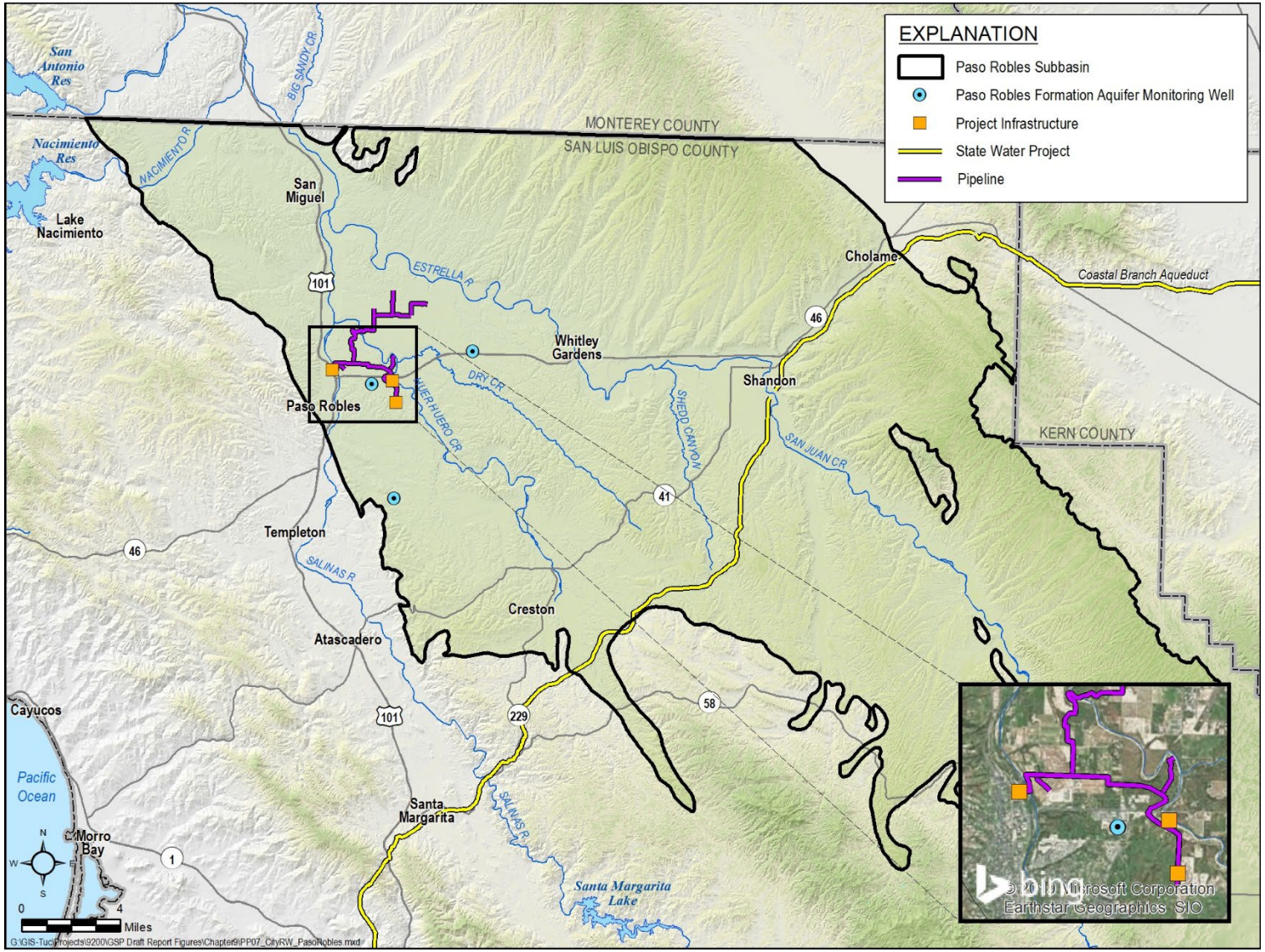


Figure 9-2. Paso Robles RW Project Layout

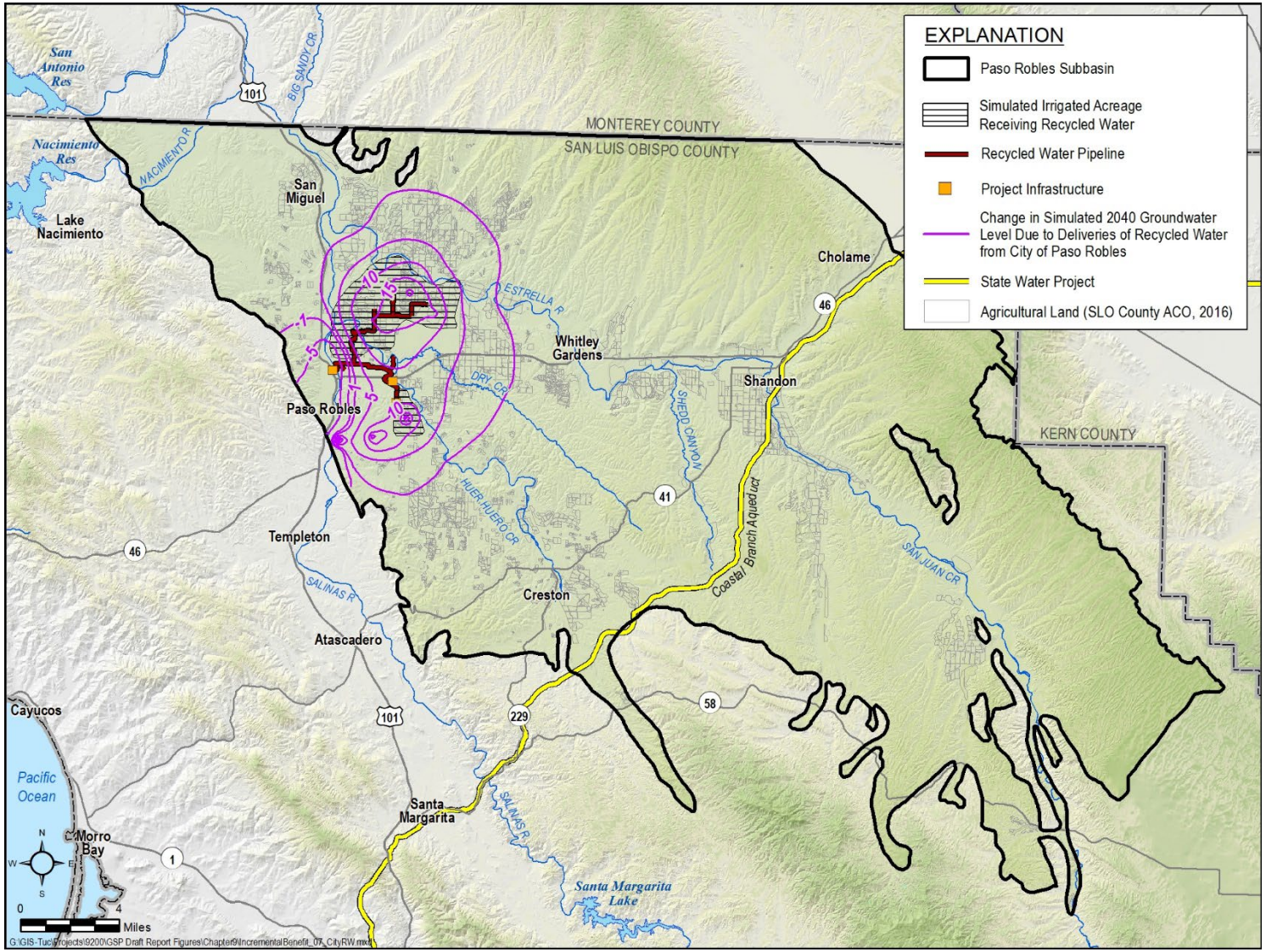


Figure 9-3. Groundwater Level Benefit of Paso Robles RW Project in Central Subbasin

Changes in groundwater elevation will be measured with the groundwater level monitoring program detailed in Chapter 7. Subsidence will be measured with the InSAR network detailed in Chapter 7. A direct correlation between the Paso Robles RW project and changes in groundwater levels may not be possible because this is only one among many management actions and projects that might be implemented in the Subbasin.

9.5.2.2.3 Circumstances for Implementation

This project is already being implemented by the City of Paso Robles. The monitoring wells 26S/12E-26E07, 26S/13E-16N01, and 27S/12E-13N01 will likely be positively impacted by this project.

9.5.2.2.4 Implementation Schedule

The project is underway. The phase design is expected to be complete by 2019 and construction complete by 2021. The implementation schedule is presented on Figure 9-4.

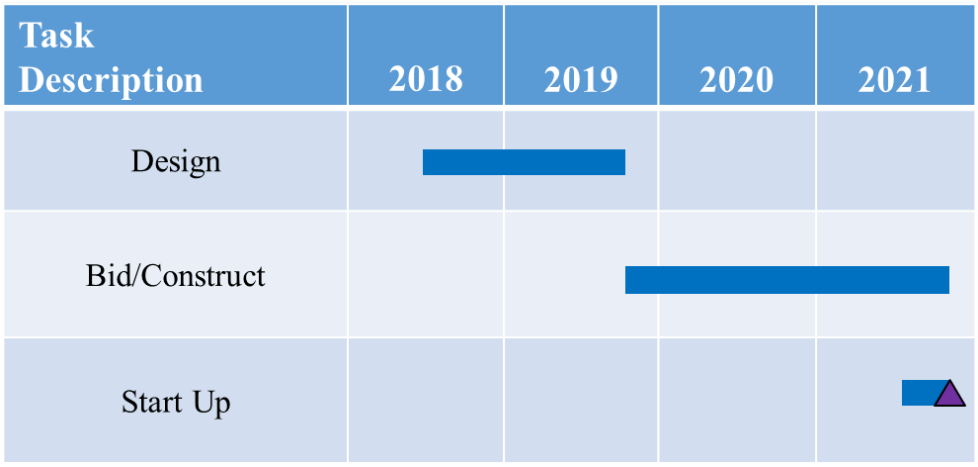


Figure 9-4. Implementation Schedule for Paso Robles RW in Central Subbasin

9.5.2.2.5 Estimated Cost

The estimated total project cost for this project is $22M. The cost and financing for the project is being determined by the City of Paso Robles. Annual O&M costs are not provided in this GSP. The cost ($/AF) of this water will be set by the City of Paso Robles and is not included in this GSP.

9.5.2.3 Preferred Project 2: San Miguel CSD Recycled Water Delivery

The San Miguel RW project is currently in the planning and preliminary design phases; therefore, the project concepts presented herein are preliminary.

This project is a planned project that involves the upgrade of San Miguel Community Services District (CSD) wastewater treatment plant to meet California Code of Regulations (CCR) Title 22 criteria for disinfected secondary recycled water for irrigation use by vineyards. Potential customers include a group of agricultural customers on the east side of the Salinas River, and a group of agricultural customers northwest of the wastewater treatment plant. The project might include the utilization of process discharge from a nearby processing facility for additional water recycling. The project could provide between 200 and 450 AFY of additional water supplies. The general layout of this project and relevant monitoring wells are shown on Figure 9-5. The infrastructure shown here includes a treatment plant upgrade, a recycled water pumping station and pipeline infrastructure to provide for delivering water to customers. The actual project size and infrastructure will be determined based on project feasibility and negotiations with suppliers and customers. For more information on technical assumptions and cost assumptions, refer to Appendix J.

9.5.2.3.1 Relevant Measurable Objectives

The measurable objectives benefiting from this groundwater project include:

- Groundwater elevation measurable objectives in the northern portion of the Subbasin
- The groundwater storage measurable objective
- Land subsidence measurable objectives in the northern portion of the Subbasin

9.5.2.3.2 Expected Benefits and Evaluation of Benefits

The primary benefit from RW use for irrigation is higher groundwater elevations in the northern portion of the Subbasin due to in-lieu recharge from the direct use of the RW. Ancillary benefits may include an increase in groundwater storage and avoiding pumping induced subsidence. The GSP model was used to quantify the expected benefit from this project. Figure 9-6 shows the expected groundwater level benefit predicted by the GSP model after 10 years of project operation. Figure 9-6 expresses the benefit as feet of groundwater. The groundwater level benefit shown on Figure 9-6 is a measure of how much higher groundwater elevations are expected to be with the project rather than without the project.

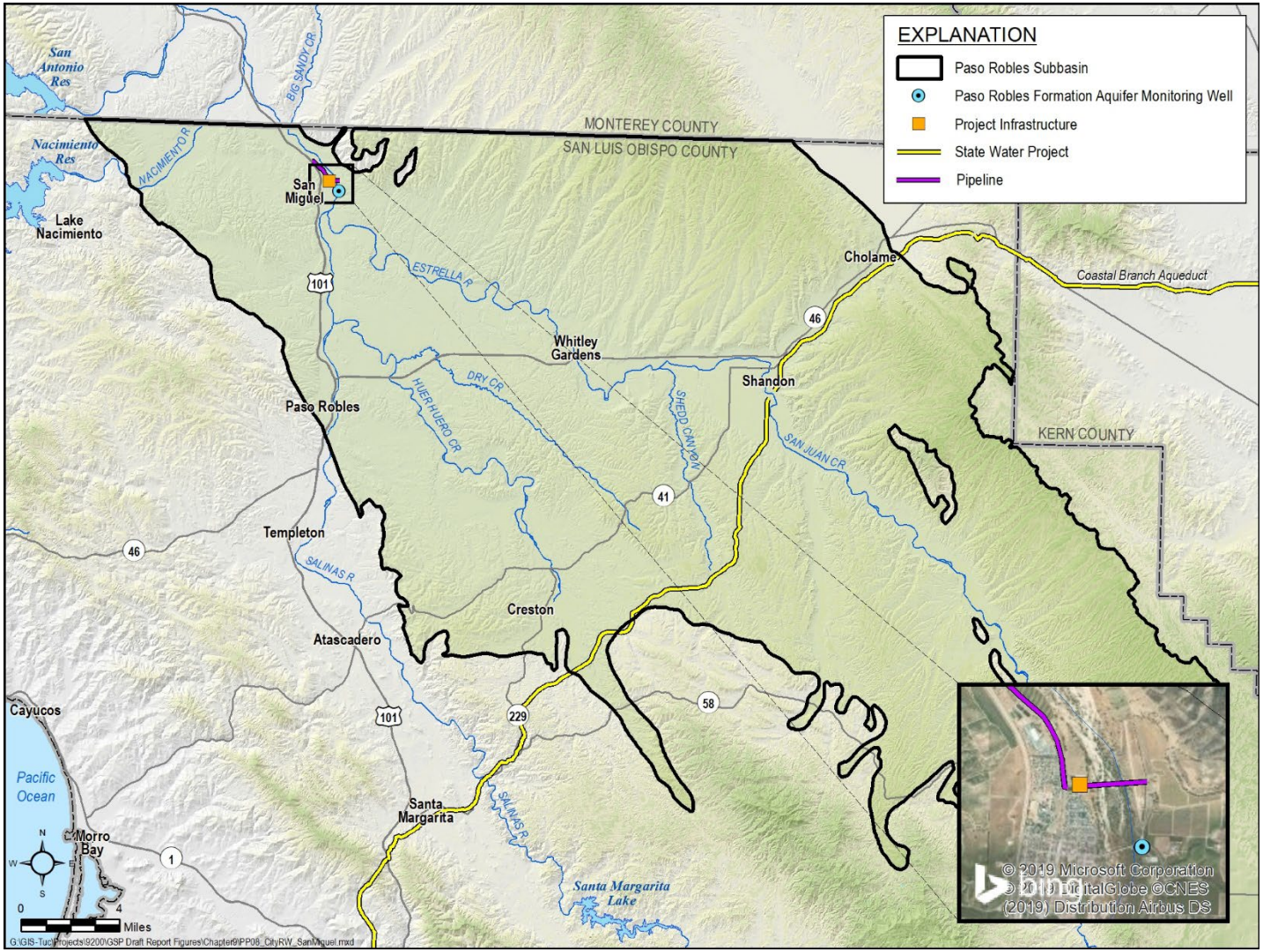


Figure 9-5. Conceptual San Miguel CSD RW Project Layout

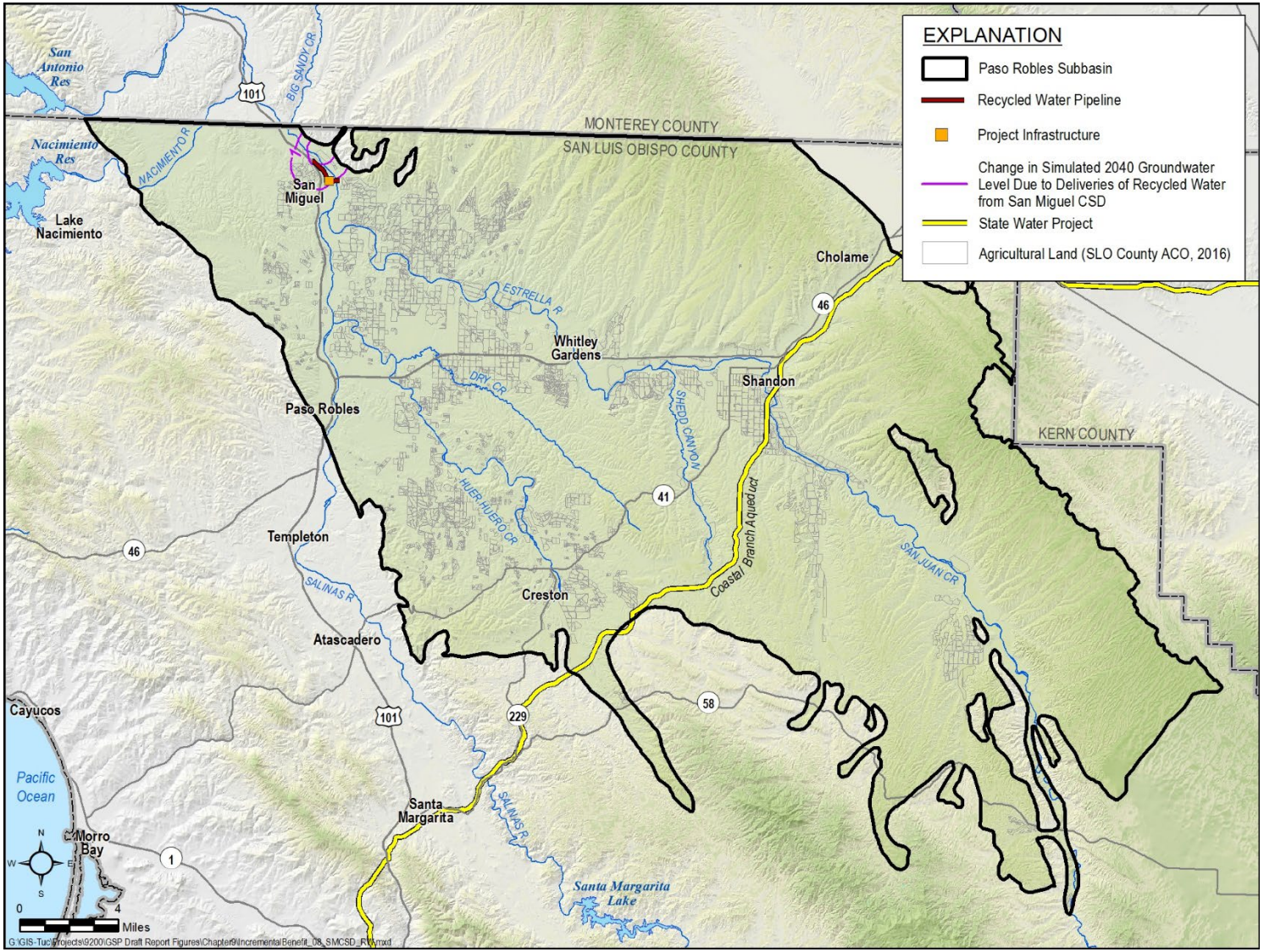


Figure 9-6. Groundwater Level Benefit of San Miguel CSD RW Project

Changes in groundwater elevation will be measured with the groundwater level monitoring program detailed in Chapter 7. Subsidence will be measured with the InSAR network detailed in Chapter 7. A direct correlation between the San Miguel CSD RW Project and changes in groundwater levels may not be possible because this is only one among many management actions and projects that might be implemented in the Subbasin.

9.5.2.3.3 CIRCUMSTANCES FOR IMPLEMENTATION

Willing parties will plan, design and raise funds to initiate projects. San Miguel CSD Staff has completed the planning phase and is currently in the design development phase of the project. The initial phase of the San Miguel CSD RW Project is currently planned for completion in mid-2021 with subsequent phases to be initiated if, after five years, groundwater levels in the northern portion of the monitoring network continue to decline at unsustainable rates. In particular, continued unsustainable groundwater level declines in monitoring well 25S/12E-16K05 will trigger implementation of this project. Additional triggers will be added as the monitoring well network expands.

This project is a planned project being undertaken by San Miguel CSD and may be implemented regardless of the triggered implementation framework presented herein.

9.5.2.3.4 IMPLEMENTATION SCHEDULE

The implementation schedule is presented on Figure 9-7. The project will take 4 to 6 years to implement. The actual project start date is to be determined on an as-needed basis or by San Miguel CSD.

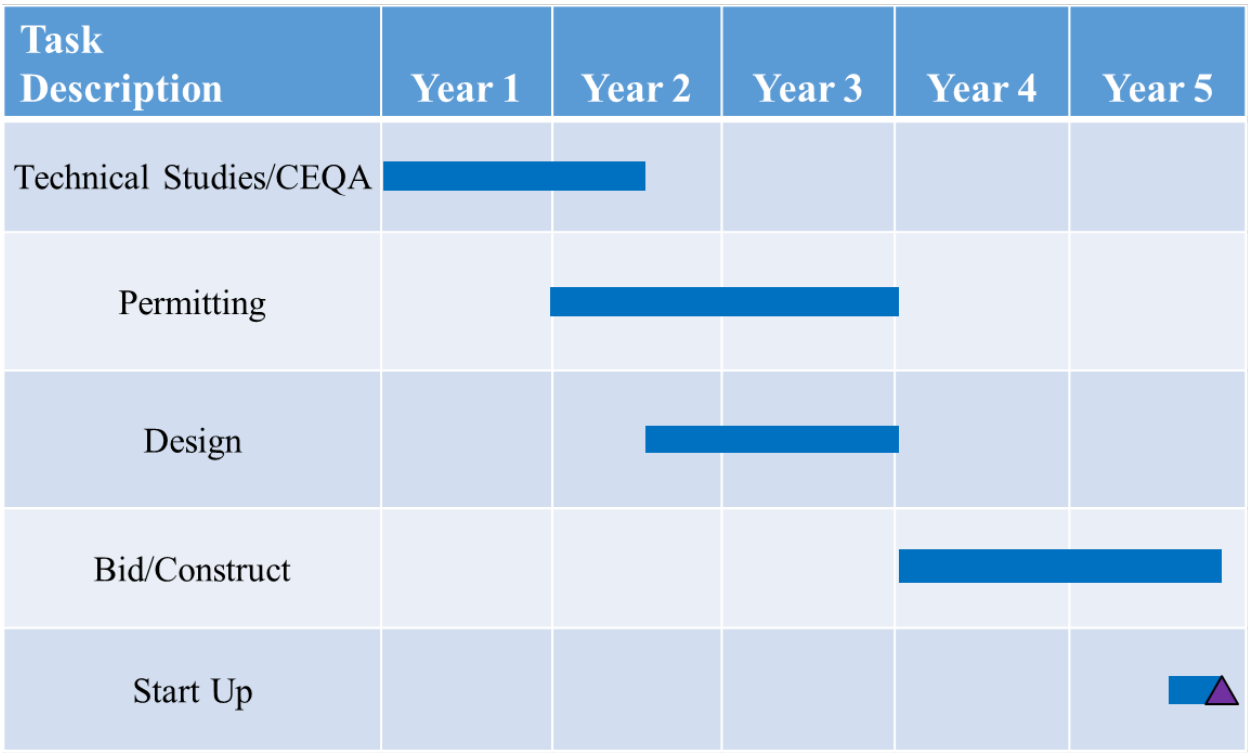


Figure 9-7. Implementation Schedule for San Miguel RW

9.5.2.3.5 Estimated Cost

This project is currently in the planning phases, and the San Miguel RW project presented herein might not accurately reflect the most current design concept. The cost of the potential project that is described herein was estimated for the purposes of the GSP. The estimated total project cost for this project is $15M, not including wastewater treatment plant upgrades. Cost can be covered by the bonding capacity developed through the groundwater conservation program. Annual O&M costs are estimated at $340,000. O&M costs would be covered by the overproduction surcharges. Based on a 30-year loan at a 5% interest rate, the cost of water for this project would be approximately $2,900/AF. Additional details regarding how costs were developed are included in Appendix J.

9.5.2.4 Preferred Project 3: NWP Delivery at Salinas and Estrella River Confluence

This conceptual project directly delivers up to 3,500 AFY of NWP water to agricultural water users near the confluence of the Salinas and Estrella Rivers, and an area north of the Estrella River. On average, this project will provide 2,800 AFY of water for use in lieu of groundwater pumping in the region. Before implementing this project, additional outreach and meetings with property owners and interested stakeholders will be conducted to inform them about the project details and acquire necessary approvals.

The general layout of this project and relevant monitoring wells are shown on Figure 9-8. Infrastructure includes a new NWP turnout, 13 miles of pipeline, a 700 horsepower (hp) pump station, and two river crossings: one crossing of the Salinas River and one crossing of the Estrella River. For more information on technical assumptions and cost assumptions, refer to Appendix J.

9.5.2.4.1 Relevant Measurable Objectives

The measurable objectives benefiting from this project include:

- Groundwater elevation measurable objectives in the central portion of the Subbasin
- The groundwater storage measurable objective
- Land subsidence measurable objectives in the central portion of the Subbasin

9.5.2.4.2 Expected Benefits and Evaluation of Benefits

The primary benefit from in-lieu recharge using NWP water is higher groundwater elevations in the central portion of the Subbasin. Ancillary benefits of shallower groundwater elevations may include an increase in groundwater storage and avoiding pumping induced subsidence. The GSP model was used to quantify the expected benefit from this project. Figure 9-9 shows the expected groundwater level benefit predicted by the GSP model after 10 years of project operation. Figure 9-9 expresses the benefit as feet of groundwater. The groundwater level benefit shown on Figure 9-9 is a measure of how much higher groundwater elevations are expected to be with the project rather than without the project.

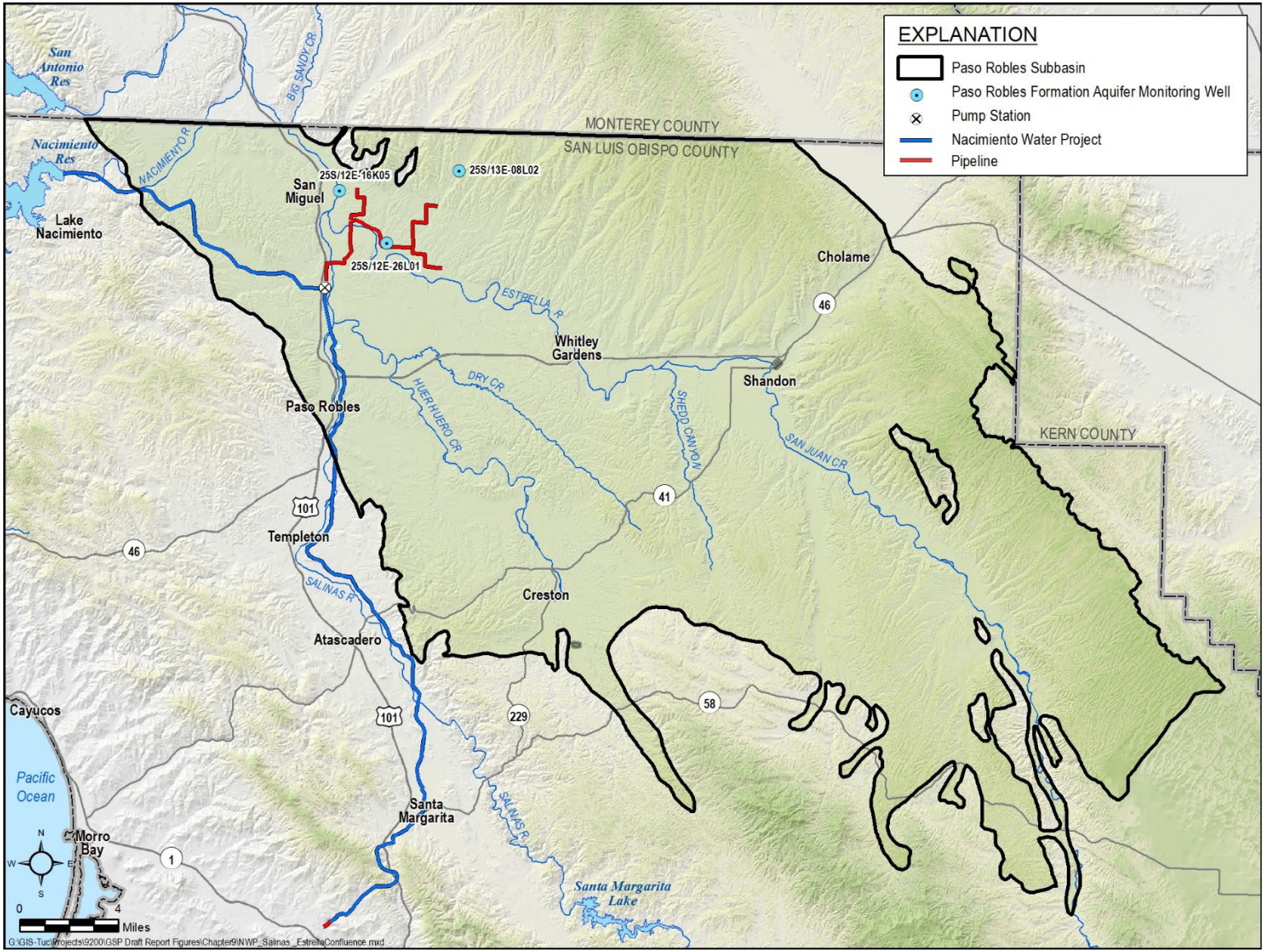


Figure 9-8. Conceptual NWP Delivery at Salinas and Estrella River Confluence Project Layout

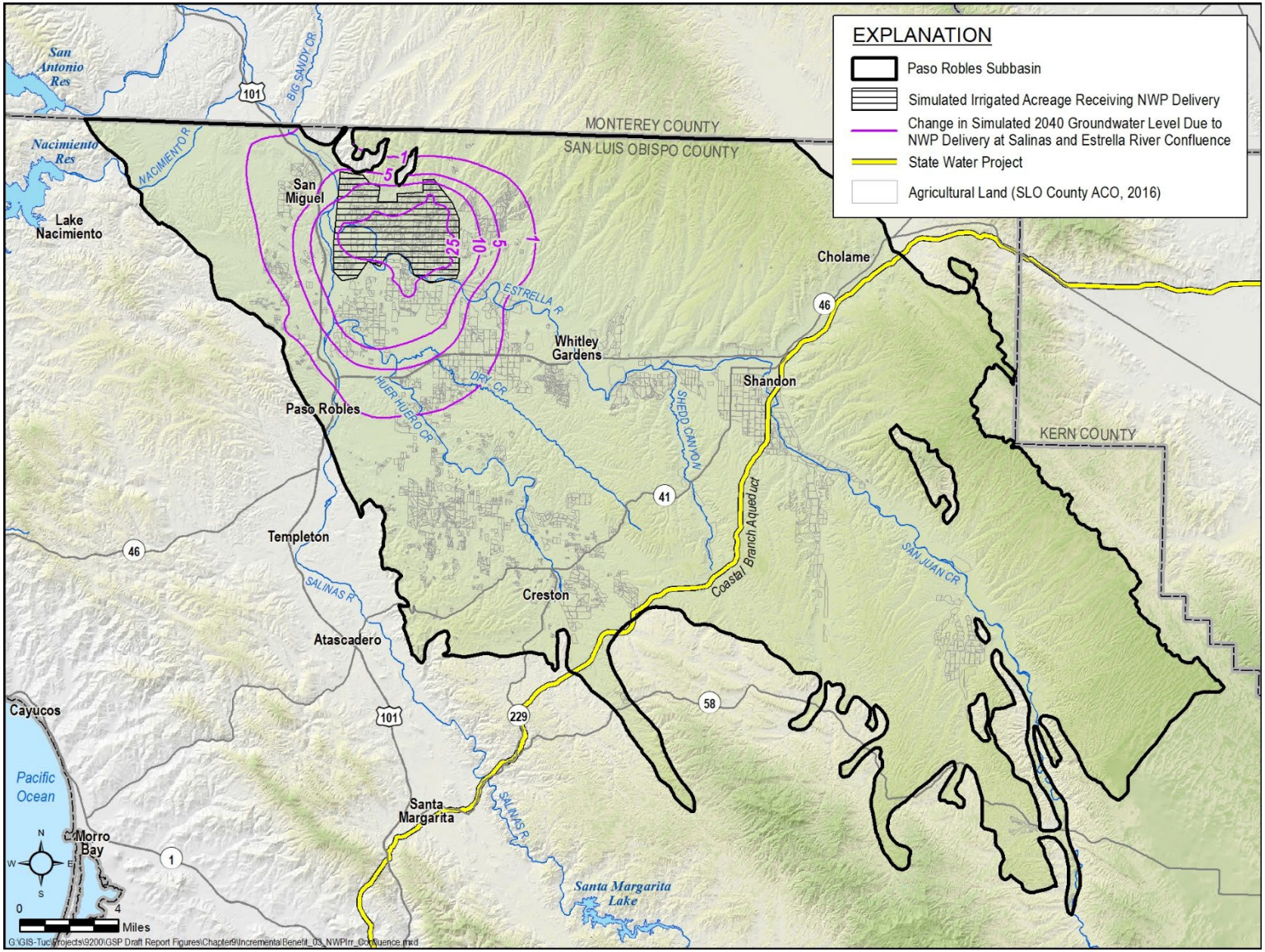


Figure 9-9. Groundwater Level Benefit of NWP Delivery at Salinas and Estrella River Confluence

Changes in groundwater elevation will be measured with the groundwater level monitoring program detailed in Chapter 7. Subsidence will be measured with InSAR data as detailed in Chapter 7. A direct correlation between in-lieu recharge and changes in groundwater levels may not be possible because this is only one among many management actions and projects that may be implemented in the Subbasin.

9.5.2.4.3 Circumstances for Implementation

All projects are implemented based on need, cost benefit studies and willing participants. The project to deliver water for in-lieu recharge near the Salinas and Estrella confluence will be initiated if, after five years, groundwater levels in the northern portion of the monitoring network continue to decline at unsustainable rates and willing participants agree to participate in the project. In particular, continued unsustainable groundwater level declines in monitoring wells 25S/12E-16K05, 25S/12E-26L01, and 25S/13E-08L02 will trigger implementation of this project. Additional triggers will be added as the monitoring well network expands.

9.5.2.4.4 Implementation Schedule

The implementation schedule is presented on Figure 9-10. The project will take 4 to 6 years to implement depending on the time required to negotiate procurement of NWP water. Conceptually, project implementation would occur in years 6 through 12 after GSP adoption.

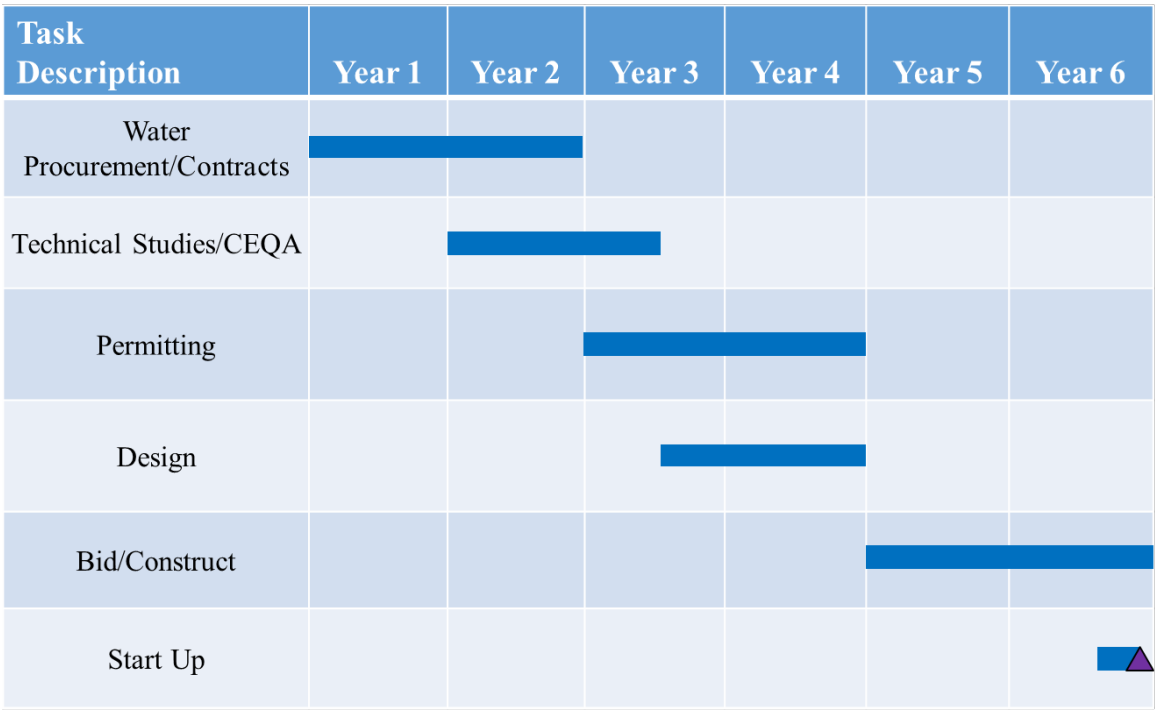


Figure 9-10. Implementation Schedule for NWP Delivery at Salinas and Estrella River Confluence

9.5.2.4.5 Estimated Cost

The estimated total project cost for this project is $50M. Annual O&M costs are estimated at $740,000. The average annual cost of NWP purchased water is estimated at $2.4M based on an average year delivery of 2,800 AFY. However, the unit price would need to be negotiated, and the actual amount of water available will vary year to year thereby affecting the actual annual purchase cost. O&M and water purchase costs would be covered by the overproduction surcharges. Based on a 30-year loan at a 5% interest rate, the cost of water for this project would be approximately $3,200/AF. Additional details regarding how costs were developed are included in Appendix J.

9.5.2.5 Preferred Project 4: NWP Delivery North of City of Paso Robles

This project provides up to 1,250 AFY of NWP water for direct delivery to agricultural water users north of the Paso Robles airport. On average, this project will provide 1,000 AFY of water for use in lieu of groundwater pumping in the region.

The general layout of this project and relevant monitoring wells are shown on Figure 9-11. Infrastructure includes a new NWP turnout, 5.6 miles of pipeline, a 130 hp pump station, and one river crossing for the Salinas River. For more information on technical assumptions and cost assumptions, refer to Appendix J.

9.5.2.5.1 Relevant Measurable Objectives

The measurable objectives benefiting from this project include:

- Groundwater elevation measurable objectives in the central portion of the Subbasin
- The groundwater storage measurable objective
- Land subsidence measurable objectives in the central portion of the Subbasin

9.5.2.5.2 Expected Benefits and Evaluation of Benefits

The primary benefit from in-lieu recharge using NWP water is higher groundwater elevations in the central portion of the Subbasin. Ancillary benefits of shallower groundwater elevations may include an increase in groundwater storage and avoiding pumping induced subsidence. The GSP model was used to quantify the expected benefit from this project. Figure 9-12 shows the expected groundwater level benefit predicted by the GSP model after 10 years of project operation. Figure 9-12 expresses the benefit as feet of groundwater. The groundwater level benefit shown on Figure 9-12 is a measure of how much higher groundwater elevations are expected to be with the project rather than without the project.

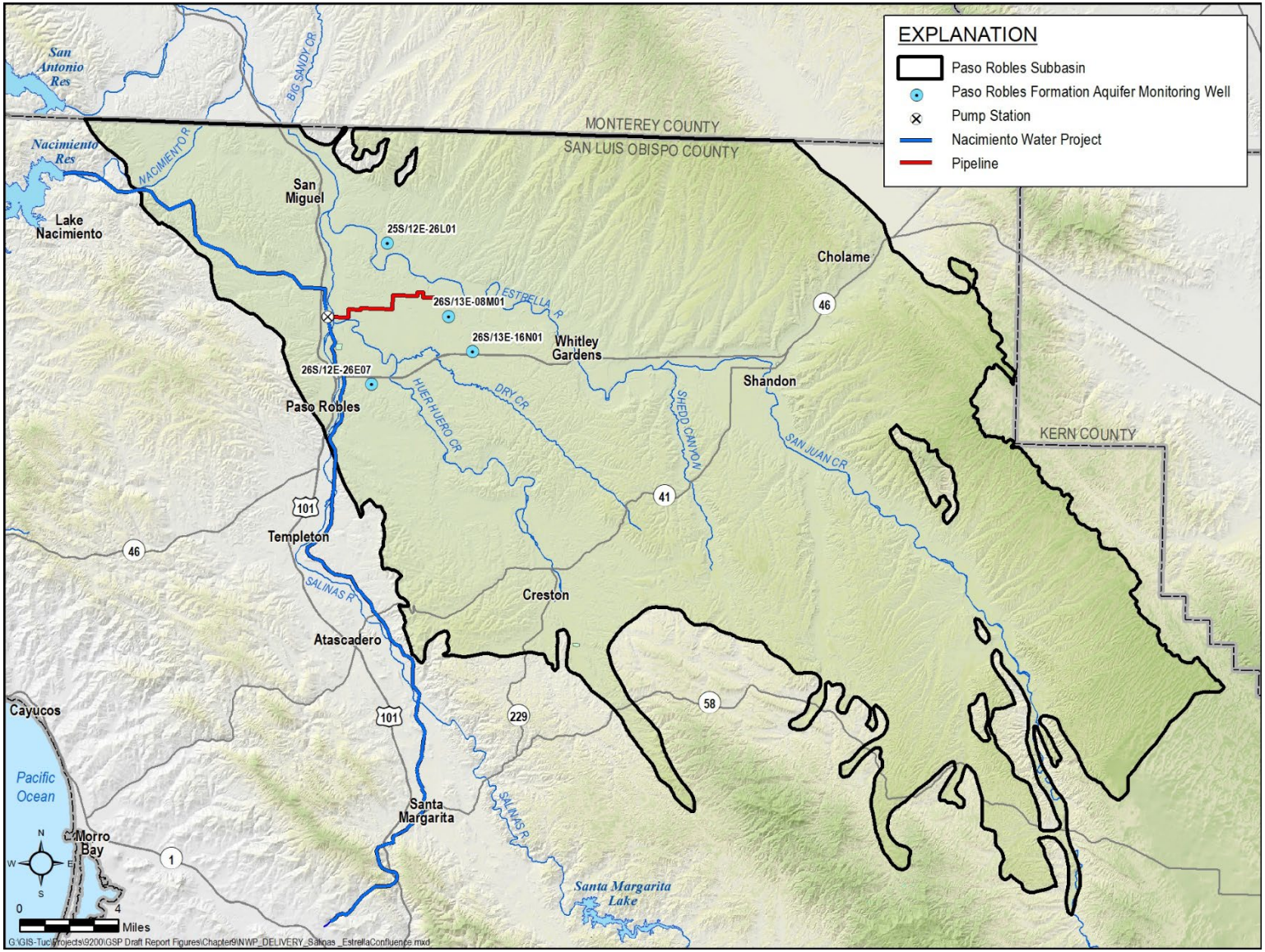


Figure 9-11. Conceptual NWP Delivery North of City of Paso Robles Project Layout

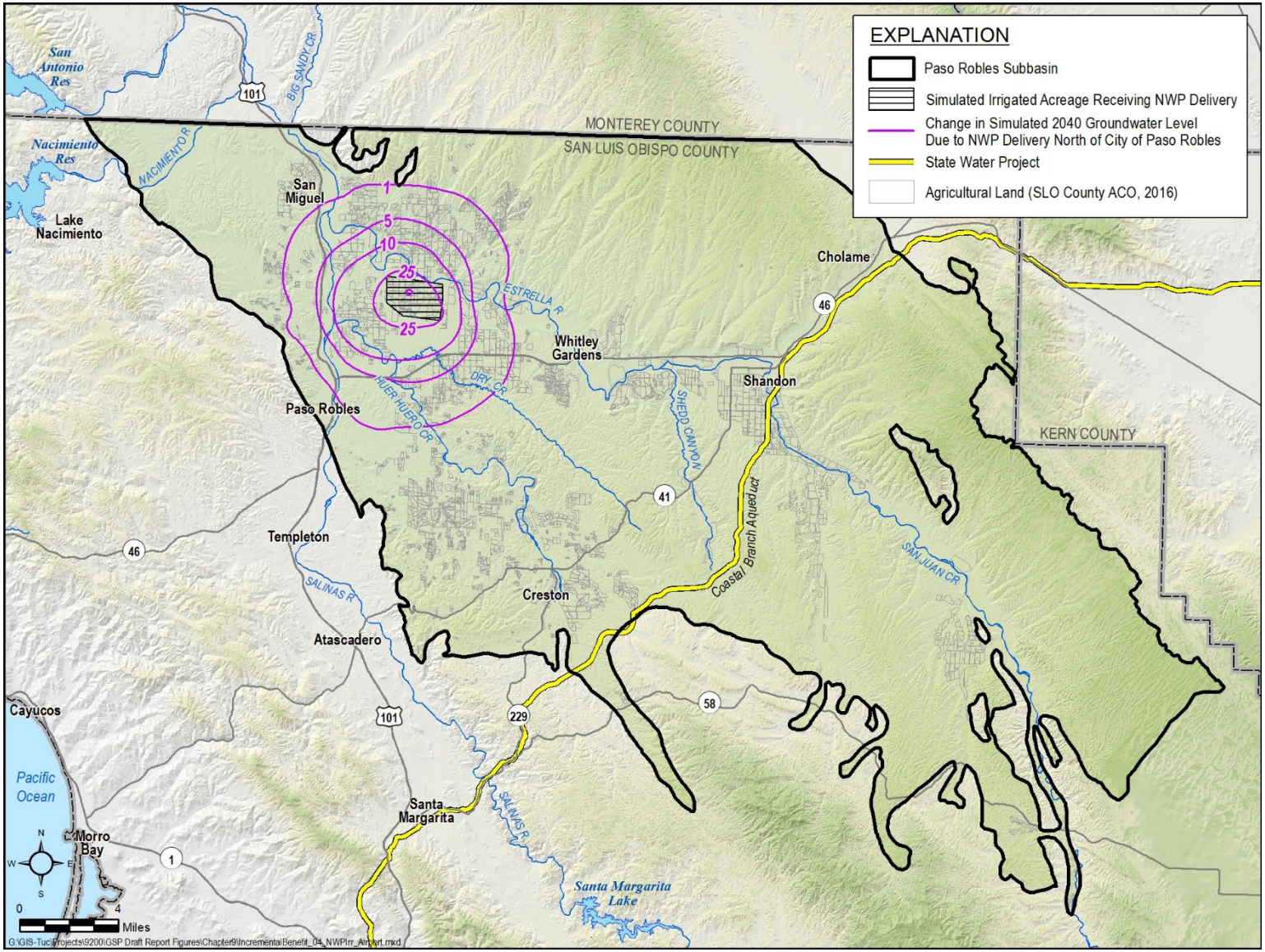


Figure 9-12. Groundwater Level Benefit from NWP Delivery North of City of Paso Robles

Changes in groundwater elevation will be measured with the groundwater level monitoring program detailed in Chapter 7. Subsidence will be measured with the InSAR network detailed in Chapter 7. A direct correlation between in-lieu recharge and changes in groundwater levels may not be possible because this is only one among many management actions and projects that may be implemented in the Subbasin.

9.5.2.5.3 Circumstances for Implementation

All projects are implemented based on need, cost benefit studies and willing participants. The project to deliver water for in-lieu recharge north of the airport will be initiated if, after five years, groundwater levels in the northern portion of the monitoring network continue to decline at unsustainable rates. In particular, continued unsustainable groundwater level declines in monitoring wells 26S/13E-08M01, 26S/13E-16N01, 25S/12E-26L01, and 26S/12E-26E07 will trigger implementation of this project. Additional triggers will be added as the monitoring well network expands.

9.5.2.5.4 Implementation Schedule

The implementation schedule is presented on Figure 9-13. The project will take 4 to 6 years to implement depending on the time required to negotiate procurement of NWP water. Conceptually, project implementation would occur in years 6 through 12 after GSP adoption.

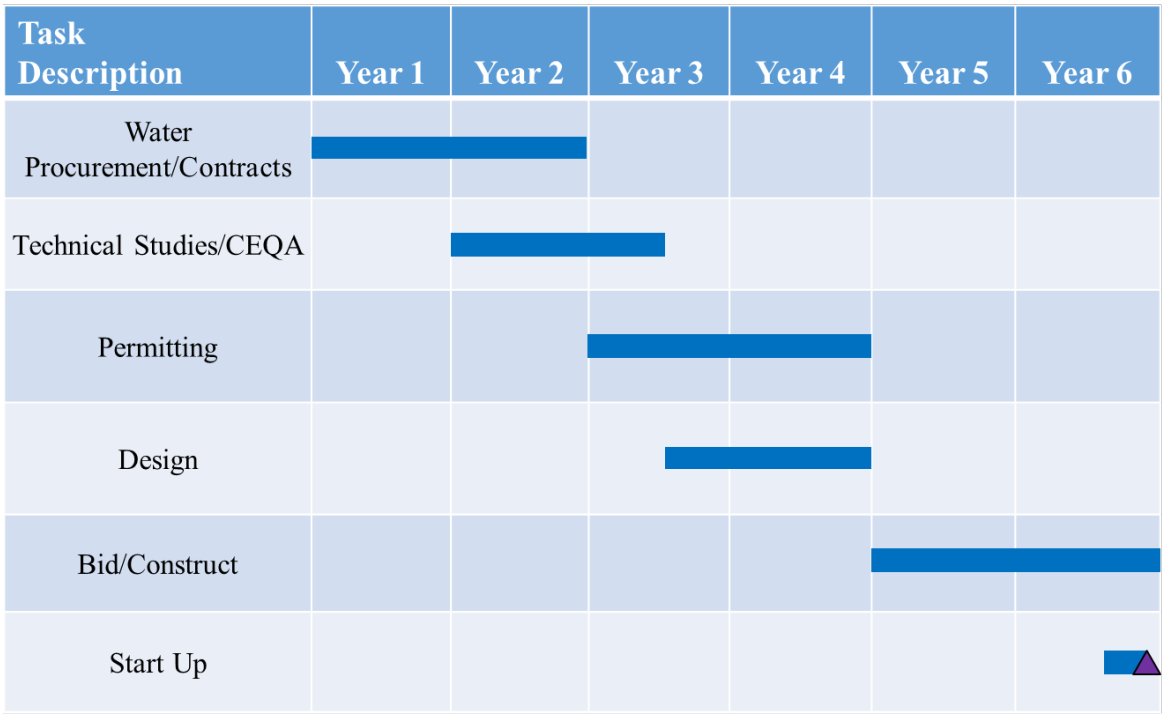


Figure 9-13. Implementation Schedule for NWP Delivery North of City of Paso Robles

9.5.2.5.5 Estimated Cost

The estimated total project cost for this project is $22M. Annual O&M costs are estimated at $150,000. The average annual cost of NWP purchased water is estimated at $1.2M based on an average year delivery of 1,000 AFY. However, the unit price would need to be negotiated, and the actual amount of water available will vary year to year thereby affecting the actual annual purchase cost. O&M and water purchase costs would be covered by the overproduction surcharges. Based on a 30-year loan at a 5% interest rate, the cost of water for this project would be approximately $2,800/AF. Additional details regarding how costs were developed are included in Appendix J.

9.5.2.6 Preferred Project 5: NWP Delivery East of City of Paso Robles

This project provides up to 2,500 AFY of NWP water to for direct delivery to agricultural water users east of the City of Paso Robles. On average, this project will provide 2,000 AFY of water for use in lieu of groundwater pumping in the region.

The general layout of this project and relevant monitoring wells are shown on Figure 9-14. Infrastructure includes a new NWP turnout, 5.6 miles of pipeline, a 130 hp pump station, and two river crossings one crossing of the Estrella River and one crossing of a tributary to the Estrella River. For more information on technical assumptions and cost assumptions, refer to Appendix J.

9.5.2.6.1 Relevant Measurable Objectives

The measurable objectives benefiting from this project include:

- Groundwater elevation measurable objectives in the central portion of the Subbasin
- The groundwater storage measurable objective
- Land subsidence measurable objectives in the central portion of the Subbasin

9.5.2.6.2 Expected Benefits and Evaluation of Benefits

The primary benefit from in-lieu recharge using NWP water is higher groundwater elevations in the central portion of the Subbasin. Ancillary benefits of shallower groundwater elevations may include an increase in groundwater storage and avoiding pumping induced subsidence. The GSP model was used to quantify the expected benefit from this project. Figure 9-15 shows the expected groundwater level benefit predicted by the GSP model after 10 years of project operation. Figure 9-15 expresses the benefit as feet of groundwater. The groundwater level benefit shown on Figure 9-15 is a measure of how much higher groundwater elevations are expected to be with the project rather than without the project.

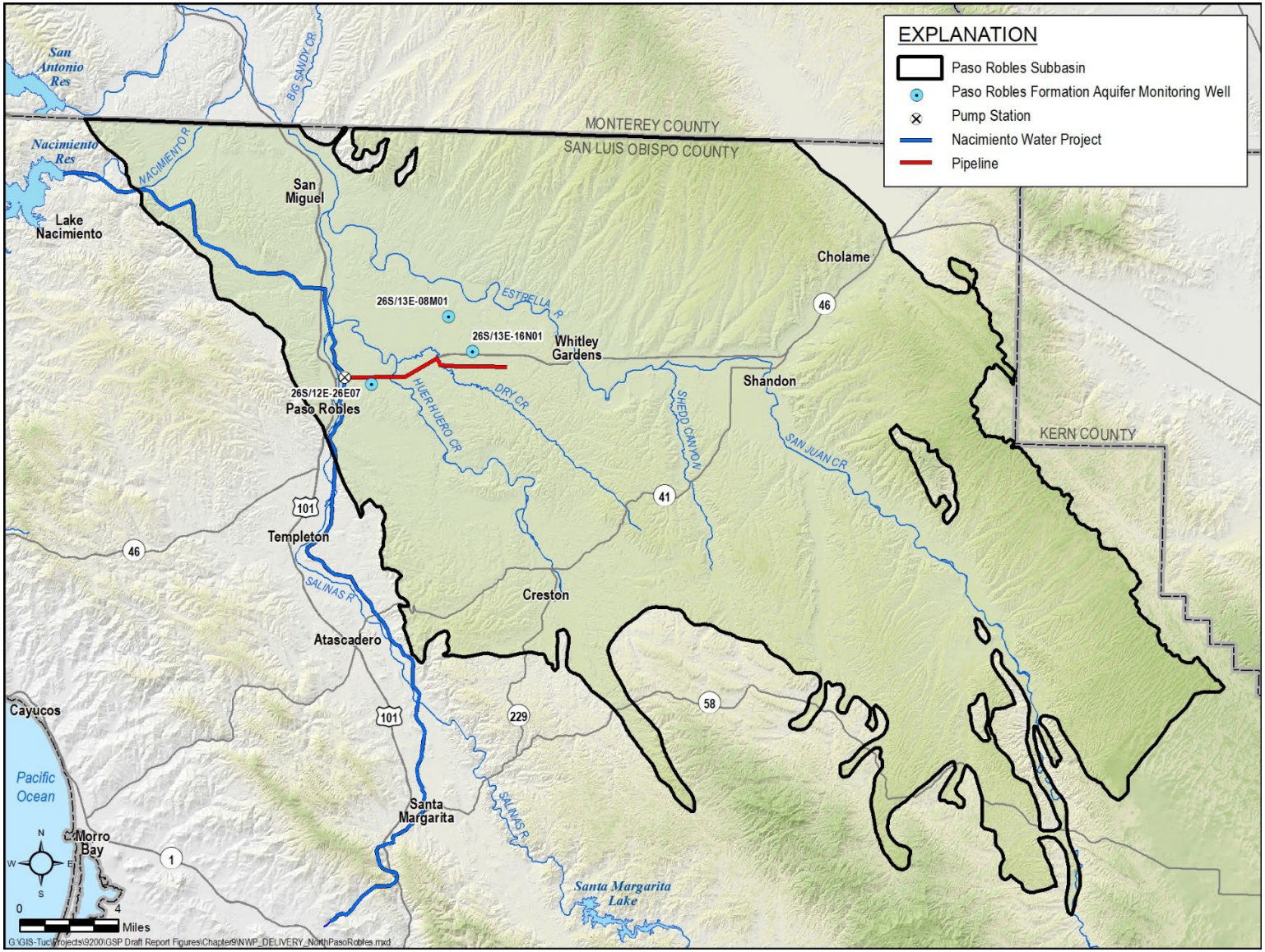


Figure 9-14. Conceptual NWP Delivery East of City of Paso Robles Project Layout

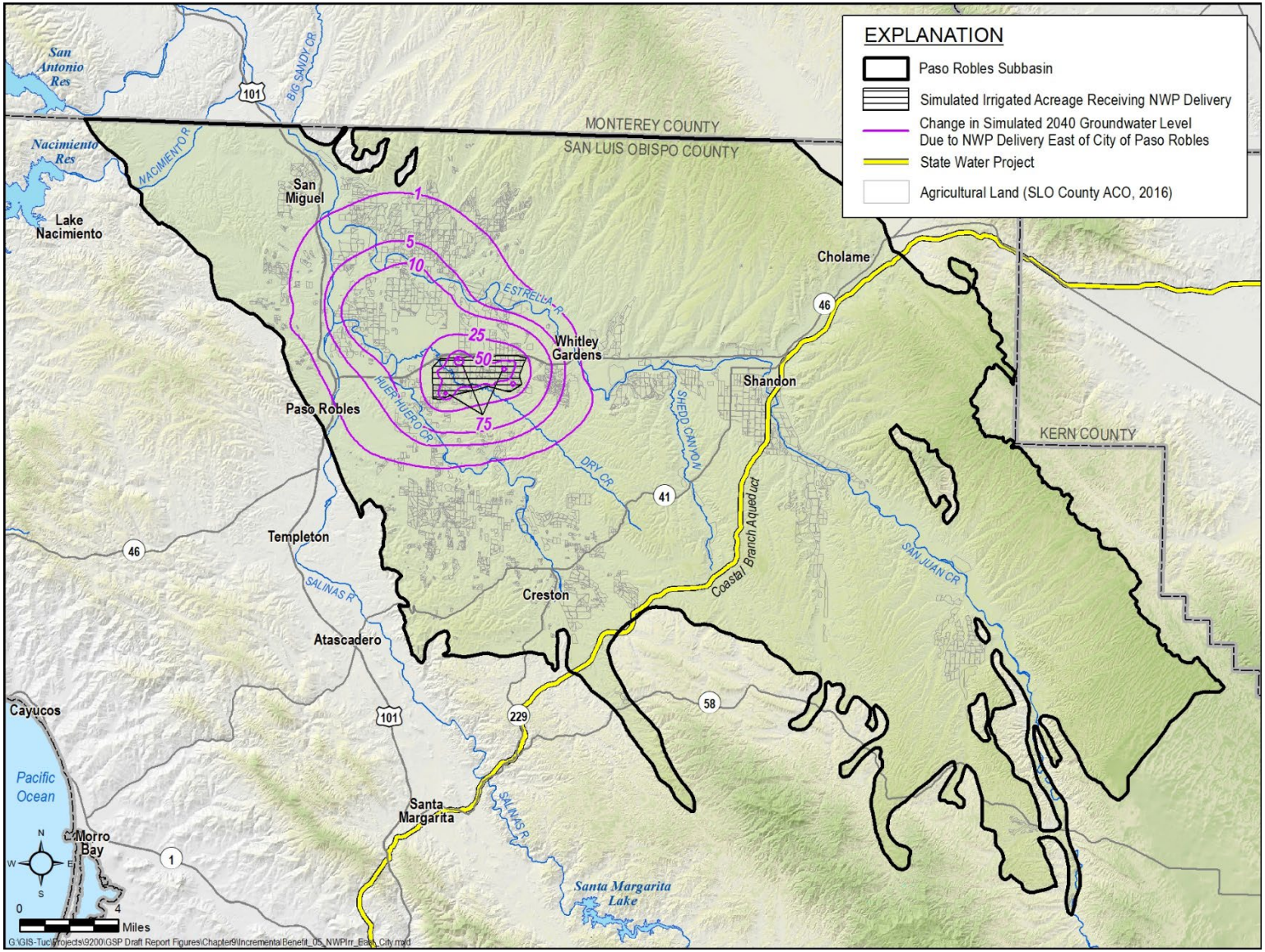


Figure 9-15. Groundwater Level Benefit from NWP Delivery East of City of Paso Robles

Changes in groundwater elevation will be measured with the groundwater level monitoring program detailed in Chapter 7. Subsidence will be measured with the InSAR network detailed in Chapter 7. A direct correlation between in-lieu recharge and changes in groundwater levels may not be possible because this is only one among many management actions and projects that may be implemented in the Subbasin.

9.5.2.6.3 Circumstances for Implementation

All projects are implemented based on need, cost benefit studies and willing participants. The project to deliver water for in-lieu recharge east of the City of Paso Robles will be initiated if, after five years, groundwater levels in the central portion of the monitoring network continue to decline at unsustainable rates. In particular, continued unsustainable groundwater level declines in monitoring wells 26S/13E-16N01, 26S/13E-08M01 and 26S/12E-26E07 will trigger implementation of this project. Additional triggers will be added as the monitoring well network expands.

9.5.2.6.4 Implementation Schedule

The implementation schedule is presented on Figure 9-16. The project will take 4 to 6 years to implement depending on the time required to negotiate procurement of NWP water. Conceptually, project implementation would occur in years 6 through 12 after GSP adoption.

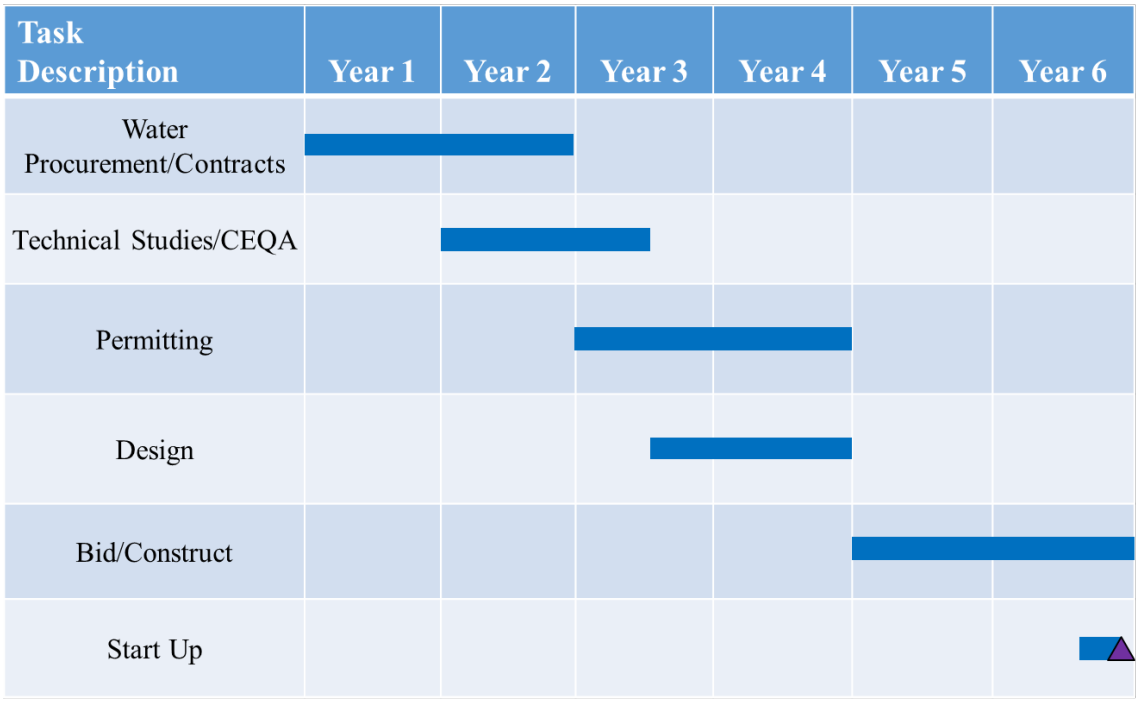


Figure 9-16. Implementation Schedule for NWP Delivery East of City of Paso Robles

9.5.2.6.5 Estimated Cost

The estimated total project cost for this project is $32M. Annual O&M costs are estimated at $380,000. The average annual cost of NWP purchased water is estimated at $2.4M based on an average year delivery of 2,000 AFY. However, the unit price would need to be negotiated, and the actual amount of water available will vary year to year thereby affecting the actual annual purchase cost. O&M and water purchase costs would be covered by the overproduction surcharges. Based on a 30-year loan at a 5% interest rate, the cost of water for this project would be approximately $2,400/AF. Additional details regarding how costs were developed are included in Appendix J.

9.5.2.7 Preferred Project 6: Expansion of Salinas Dam

SLOCFCWCD operates the Salinas Dam to provide water to the City of San Luis Obispo. The storage capacity of the lake is 23,843 AF; however, the City has existing water rights of 45,000 AF of storage. It is anticipated that funding would be sought to help the cost of retrofitting the dam and expanding the storage capacity by installing gates along the spillway in order to retain flood flow/stormwater for beneficial use. A risk assessment for the Dam is scheduled for the summer of 2019.

There may be opportunities to use the water from the expanded reservoir storage to benefit the Subbasin. One possibility would be to schedule summer releases from the storage to the Salinas River, which would benefit the Subbasin by recharging the basin through the Salinas River. Another way this project might indirectly benefit the Subbasin is if the City of San Luis Obispo were to use more of their Salinas River water allocation, thereby freeing up the NWP water for purchase by the GSAs.

9.5.2.7.1 Relevant Measurable Objectives

The measurable objectives benefiting from this project include:

- Groundwater elevation measurable objectives in the central portion of the Subbasin
- The groundwater storage measurable objective
- Land subsidence measurable objectives in the central portion of the Subbasin

9.5.2.7.2 Expected Benefits and Evaluation of Benefits

The primary benefit from releasing additional water to the Salinas River during the summer is higher groundwater elevations along the Salinas River. Ancillary benefits of shallower groundwater elevations may include an increase in groundwater storage and avoiding pumping induced subsidence. The GSP model was used to quantify the expected benefit from this project. Figure 9-17 shows the expected groundwater level benefit predicted by the GSP

model after 10 years of project operation. Figure 9-17 expresses the benefit as feet of groundwater. The groundwater level benefit shown on Figure 9-17 is a measure of how much higher groundwater elevations are expected to be with the project rather than without the project.

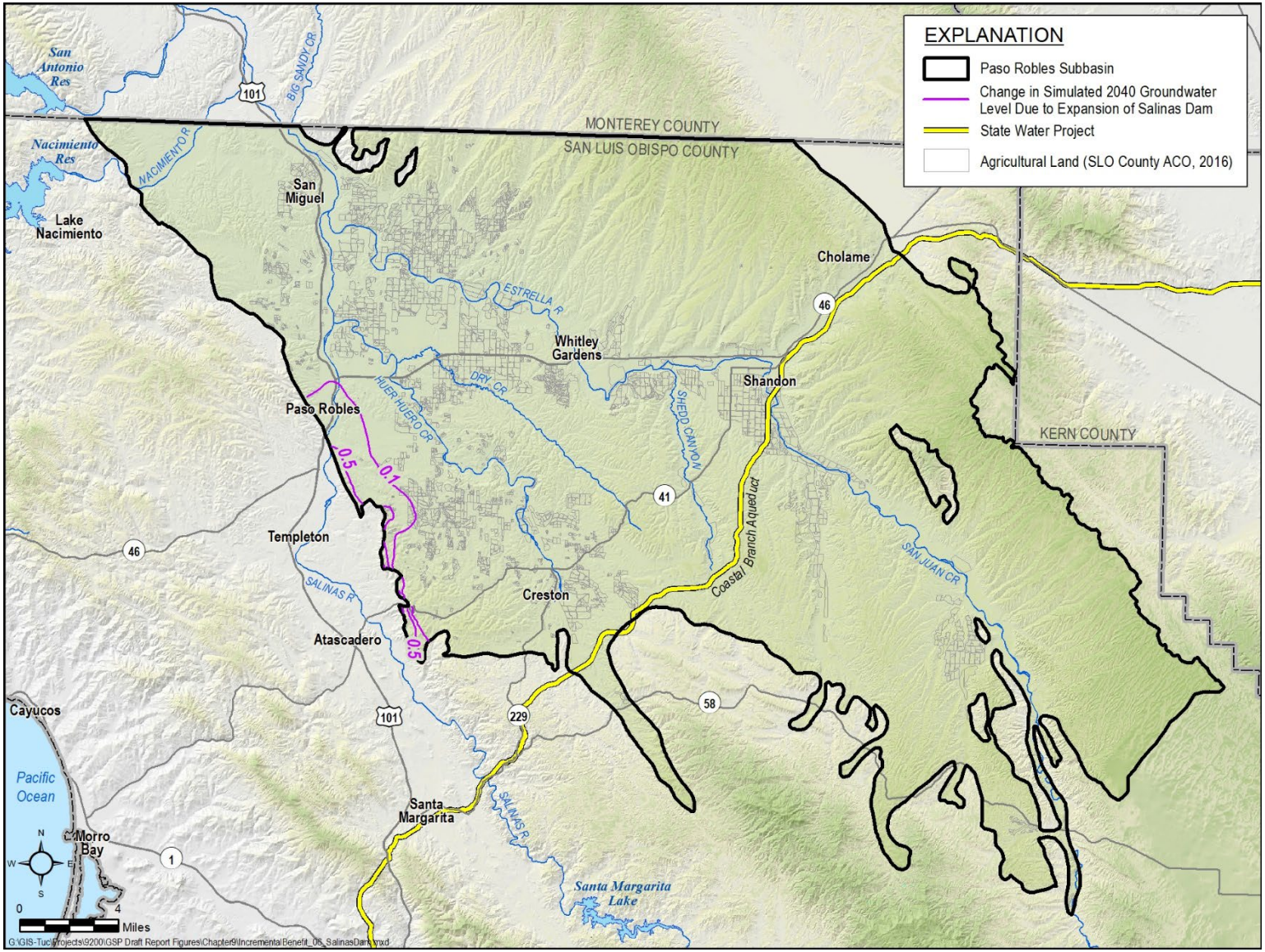


Figure 9-17. Groundwater Level Benefit from Salinas River Summer Releases

9.5.2.7.3 Circumstances for Implementation

All projects are implemented based on need, cost benefit studies and willing participants. The project to release Salinas River water during the summer will be initiated if, after two years, groundwater levels near the Salinas River continue to decline at unsustainable rates. In particular, continued unsustainable groundwater level declines in monitoring wells 25S/12E-16K05, 26S/13E-16N01, 27S/12E-13N01 and 27S/13E-30N01 will trigger implementation of this project. Additional triggers will be added as the monitoring well network expands.

9.5.2.7.4 Implementation Schedule

The implementation schedule is presented on Figure 9-18. The project will take 4 to 5 years to implement. Conceptually, project implementation would occur in years 3 through 8 after GSP adoption.

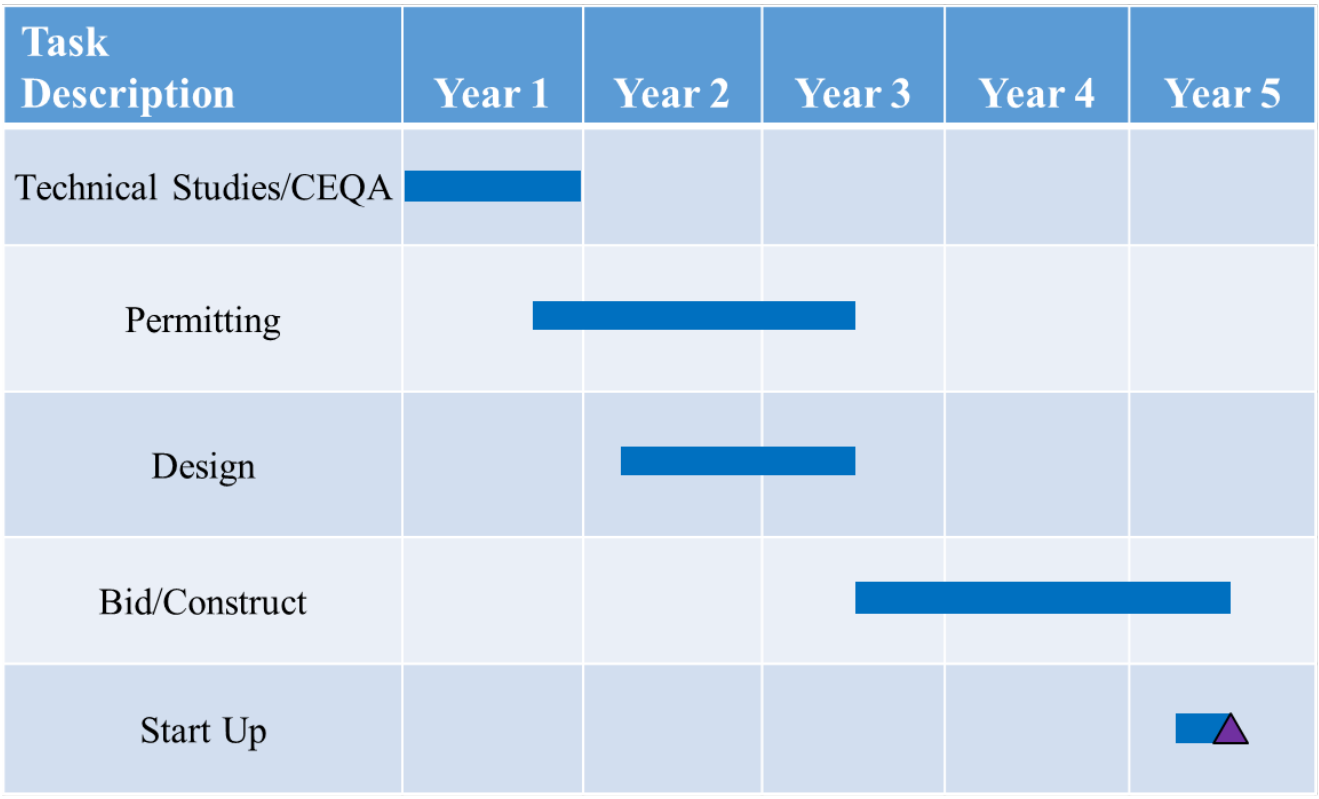


Figure 9-18. Implementation Schedule for Expansion of Salinas Dam

9.5.2.7.5 Estimated Cost

The cost to increase the storage capacity behind the Salinas Dam has been estimated at between $30M and $50M. O&M costs have not been estimated at this time. Some of these costs may be available from federal sources. No additional capital cost would be required to release water to the Salinas River for recharge during the summer months.

9.6 Other Groundwater Management Activities

Although not specifically funded or managed as part of implementing this GSP, a number of associated groundwater management activities will be promoted and encouraged by the GSAs as part of general good groundwater management practices.

9.6.1 Continue Urban and Rural Residential Conservation

Existing water conservation measures should be continued, and new water conservation measures promoted for residential users. Conservation measures may include the use of low flow toilet fixtures, or laundry-to-landscape greywater reuse systems. Conservation projects can reduce demand for groundwater pumping, thereby acting as in-lieu recharge.

9.6.2 Watershed Protection and Management

Watershed restoration and management can reduce stormwater runoff and improving stormwater recharge into the groundwater basin. While not easily quantified and therefore not included as projects in this document, watershed management activities may be worthwhile and benefit the basin.

9.6.3 Retain and Enforce the Existing Water Export Ordinance

This GSP recommends that San Luis Obispo County's existing groundwater export ordinance should be enforced and retained. With limited exception, the ordinance requires a permit for the movement of groundwater across the county or Subbasin line. To obtain a permit, the movement of groundwater cannot negatively impact a nearby overlying groundwater user, result in seawater intrusion, or result in a cone of depression greater than the landowner's property line. This ordinance will continue to protect the county's water supplies.

9.7 Demonstrated Ability to Attain Sustainability

To demonstrate the ability to attain sustainability, a groundwater management scenario that included both projects and management actions was modeled. The scenario included all of the conceptual projects listed in Section 9.5.3. In addition to the conceptual projects, pumping was reduced to bring groundwater elevations to the measurable objectives before 2040 and maintain the same groundwater elevations through 2070.

The GSP model was adapted to simulate the scenario described above over the GSP implementation period from 2020 through 2040. The ability to achieve sustainability was quantified by comparing 2040 simulated groundwater levels under each of the two scenarios against the Measurable Objective surface – as described in Chapter 8 – for both the Paso Robles formation aquifer and the Alluvial aquifer.

Individual hydrographs comparing the predicted groundwater elevations to the measurable objectives at each representative monitoring site are included in Appendix K.

9.8 Management of Groundwater Extractions and Recharge and Mitigation of Overdraft

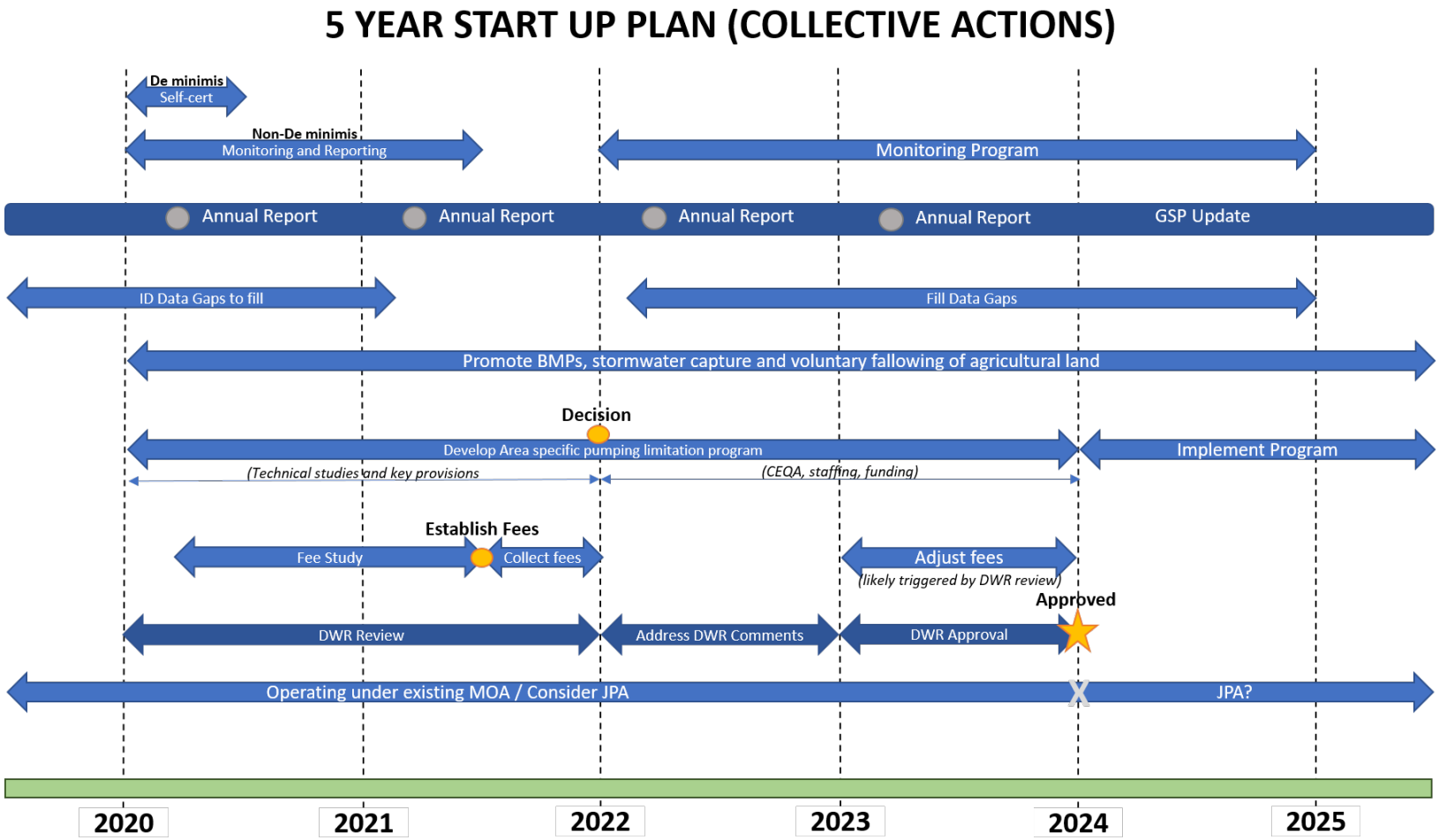
This GSP is specifically designed to mitigate the decline in groundwater storage and persistent groundwater level declines in certain areas with a combined program of management actions designed to promote voluntary reductions in pumping and provide authority for mandatory pumping limitations where necessary. Individual GSAs are also proceeding on projects designed to use recycled water, any available Nacimiento Project water and flood flow/stormwater in the Salinas River to use in lieu of pumping groundwater and/or to supplement groundwater supplies.

10 GROUNDWATER SUSTAINABILITY PLAN IMPLEMENTATION

This chapter is intended to serve as a conceptual roadmap for efforts to start implementing the GSP over the first five years and discusses implementation effects in accordance with SGMA regulations sections 354.8(f)(2) and (3). A general schedule showing the major tasks and estimated timeline is provided in Figure 10-1. Specific regulations guiding the content of this chapter were not developed by DWR.

The implementation plan provided in this chapter is based on current understanding of Subbasin conditions and anticipated administrative considerations that affect the management actions described in Chapter 9. Understanding of Subbasin conditions and administrative considerations will evolve over time based on future refinement of the hydrogeologic setting, groundwater flow conditions, and input from Subbasin stakeholders.

Implementation of the GSP requires robust administrative and financing structures, with adequate staff and funding to ensure compliance with SGMA. The GSP calls for GSAs to routinely provide information to the public about GSP implementation and progress towards sustainability and the need to use groundwater efficiently. The GSP calls for a website to be maintained as a communication tool for posting data, reports and meeting information. The website may also include forms for on-line reporting of information needed by the GSAs (e.g., annual pumping amounts) and an interactive mapping function for viewing Subbasin features and monitoring information.



JPA: Joint Powers Authority

Figure 10-1. General Schedule of 5-Year Start-Up Plan

10.1 Administrative Approach

GSAs will likely hire consultant(s) or hire staff to implement the GSP. If consultants are hired, it is anticipated that qualified professionals will be identified and hired through a competitive selection process. It is also anticipated that the lead GSA for a particular task will keep the other GSAs informed via periodic updates to the Cooperative Committee and the public. As needed, the GSAs would likely coordinate on the specific studies and analyses necessary to improve understanding of Subbasin conditions. The GSAs would likely then use new information on Subbasin conditions and projects to identify, evaluate, and/or improve management actions to achieve sustainability. This GSP calls for actions considered by the GSAs to be vetted through a public outreach process whereby groundwater pumpers and other stakeholders will have opportunities to provide input to the decision-making process.

10.2 Funding GSP Implementation

As summarized in Table 10-1, a conceptual planning-level cost of about $7,800,000 was estimated for planned activities during the first five years of implementation, or an estimated cost of $1,560,000 per year. This cost estimate reflects routine administrative operations, monitoring, public outreach, and the basin wide and area specific management actions outlined in Chapter 9. This estimate assumes a centralized approach to implementation and staffing, it does not include CEQA, legal staff costs, individual GSA staff costs or responding to DWR comments, nor does it include costs associated with any projects undertaken by willing entities.

The GSP calls for implementation to be covered under the terms of the existing MOA (see Chapter 12) among the four GSAs until DWR approves the GSP and a new or renewed GSA cooperative agreement is established. Consistent with current practice under the MOA, it is anticipated that an annual operating budget will be established that is considered for approval by each GSA. This budget information and management action details would be used to conduct a fee study for purposes of developing a groundwater pumping fee to cover the costs of implementing the regulatory program described in the GSP including, but not limited to, costs related to monitoring and reporting, hydrogeologic studies, pumping reduction enforcement where necessary, and public outreach.

The GSAs plan to conduct focused public outreach and hold meetings to educate and solicit input on the proposed fee structure and plan to begin developing the fee structure as soon as administratively feasible after GSP adoption. Establishing a funding structure is estimated to cost $250,000.

California Water Code Sections 10730 and 10730.2 provide GSAs with the authority to impose certain fees, including fees on groundwater pumping. Any imposition of fees, taxes or other charges would need to follow the applicable protocols outlined in the above sections and

all applicable Constitutional requirements based on the nature of the fee. Such protocols would likely include public outreach, notification of all property owners, and at least one public hearing where the opinions and concerns of all parties are heard and considered before the GSAs make a determination to proceed with a fee or other charge. It is assumed that any fee structure adopted by the individual GSAs would be adopted by resolution or ordinance and would be identical in all material respects, i.e. with respect to levels and classes of uses. As part of or in conjunction with the feasibility study and in order to reduce the risk of a legal challenge, the GSAs plan to obtain the legal advice necessary to ensure that the proposed fee is consistent with all applicable legal requirements and rights.

With respect to those pumpers that are not anticipated to be subject to the fee, the GSAs plan to develop a program pursuant to which such pumpers will be required to self-certify that they only pump for domestic purposes and use less than 2 AFY.

Table 10-1. Estimated Planning-Level Costs for First Five Years of Implementation[1]

GSP Implementation Activity	Description	Estimated Costs	Cost Unit	Anticipated Timeframe	Estimated Costs During Startup (2020-2025)
Administration and Finance					
Administration development	Update agreements; hire staff (GSP manager and staff); update website; conduct public outreach and meeting protocols	$ 100,000	lump sum	Quarters 1-2, 2020	$ 100,000
Ongoing GSP implementation administration	Routine operating costs (salaries, office space, equipment, etc.)	$ 500,000	annual	Starting in 2020	$ 2,500,000
Fee study for GSP implementation	Study to develop and justify funding mechanism for GSP implementation	$ 250,000	lump Sum	Quarter 2, 2020 through Quarter 2, 2021	$ 250,000
Basin-wide Management Actions					
Monitoring, reporting & outreach					
De minimis self certification	Evaluate existing programs; develop new program for GSP	$ 30,000	lump sum	Quarters 1-2, 2020	$ 30,000
Non-de minimis metering & reporting program	Develop new metering and reporting program, land fallowing/project accounting	$ 100,000	lump sum	Quarters 1-2, 2020	$ 100,000
Annual reports	Collect and analyze groundwater level data; apply groundwater lelvel - storage proxy, evaluate water quality data, download and evaluate land subsidence data; update data management system (DMS); maintain monitoring network infrastructure; prepare and submit annual report to DWR	$ 250,000	annual	Starting in 2020	$ 1,250,000
Data gaps					
Supplemental hydrogeologic study	Refine hydrologeologic conceptual model; address data gaps	$ 300,000	lump sum	2020 to 2024	$ 300,000
Monitoring networks - groundwater levels					
Verify network	Verify proposed network	$ 30,000	lump sum	Quarters 1-2, 2020	$ 30,000
Expand network - add existing wells	Identify/inspect wells, video-logging, access agreements	$ 100,000	lump sum	Quarters 1-2, 2020	$ 100,000
Expand network - drill new wells	Add new wells in key data gap areas	$ 100,000	per well	Quarters 1-2, 2020	$ 500,000
Monitoring networks - groundwater storage					
Develop groundwater level - storage proxy	Quantiative relationship between changes in groundwater level, changes in storage, and amount of groundwater pumping	$ 50,000	lump sum	Quarters 3-4, 2020	$ 50,000
Monitoring networks - water quality					
Verify network	Verify proposed network	$ 20,000	lump sum	2020 to 2024	$ 20,000
Monitoring networks - land subsidence					
Verify network	Verify proposed network	$ 20,000	lump sum	2020 to 2024	$ 20,000
Monitoring networks - interconnected surface water					
Conduct surface water/groundwater investigation	Focused surface and groundwater investigations in areas of ptentailly interconnectivity; conduct monitoring; cost depends on avaailabiltiy of existing wells and number of new wells needed; cost assumes 5 new wells needed	$ 400,000	lump sum	2020 to 2024	$ 400,000
5-year GSP updates & amendments					
GSP assessment and reporting	Prepare report/amend GSP	$ 300,000	lump sum	2023 to 2024	$ 300,000
Groundwater modeling	Refine, update, and recalibrate groundwater model	$ 250,000	lump sum	2023	$ 250,000
Promoting					
Best water use practices	Costs included in monitoring, reporting and outreach for ongoing GSP implementation				
Stormwater capture					
Voluntary fallowing of agricultural land					
Area Specific Management Actions					
Mandatory pumping limitations in specific areas					
Baseline pumping determination	Develop structure; public outreach; meetings; legal fees	$ 350,000	lump sum	2020 to 2022	$ 350,000
Pumping limitations determination					
Timeline established for pumping limitations					
Pumping limitations regulations approval process					
Regulation implementation	Oversight and enforcement	$ 250,000	annual	Starting in 2020	$ 1,250,000
				Total Estimated Costs during Startup (2020-2025)	**$ 7,800,000**
				Average Annual Estimated Costs during Startup (2020-2025)	**$ 1,560,000**

[1] This estimate assumes a centralized approach to implementation and staffing, it does not include CEQA, legal staff costs, individual GSA staff costs or responding to DWR comments, nor does it include costs associated with any projects undertaken by willing entities.

10.3 Plan Implementation Effects on Existing Land Use

Given that implementation of the GSP will likely result in the adoption of regulations limiting or suspending extractions pursuant to the authority granted by SGMA, implementation of the GSP is likely to have an impact on land uses. However, all such regulations will need to be consistent with the applicable statutory constraints, including those described in Water Code Section 10726.4(a)(2) which provides that such regulations shall be consistent with the applicable elements of the city or county general plan, unless there is insufficient sustainable yield in the basin to serve a land use designated in the city or county general plan and Water Code Section 10726.8(f) which states that nothing contained in SGMA or in a GSP shall be interpreted as superseding the land use authority of cities and counties.

10.4 Plan Implementation Effects on Water Supply

Plan implementation will not significantly alter the existing water supply of the Subbasin. If entities opt to develop optional water supply projects as outlined in Chapter 9, the Subbasin's water supply could increase.

10.5 Plan Implementation Effects on Local and Regional Economy

Plan implementation will potentially limit economic growth due to pumping reductions outlined in Chapter 9. Pumping reductions could limit or reduce agricultural output, thereby reducing regional income.

11 NOTICE AND COMMUNICATION

This chapter and the Communications and Engagement (C&E) Plan in Appendix M describe the notification and communication with interested parties and stakeholders in the Subbasin regarding the GSP. The information presented is prepared in accordance with the SGMA Regulations §354.10 to provide a description of beneficial uses, a list of public meetings, and comments and a summary of responses. It also contains a communication section with an explanation of the decision-making process, identification of opportunities for public engagement, a description of outreach to diverse populations, and the method for keeping the public updated about the plan and related activities. These requirements are met by the Communications and Engagement (C&E) Plan that is included in Appendix M. Public comments received and provided by the GSAs are listed in Appendix N. Table 11-1 lists the specific regulatory and statutory requirements for notice and communication and refers to sections of the C&E Plan.

The plan was written early in the process of GSP development as a stand-alone document to guide notice and communication throughout GSP development. The C&E Plan was presented to and accepted as "receive and file" by the Cooperative Committee on July 25, 2018. Table 11-2 lists public meetings that were held after July 2018.

Table 11-1. Requirements of Statutes and Regulations Pertaining to Notice and Communications

Legislative / Regulatory Requirement	Legislative / Regulatory Section Reference	C&E Plan Section
Publish public notices and conduct public meetings when establishing a GSA, adopting or amending a GSP, or imposing or increasing a fee.	SGMA Sections 10723(b), 10728.4, and 10730(b)(1).	**7.0**
Maintain a list of, and communicate directly with, interested parties.	SGMA Sections 10723.4, 10730(b)(2), and 10723.8(a)	**4.0**
Consider the interests of all beneficial uses and users of groundwater.	SGMA Section 10723.2	**4.0**
Provide a written statement describing how interested parties may participate in plan [GSP] development and implementation, as well as a list of interested parties, at the time of GSA formation.	SGMA Sections 10723.8(a) and 10727.8(a)	**4.0**
Encourage active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin.	SGMA Section 10727.8(a)	**7.0**
Understand that any federally recognized Indian Tribe may voluntarily agree to participate in the planning, financing, and management of groundwater basins – refer to DWR's Engagement with Tribal Governments Guidance Document for Tribal recommended communication procedures.	SGMA 10720.3(c)	**7.0**
Description of beneficial uses and users of groundwater in the basin	GSP Regulations §354.10	**3.0**
List of public meetings at which the Plan [GSP] was discussed or considered	GSP Regulations §354.10	**Table 11-2**
Comments regarding the Plan [GSP] received by the Agency and a summary of responses	GSP Regulations §354.10	**N/A at time of publication**
A communication section that includes the following:	GSP Regulations §354.10	
Explanation of the Agency's decision-making process	GSP Regulations §354.10	**4.0**
Identification of opportunities for public engagement and discussion of how public input and response will be used	GSP Regulations §354.10	**7.0**
Description of how the Agency encourages active involvement of diverse social, cultural, and economic elements of the population within the basin	GSP Regulations §354.10	**7.0**
The method the Agency will follow to inform the public about progress implementing the Plan [GSP], including the status of projects and actions	**GSP Regulations §354.10**	**7.0**

Table 11-2. Public Meetings at which the GSP Was Discussed

Type of Meeting	Location	Date
City of Paso Robles		
GSA Formation Public Hearing	Paso Robles City Hall	**Jan 17, 2017**
Todd Groundwater Contract for Pre-GSP Planning	Paso Robles City Hall	**April 4, 2017**
GSA/GSP Funding	Paso Robles City Hall	**June 6, 2017**
Paso Basin MOA	Paso Robles City Hall	**Aug 15, 2017**
Paso Basin MOA Appointments	Paso Robles City Hall	**Sept 7, 2017**
Paso Basin Prop 1 Grant Application	Paso Robles City Hall	**Oct 17, 2017**
GSA Notice of Intent to Prepare GSP	Paso Robles City Hall	**Jan 6, 2018**
GSP Contract Award to HydroMetrics	Paso Robles City Hall	**March 20, 2018**
GSA Review of GSP Draft Chapters 1-4 and 11	Paso Robles City Hall	**Oct 16, 2018**
GSA Review of GSP Draft Chapters 5-8	Paso Robles City Hall	**April 16, 2019**
GSA Review of GSP Draft Chapters 9-12	Paso Robles City Hall	**June 18, 2019**
GSA Increase to GSP Budget	Paso Robles City Hall	**Aug 6, 2019**
Adoption of GSP Public Hearing	Paso Robles City Hall	**Dec 17, 2019**
Adoption of Revised GSP Public Hearing	Paso Robles City Hall and Zoom	**Jun 21, 2022**
County of San Luis Obispo		
County Board of Supervisors	County Government Center	**May 16, 2017**
County Board of Supervisors	County Government Center	**Aug 22, 2017**
County Board of Supervisors	County Government Center	**Feb 6, 2018**
County Board of Supervisors	County Government Center	**March 6, 2018**
County Board of Supervisors	County Government Center	**June 19, 2018**
County Board of Supervisors	County Government Center	**Oct 2, 2018**
County Board of Supervisors	County Government Center	**Dec 4, 2018**
County Board of Supervisors	County Government Center	**Feb 26, 2019**
County Board of Supervisors	County Government Center	**April 9, 2019**
County Board of Supervisors	County Government Center	**June 18, 2019**
County Board of Supervisors	County Government Center	**Aug 20, 2019**
County Board of Supervisors	County Government Center	**Oct 22, 2019**
County Board of Supervisors	County Government Center	**Nov 5, 2019**
County Board of Supervisors	County Government Center	**Nov 19, 2019**
County Board of Supervisors	County Government Center	**Dec 17, 2019**
County Board of Supervisors	County Government Center and Zoom	**Jul 20, 2022**
Paso Robles Subbasin Cooperative Committee		
Cooperative Committee Meeting	EOC Main Conference Room	**Oct 18, 2017**
Cooperative Committee Meeting	Courtyard by Marriott	**Oct 25, 2017**
Cooperative Committee Meeting	EOC Main Conference Room	**Dec 6, 2017**
Cooperative Committee Meeting	Hampton Inn & Suites	**Feb 14, 2018**
Cooperative Committee Meeting	Paso Robles City Hall	**March 7, 2018**
Cooperative Committee Meeting	Paso Robles City Hall	**April 25, 2018**
Cooperative Committee Meeting	Paso Robles City Hall	**July 25, 2018**
Cooperative Committee Special Meeting	Paso Robles City Hall	**Sept 12, 2018**

Type of Meeting	Location	Date
Paso Robles Subbasin Cooperative Committee (continued)		
Public Workshop: Sustainable Management Criteria	Kermit King Elementary School	**Oct 4, 2018**
Public Workshop: Sustainable Management Criteria	Creston Elementary School	**Oct 8, 2018**
Cooperative Committee Regular Meeting	Paso Robles City Hall	**Oct 17, 2018**
Cooperative Committee Special Meeting	Paso Robles City Hall	**March 6, 2019**
Cooperative Committee Regular Meeting	Paso Robles City Hall	**April 24, 2019**
Cooperative Committee Special Meeting	Paso Robles City Hall	**May 22, 2019**
Cooperative Committee Regular Meeting	Paso Robles City Hall	**July 24, 2019**
Cooperative Committee Special Meeting	Paso Robles City Hall	**Aug 21, 2019**
Cooperative Committee Regular Meeting	Paso Robles City Hall	**Oct 23, 2019**
Cooperative Committee Special Meeting	Paso Robles City Hall	**Nov 20, 2019**
Cooperative Committee Special Meeting	Zoom	**Sep 23, 2020**
Cooperative Committee Special Meeting	Zoom	**Nov 18, 2020**
Cooperative Committee Special Meeting	Zoom	**Jan 27, 2021**
Cooperative Committee Special Meeting	Zoom	**Mar 17, 2021**
Cooperative Committee Special Meeting	Zoom	**Apr 28, 2021**
Cooperative Committee Special Meeting	Zoom	**Jul 21, 2021**
Cooperative Committee Special Meeting	Zoom	**Jul 27, 2021**
Cooperative Committee Special Meeting	Zoom	**Oct 27, 2021**
Cooperative Committee Special Meeting	Zoom	**Jan 26, 2022**
Cooperative Committee Special Meeting	Zoom	**Mar 4, 2022**
Cooperative Committee Special Meeting	Paso Robles City Hall and Zoom	**Mar 17, 2022**
Cooperative Committee Special Meeting	Paso Robles City Hall and Zoom	**Apr 27, 2022**
San Miguel Community Services District		
2018 GSP Meeting	SMCS District office	**June 28, 2018**
2018 GSP Meeting	SMCS District office	**Aug 23, 2018**
2018 GSP Meeting	SMCS District office	**Sept 27, 2018**
2018 GSP Meeting	SMCS District office	**Oct 25, 2018**
2019 GSP Meeting	SMCS District office	**Jan 24, 2019**
2019 GSP Meeting	SMCS District office	**March 28, 2019**
2019 GSP Meeting	SMCS District office	**April 25, 2019**
2019 GSP Meeting	SMCS District office	**May 21, 2019**
2019 GSP Meeting	SMCS District office	**July 25, 2019**
2019 GSP Meeting	SMCS District office	**Aug 22, 2019**
2019 GSP Meeting	SMCS District office	**Sept 26, 2019**
2019 GSP Meeting	SMCS District office	**Oct 24, 2019**
2019 GSP Meeting	SMCS District office	**Nov 21, 2019**
2019 GSP Meeting	SMCS District office	**Dec 19, 2019**
Revised GSP Adoption Hearing	SMCS District office	**Jun 23, 2022**
Shandon-San Juan Water District		
SSJWD Board Meeting	Shandon High School Library	**Aug 15, 2017**
SSJWD Board Meeting	Shandon High School Library	**Sept 19, 2017**

Type of Meeting	Location	Date
Shandon-San Juan Water District (continued)		
Shandon Advisory Groundwater Update	Shandon Park	**Oct 4, 2017**
SSJWD Board Meeting	Shandon High School Library	**Oct 17, 2017**
SSJWD Board Meeting	Shandon High School Library	**Nov 15, 2017**
Shandon Advisory Groundwater Update	Shandon Park	**Feb 7, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**Feb 20, 2018**
Shandon Advisory Groundwater Update	Shandon Park	**March 7, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**March 27, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**May 15, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**June 19, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**July 17, 2018**
Shandon Advisory Groundwater Update	Shandon Park	**Aug 1, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**Aug 21, 2018**
Shandon Advisory Groundwater Update	Shandon Park	**Sept 5, 2018**
SSJ GSA GSP Special Board meeting	Windfall Farms Creston	**Sept 18, 2018**
Shandon Advisory Groundwater Update	Shandon Park	**Oct 3, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**Oct 16, 2018**
Shandon Advisory Groundwater Update	Shandon Park	**Nov 7, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**Nov 14, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**Dec 11, 2018**
SSJ GSA GSP Board meeting	Shandon High School Library	**Jan 15, 2019**
SSJ GSA GSP Board meeting	Shandon High School Library	**Feb 19, 2019**
SSJ GSA GSP Special Board meeting	J Lohr Wine Center Paso Robles	**March 19, 2019**
SSJ GSA GSP Special Board meeting	J Lohr Wine Center Paso Robles	**April 9, 2019**
Shandon Advisory Groundwater Update	Shandon Park	**May 1, 2019**
SSJ GSA GSP Special Board meeting	J Lohr Wine Center Paso Robles	**May 7, 2019**
SSJ GSA GSP Board meeting	Shandon High School Library	**June 18, 2019**
SSJ GSA GSP Special Board meeting	Paso Robles Wine Services Paso Robles	**July 8, 2019**
SSJ GSA GSP Board meeting	Paso Robles Wine Services Paso Robles	**Aug 27, 2019**
SSJ GSA GSP Special Board meeting	Sunny Slope Lodge Shandon	**Sept 5, 2019**
SSJ GSA GSP Board meeting	Sunny Slope Lodge Shandon	**Sept 17, 2019**
SSJ GSA GSP Board meeting	Sunny Slope Lodge Shandon	**Oct 15, 2019**
SSJ GSA GSP Board meeting	Sunny Slope Lodge Shandon	**Nov 21, 2019**
SSJ GSA GSP Adoption Hearing	Sunny Slope Lodge Shandon	**Jun 22, 2022**

12 MEMORANDUM OF AGREEMENT

The GSAs will operate under the existing MOA until DWR approves the GSP. The existing MOA is included in Appendix A. During DWR's review process, the GSAs will consider developing a refined governance structure to implement the GSP. The governance structure would be established in a new agreement between the GSAs. The agreement would outline details and responsibilities for GSP administration among the participating entities and may include provisions to establish a new governing body to oversee GSP implementation.

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Revised June 2022

Paso Robles Subbasin

GROUNDWATER SUSTAINABILITY PLAN

APPENDICES

Paso Robles Subbasin Groundwater Sustainability Agencies

County of San Luis Obispo
Shandon San Juan Water District
City of Paso Robles
San Miguel Community Services District




Revised June 13, 2022

Paso Robles Subbasin Groundwater Sustainability Plan
APPENDICES

Prepared for:

Paso Robles Subbasin Cooperative Committee and the Groundwater Sustainability Agencies

LIST OF APPENDICES

Appendix A

Groundwater Sustainability Agency Resolutions and Memorandum of Agreement

BEFORE THE BOARD OF SUPERVISORS

of the

COUNTY OF SAN LUIS OBISPO

Tuesday, May 16, 2017

PRESENT: Supervisors Bruce S. Gibson, Adam Hill, Lynn Compton, Debbie Arnold, and Chairperson John Peschong

ABSENT: None

RESOLUTION NO. 2017-134

RESOLUTION FORMING THE PASO BASIN – COUNTY OF SAN LUIS OBISPO GROUNDWATER SUSTAINABILITY AGENCY AND FINDING THAT THE PROJECT IS EXEMPT FROM SECTION 21000 *ET SEQ.* OF THE CALIFORNIA PUBLIC RESOURCES CODE (CEQA)

The following Resolution is hereby offered and read:

WHEREAS, in 2014, the California Legislature adopted, and the Governor signed into law, three bills (SB 1168, AB 1739, and SB 1319) collectively referred to as the Sustainable Groundwater Management Act (SGMA) (Water Code §§ 10720 *et seq.*), that became effective on January 1, 2015, and that have been subsequently amended; and

WHEREAS, the intent of SGMA, as set forth in Water Code section 10720.1, is to provide for the sustainable management of groundwater basins at a local level by providing local groundwater agencies with the authority, and technical and financial assistance necessary, to sustainably manage groundwater; and

WHEREAS, SGMA requires the formation of a groundwater sustainability agency (GSA) or agencies for all basins designated by the California Department of Water Resources (DWR) as high or medium priority on or before June 30, 2017; and

WHEREAS, SGMA further requires the adoption of a groundwater sustainability plan (GSP) for all basins designated by DWR as high or medium priority and subject to critical conditions of overdraft on or before January 31, 2020; and

WHEREAS, the Paso Robles Area Groundwater Subbasin (Basin No. 3-004.06) (Basin) has been designated by DWR as a high priority basin subject to critical conditions of overdraft; and

WHEREAS, the County of San Luis Obispo is a "local agency" within the Basin as defined in Water Code Section 10721(n) and thus is eligible to form a GSA in the Basin; and

WHEREAS, the Salinas Valley Basin Groundwater Sustainability Agency, City of El Paso de Robles, San Miguel Community Services District, Heritage Ranch Community Services District, and Shandon-San Juan Water District are also local agencies within the Basin, and it is anticipated that they will each become the GSA for their respective service areas within the Basin; and

WHEREAS, on April 6, 2017, the San Luis Obispo Local Agency Formation Commission (LAFCO) conditionally approved the formation of the Estrella-El Pomar-Creston Water District (EPCWD) for the purpose of serving as (or part of) a GSA and which could be formed as early as Fall 2017; and

WHEREAS, although it is anticipated that the EPCWD will desire to become the GSA for its service area consistent with LAFCO's conditional approval, this decision cannot be made or effectuated until the EPCWD is formed, the Board of Directors are seated and the Board of Directors holds the necessary public hearing; and

WHEREAS, the County of San Luis Obispo's SGMA Strategy specifically acknowledges the possibility that a new eligible local agency may be formed shortly after the June 30, 2017 deadline and permits the County of San Luis Obispo to include the potential future service area of the EPCWD in its initial boundary submittal to DWR and then permits them through future action by the Board of Supervisors to subsequently withdraw from serving as the GSA within said area; and

WHEREAS, the County of San Luis Obispo desires to form a GSA to cover all areas within the Basin within the County of San Luis Obispo that will not otherwise be covered by a GSA as of the June 30, 2017 deadline; and

WHEREAS, the County of San Luis Obispo published a notice of public hearing consistent with the requirements contained within Water Code Section 10723(b); and

WHEREAS, the Board of Supervisors conducted such a public hearing on May 16, 2017; and

WHEREAS, the County of San Luis Obispo is committed to the sustainable management of groundwater within the Paso Basin and intends to coordinate with the other GSAs and affected parties, and to consider the interests of all beneficial users and uses of groundwater within the Paso Basin through a memorandum of agreement with the other GSAs.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED by the Board of Supervisors of the County of San Luis Obispo, State of California, that:

Section 1: The foregoing recitals are true and correct and are incorporated herein by reference.

Section 2: The County of San Luis Obispo hereby decides to become the GSA for, and undertake sustainable groundwater management within, the portions of the Basin within the County of San Luis Obispo, with the exception of the portions of the Basin located within the boundaries of the City of El Paso de Robles, the San Miguel Community Services District, the Heritage Ranch Community Services District, and the Shandon-San Juan Water District ("GSA Boundary"). A map of the GSA Boundary is attached hereto as Exhibit A and incorporated herein.

Section 3: The Director of Public Works of the County of San Luis Obispo, or designee, is hereby authorized and directed to submit notice of adoption of this Resolution in addition to all other information required by SGMA, including but not limited to, all information required by Water Code Section 10723.8, to DWR, and to support the development and maintenance of an interested persons list as described in Water Code Section 10723.4 and a list of interested parties as described in Water Code Section 10723.8(a)(4).

Section 4: The Director of Public Works of the County of San Luis Obispo, or designee, is hereby authorized to take such other and further actions as may be necessary to effectuate the purposes of this Resolution.

Section 5: The Board of Supervisors finds that the adoption of this Resolution is exempt from the requirements of the California Environmental Quality Act (Public Resources Code §§ 21000 et seq.) (CEQA) pursuant to Section 15061(b)(3) of the CEQA Guidelines.

Section 6: The Environmental Coordinator of the County of San Luis Obispo is hereby directed to file a Notice of Exemption in accordance with the provisions of CEQA.

Upon motion of Supervisor Arnold, seconded by Chairperson Peschong, and on the following roll call vote, to wit:

AYES: Supervisors Arnold, Chairperson Peschong, Gibson, Hill and Compton

NOES: None

ABSENT: None

ABSTAINING: None

the foregoing resolution is hereby adopted on the 16th day of May, 2017.

John Peschong
Chairperson of the Board of Supervisors

ATTEST:

TOMMY GONG
Clerk of the Board of Supervisors

By: Annette Ramirez
Deputy Clerk

[SEAL]

APPROVED AS TO FORM AND LEGAL EFFECT:

RITA L. NEAL
County Counsel

By: /s/ Erica Stuckey
Deputy County Counsel

Dated: May 4, 2017

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STATE OF CALIFORNIA,)
) **ss.**
COUNTY OF SAN LUIS OBISPO)

I, Tommy Gong, County Clerk and ex-officio Clerk of the Board of Supervisors, in and for the County of San Luis Obispo, State of California, do hereby certify the foregoing to be a full, true and correct copy of an order made by the Board of Supervisors, as the same appears spread upon their minute book.

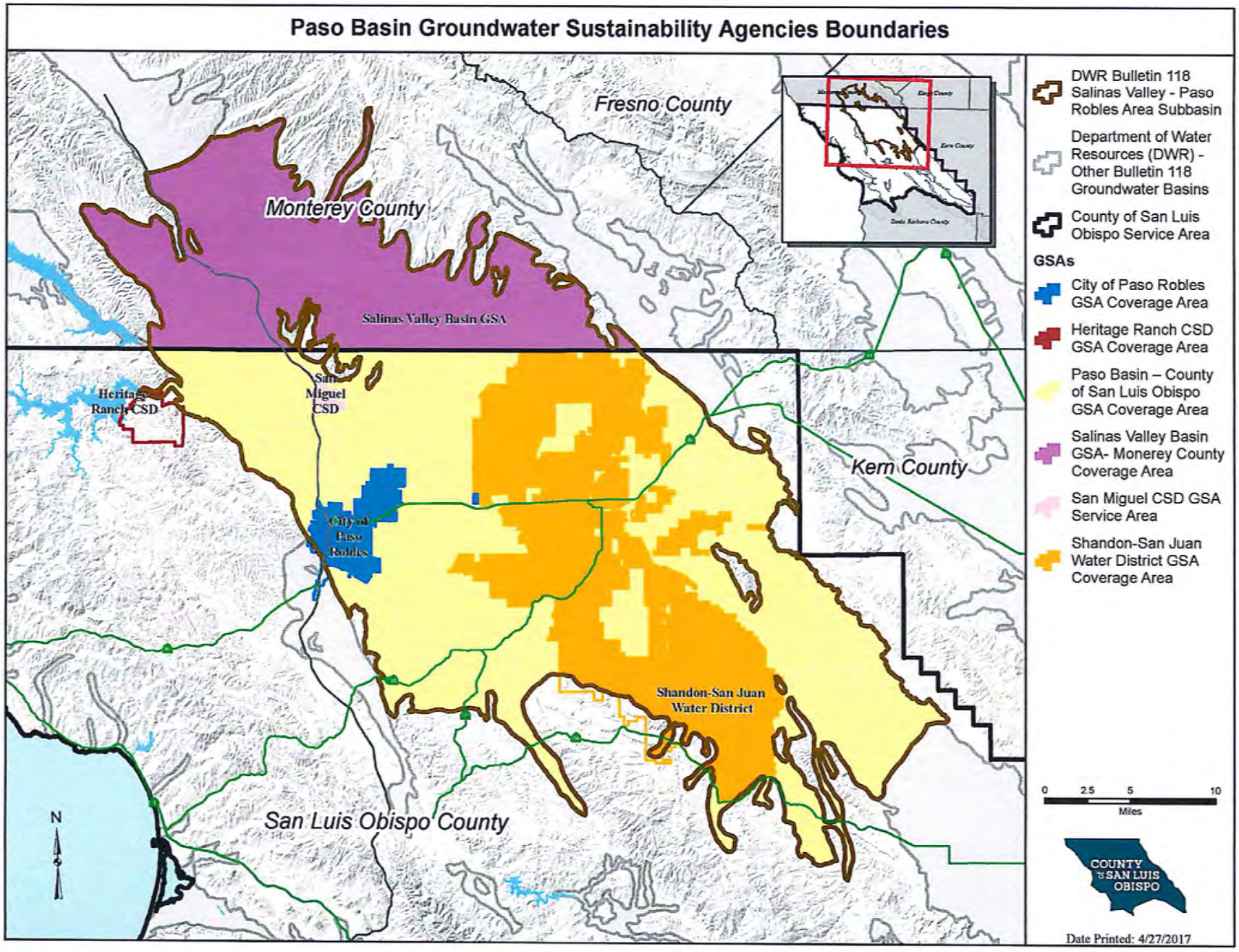
WITNESS my hand and the seal of said Board of Supervisors, affixed this 16th day of May, 2017.

Tommy Gong
County Clerk and Ex-Officio Clerk
of the Board of Supervisors

(SEAL)

By: _____
Deputy Clerk

EXHIBIT A


Paso Basin Groundwater Sustainability Agencies Boundaries
Fresno County
Monterey County
Salinas Valley Basin GSA
San Miguel CSD
Heritage Ranch CSD
City of Paso Robles
Kern County
Shandon-San Juan Water District
San Luis Obispo County
N
DWR Bulletin 118 Salinas Valley - Paso Robles Area Subbasin
Department of Water Resources (DWR) - Other Bulletin 118 Groundwater Basins
County of San Luis Obispo Service Area
GSAs
City of Paso Robles GSA Coverage Area
Heritage Ranch CSD GSA Coverage Area
Paso Basin – County of San Luis Obispo GSA Coverage Area
Salinas Valley Basin GSA- Monerey County Coverage Area
San Miguel CSD GSA Service Area
Shandon-San Juan Water District GSA Coverage Area
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Miles
COUNTY OF SAN LUIS OBISPO
Date Printed: 4/27/2017

CITY OF EL PASO DE ROBLES

"The Pass of the Oaks"

January 26, 2017

Sent via U.S. Postal Service & Electronic Mail to MarkNordberg@water.ca.gov

Mr. Mark Nordberg, GSA Project Manager
Senior Engineering Geologist
Department of Water Resources
901 P Street, Room 213A
P.O. Box 942836
Sacramento, CA 94236
Mark.Nordberg@water.ca.gov

Subject: Notice of Election to Become a Groundwater Sustainability Agency for a Portion of the Paso Robles Sub-Basin of the Salinas Basin

Dear Mr. Nordberg:

Pursuant to California Water Code Section 10723.8, the City of Paso Robles (City), a political subdivision of the State of California, gives notice to the California Department of Water Resources (DWR) of the City's decision to become a Groundwater Sustainability Agency (GSA) and to undertake sustainable groundwater management in the Paso Robles Sub-Basin (DWR Basin No. 3-4.06) (Basin) in accordance with the Sustainable Groundwater Management Act (SGMA). The GSA will be known as the Paso Robles City GSA. The City overlies the Basin and the proposed service area of the GSA lies entirely within the City's jurisdictional boundaries.

In accordance with section 10723(b) of the Water Code and section 6066 of the Government Code, a notice of public hearing was published in a newspaper of general circulation in the City of Paso Robles and San Luis Obispo County regarding the City's intent to consider forming a GSA. Copies of the proof of publication and published notices are included as Enclosure 1.

On January 17, 2017, the Paso Robles City Council (Council) held a public hearing regarding its decision to form a GSA in accordance with California Water Code Section 10723(b). No written comments were received before the public hearing and no negative comments or objections were made during the hearing.

After holding the public hearing, the Council approved Resolution 17-009 (Enclosure 2), electing to become a GSA over the portion of the Basin within the jurisdiction of the City, as further depicted in Exhibit A to the Resolution and in shape files included herein as Enclosure 3. No new bylaws, ordinances, or authorities for the governance of the GSA have been adopted by the City at this time.

The City is coordinating with other local agencies that overlie the Basin and intends to work cooperatively with these agencies to jointly manage groundwater in the Basin.

The Council has authorized the City's Public Works Director, Dick McKinley, to negotiate inter-agency agreements with local public agencies overlying the Basin, as necessary, for the purposes of implementing a cooperative and coordinated governance structure to sustainably manage the Basin.

To date, the San Miguel Community Services District has provided notice to DWR of its intent to form a GSA over the Basin, but not over the area proposed for the City GSA. To the City's knowledge, no other entities within the City's proposed GSA service area have provided notice to DWR to become a GSA.

Pursuant to California Water Code Section 10723.2, the City will consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing a Groundwater Sustainability Plan (GSP). An initial list of stakeholders and interested parties is described below:

a. Holders of overlying groundwater rights – the majority of individuals and entities exercising groundwater rights within that portion of the Basin located within the jurisdiction of the City have a County well permit, or a City permit, and compliance with the County or City ordinances. Those entities include agricultural users, domestic users, other overlying users, and public or private landowners. The list of those private parties pumping groundwater within the City of Paso Robles City limits is included as Enclosure 4.
b. Municipal well operators – the City.
c. Public water systems – the City.
d. Local land use planning agencies – the City.
e. Environmental users of groundwater - None
f. Surface water users, if there is a hydrologic connection between surface and groundwater basins - None
g. California Native American tribes – None.
h. Disadvantaged communities, including but not limited to, those served by private domestic wells or small community water systems or ratepayers and domestic well owners - None.
i. Entities listed in Section 10927 that are monitoring and reporting groundwater elevations in all or part of a groundwater basin managed by the GSA – the City of Paso Robles files, contributes, and/or maintain California Statewide Groundwater Elevation Monitoring (CASGEM) monitoring data with the DWR through San Luis Obispo County.
j. It is anticipated that other entities may form a GSA over part of the Paso Robles sub-basin, including San Luis Obispo County, San Miguel CSD, a future Shandon-San Juan Water District (which is in the LAFCO process), a future Estrella-El Pomar-Creston Water District (which is in the LAFCO process), and several different groups in Monterey County.

The City intends to engage in an open, collaborative and inclusive process to work cooperatively with stakeholders to develop and implement a GSP or multiple GSPs for the Basin and will maintain a list of interested parties to be included in the formation of the GSP(s). An initial list

of those interested parties is included in Enclosure 5. The City intends to work with San Luis Obispo County, San Miguel CSD, and the two Water Districts which are currently being formed to work with several interested parties, holding regular meetings, and considering comments, to prepare a GSP that would serve all of the GSAs in San Luis Obispo County overlying the Paso Robles sub-basin, and would be fully coordinated with the GSPs prepared in Monterey County.

The following information is included in this notice and transmittal pursuant to California Water Code Section 10723.8 (a):

1. Notice of Public Hearing pursuant to Government Code Section 6066
2. City Resolution No. 17-009 (with Exhibit A – Paso Robles Sub-basin Maps)
3. City of Paso Robles Boundary shape files

If you have any questions, or require additional information, please contact the City Public Works Director, Dick McKinley, at (805) 237-3861 or via email at dmckinley@prcity.com.

Sincerely,

Thomas Frutchey
City Manager

Enclosures: No. 1: Notice of Public Hearing pursuant to Government Code Section 6066
No. 2: City of Paso Robles Resolution No. 17-009 (with Exhibit A – Paso Robles Sub-basin Maps)
No. 3: City of Paso Robles Boundary shape files (electronic files only)
No. 4: List of private parties who pump from the groundwater basin within the City limits of the City of Paso Robles
No. 5: List of interested parties who would be advised and encouraged to participate in the process of preparing the GSP.

C: Mike McKenzie, DWR - South Central Region
Senior Engineering Geologist
3374 East Shields Avenue
Fresno, CA 93726
Charles.McKenzie@water.ca.gov

Dick McKinley, City Public Works Director
Wade Horton, County of San Luis Obispo Public Works Director
Warren Frace, City Community Development Director
Christopher Alakel, City Water Resource Manager

Append a list of interested parties who receive a copy of this notice (See Enclosure 5)

ENCLOSURE NO. 1

NOTICE OF PUBLIC HEARING

NOTICE OF PASO ROBLES CITY COUNCIL

PUBLIC HEARING

DATE OF MEETING: **TUESDAY, JANUARY 17, 2017**

TIME OF MEETING: **6:30 PM**

PLACE OF MEETING: **COUNCIL CHAMBER, 1ST FLOOR, CITY HALL, 1000 SPRING STREET, PASO ROBLES, CALIFORNIA, 93446**

PROJECT NAME: **RESOLUTION REQUEST AUTHORIZING THE CITY OF EL PASO DE ROBLES TO BECOME A GROUNDWATER SUSTAINABILITY AGENCY OVER THE PASO ROBLES SUB-BASIN UNDER THE CITY LIMITS OF THE CITY OF EL PASO DE ROBLES**

APPLICANT: **CITY OF EL PASO DE ROBLES**

FOR ADDITIONAL INFORMATION PLEASE CONTACT CITY PUBLIC WORKS DIRECTOR: Dick McKinley at (805) 237-3861 or at: dmckinley@prcity.com

PLEASE ACCEPT THIS AS A NOTICE TO INFORM YOU, as a property owner, tenant or interested citizen, that the City Council of the City of El Paso de Robles, California will conduct a public hearing, as part of a scheduled City Council meeting, on the following project:

Notice is hereby given that the City Council of the City of El Paso de Robles will consider authorizing the City to become a Groundwater Sustainability Agency (GSA) over that portion of the Paso Robles Sub-basin that lies under the City limits of the City of El Paso de Robles, per California Water Code Sections 10723 to 10727. In 2014, the California Legislature and the Governor passed into law the Sustainable Groundwater Management Act (SGMA), which provides a new framework for best management of resources in California. Implementation of SGMA is achieved through formation of GSAs and through preparation and implementation of Groundwater Sustainability Plans (GSPs). The City has a groundwater basin that is governed by SGMA legislation, the Paso Robles Sub-basin of the Salinas Basin. This groundwater sub-basin is designated by the State as a high priority basin and must comply with SGMA requirements.

Once the GSA is formed, the City will then be required to develop and implement a GSP that provides a roadmap for managing the basin on a sustainable basis. The City believes it is essential for the City to be a GSA. SGMA provides GSAs with access to various powers and authorities to ensure sustainable management. Becoming a GSA will confirm the City's role as the local groundwater management agency, ensure access to SGMA authorities, and preserve access to grant funding or other opportunities that may be limited to GSAs.

The decision of the City Council is final.

COMMUNICATIONS

This item may begin at any time after the time specified. Any interested person may address the City Council to express support or opposition to this issue. Time allotted to each speaker is determined by the Chair and, in general, is limited to three (3) minutes.

Those unable to attend the hearing may write a letter to the Mayor and City Council, Attention: City Clerk, City Hall, 1000 Spring Street, Paso Robles, CA 93446, OR, you can reach us by email at cityclerk@prcity.com OR FAX at (805) 237-4032. All communications will be forwarded to the Mayor and City Council.

If you wish to challenge the Council's actions on the above proceedings in court, you may be limited to raising only those issues you or someone else raised at the public hearing described in this notice, or in written correspondence to the City Council at or prior to the public hearing. All correspondence should be delivered to the City Clerk (at the above address) to be included in the record of the proceedings, at or prior to the time of the public hearing. Correspondence must be received no later than 5:00 pm on January 17, 2017.

This material is available in alternative formats upon request. To order information in an alternative format, or to arrange for a sign language or oral interpreter for the meeting, please call the City Clerk's office at least 5 working days prior to the meeting at (805) 237-3960 (voice) or visit the City of Paso Robles website at www.prcity.com.

Dick McKinley
Public Works Director
1/3/2017

THE TRIBUNE
Newspaper of the Central Coast

3825 South Higuera • Post Office Box 112 • San Luis Obispo, California 93406-0112 • (805) 781-7800

In The Superior Court of The State of California
In and for the County of San Luis Obispo
AFFIDAVIT OF PUBLICATION

AD # 2855235
CITY OF PASO ROBLES
PUBLIC WORKS

STATE OF CALIFORNIA
ss.
County of San Luis Obispo

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen and not interested in the above entitled matter; I am now, and at all times embraced in the publication herein mentioned was, the principal clerk of the printers and publishers of THE TRIBUNE, a newspaper of general Circulation, printed and published daily at the City of San Luis Obispo in the above named county and state; that notice at which the annexed clippings is a true copy, was published in the above-named newspaper and not in any supplement thereof – on the following dates to wit; JANUARY 3, 10, 2017 that said newspaper was duly and regularly ascertained and established a newspaper of general circulation by Decree entered in the Superior Court of San Luis Obispo County, State of California, on June 9, 1952, Case #19139 under the Government Code of the State of California.

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Marlena Mangl
(Signature of Principal Clerk)
DATED: JANUARY 10, 2017
AD COST: $750.20

NOTICE OF PASO ROBLES CITY COUNCIL PUBLIC HEARING

DATE OF MEETING: TUESDAY, JANUARY 17, 2017

TIME OF MEETING: 6:30 PM

PLACE OF MEETING: COUNCIL CHAMBER, 1ST FLOOR, CITY HALL, 1000 SPRING STREET, PASO ROBLES, CALIFORNIA, 93446

PROJECT NAME: RESOLUTION REQUEST AUTHORIZING THE CITY OF EL PASO DE ROBLES TO BECOME A GROUNDWATER SUSTAINABILITY AGENCY OVER THE PASO ROBLES SUB-BASIN UNDER THE CITY LIMITS OF THE CITY OF EL PASO DE ROBLES

APPLICANT: CITY OF EL PASO DE ROBLES

FOR ADDITIONAL INFORMATION PLEASE CONTACT CITY PUBLIC WORKS DIRECTOR: Dick McKinley at (805) 237-3861 or at:
dmckinley@prcity.com

PLEASE ACCEPT THIS AS A NOTICE TO INFORM YOU, as a property owner, tenant or interested citizen, that the City Council of the City of El Paso de Robles, California will conduct a public hearing, as part of a scheduled City Council meeting, on the following project:

Notice is hereby given that the City Council of the City of El Paso de Robles will consider authorizing the City to become a Groundwater Sustainability Agency (GSA) over that portion of the Paso Robles Sub-basin that lies under the City limits of the City of El Paso de Robles, per California Water Code Sections 10723 to 10727. In 2014, the California Legislature and the Governor passed into law the Sustainable Groundwater Management Act (SGMA), which provides a new framework for best management of resources in California. Implementation of SGMA is achieved through formation of GSAs and through preparation and implementation of Groundwater Sustainability Plans (GSPs). The City has a groundwater basin that is governed by SGMA legislation, the Paso Robles Sub-basin of the Salinas Basin. This groundwater sub-basin is designated by the State as a high priority basin and must comply with SGMA requirements.

Once the GSA is formed, the City will then be required to develop and implement a GSP that provides a roadmap for managing the basin on a sustainable basis. The City believes it is essential for the City to be a GSA. SGMA provides GSAs with access to various powers and authorities to ensure sustainable management. Becoming a GSA will confirm the City's role as the local groundwater management agency, ensure access to SGMA authorities, and preserve access to grant funding or other opportunities that may be limited to GSAs.

The decision of the City Council is final.
COMMUNICATIONS

This item may begin at any time after the time specified. Any interested person may address the City Council to express support or opposition to this issue. Time allotted to each speaker is determined by the Chair and, in general, is limited to three (3) minutes.

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Dick McKinley
Public Works Director
1/3/2017
Jan. 3, 10, 2017 2855235


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Google Custom Search
DEPARTMENTS CITY COUNCIL ADVISORY BODIES PLANNING COMMISSION
CITY GOVERNMENT
Address
City of Paso Robles
1000 Spring Street
Paso Robles, CA 93446
Map
Phone
(805) 227-PASO
(7276)
FAX
(805) 237-6565
Hours
Mon-Fri 8am to 5pm
E-mail
info@prcity.com
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PRESS RELEASES & PUBLIC NOTICES
City Manager's Task Force on Medical Marijuana - Meeting Reminder
Posted: January 23, 2017
Public Notice: City Council Workshop - Review of Draft Short-Term Rental Ordinance
Posted: January 19, 2017
Free Tax Assistance at the Library
Posted: January 13, 2017
Sierra Backpacking Adventure Presentation at the Library
Posted: January 13, 2017
Paso Robles to Honor Martin Luther King Jr.
Posted: January 10, 2017
Residential Structure Fire - 3126 Spring Street #3
Posted: January 9, 2017
Notice of Public Hearing: Resolution Request Authorizing the City of Paso Robles to become a Groundwater Sustainability Agency Over the Paso Robles Sub-Basin Under the City Limits of the City of Paso Robles
Posted: January 3, 2017
Attempted Bank Robbery
Posted: January 3, 2017
Residential Structure Fire - 14th Street
Posted: January 3, 2017
Volunteers Wanted: Housing Authority Board of Commissioners
Posted: December 27, 2016
Volunteers Wanted: Planning Commission
Posted: December 27, 2016
Residential Structure Fire
Posted: December 23, 2016
Mayor Martin and Supervisor-Elect Peschong Confer
Posted: December 19, 2016
Seeking Musical Performers for 2017 Summer Concert Series
Posted: December 15, 2016
HOT TOPICS
Level 2 Watering Restrictions are In Effect!
Water ... Use it Wisely
Local Hazard Mitigation Plan (2016)
Supplemental Sales Tax Information
and Road Repair Plans
Adopted Ordinances
1038 N.S.
2016 CA Building Code
1037 N.S.
Airport Commission
1036 N.S.
Marijuana Regulation
City Council/ Advisory Committees: Find An Agenda
List of City Officials
Public Records Requests
Senate Bill 272 (Enterprise System Catalog)
City Projects
Capital OUT TO BID
Request for Proposals
Municipal Code Online Database
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ENCLOSURE NO. 2

CITY OF PASO ROBLES RESOLUTION NO. 17-009

RESOLUTION NO. 17-009

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF EL PASO DE ROBLES AUTHORIZING THE CITY TO BECOME A GROUNDWATER SUSTAINABILITY AGENCY FOR THE PASO ROBLES SUB-BASIN OF THE SALINAS BASIN FOR THE AREA THAT LIES BENEATH AND WITHIN THE JURISDICTIONAL BOUNDARIES OF THE CITY OF EL PASO DE ROBLES

WHEREAS, in 2014 the California Legislature and the Governor passed into law the Sustainable Groundwater Management Act (SGMA) for local management of groundwater resources in California through the formation of Groundwater Sustainability Agencies (GSAs) and through preparation and implementation of Groundwater Sustainability Plans (GSPs); and

WHEREAS, the City overlies a portion of the Paso Robles Sub-basin of the Salinas Groundwater Basin, which is subject to SGMA, and thus one or more GSAs must be formed for the Sub-basin by June 30, 2017, or the Sub-basin may be subject to regulation by the State Water Resources Control Board; and

WHEREAS, the City is a "local agency" as that term is defined by SGMA, and as such is authorized to form a GSA to manage groundwater resources in the Sub-basin and within the City's jurisdictional boundaries in accordance with SGMA and other applicable laws and authorities; and

WHEREAS, the City desires to form a GSA to manage groundwater resources in the Sub-basin beneath and within the City's jurisdictional boundaries (and excluding that portion of the City's boundaries that overlie the Atascadero Sub-basin as designated by the Department of Water Resources); and

WHEREAS, the City intends that its GSA will work cooperatively with the other GSAs that have formed or will be formed in the Paso Robles Sub-basin to prepare one or more GSPs by January 2020, so that groundwater resources in the Sub-basin will be properly managed and sustainable in accordance with the provisions of SGMA; and

WHEREAS, it is essential that the City form this GSA because SGMA grants GSAs substantial additional powers and authorities to ensure sustainable groundwater management. Acting as the GSA within the City's jurisdictional boundaries will, among other things, confirm the City's role as the local groundwater management agency, ensure access to SGMA authorities, and preserve access to grant funding and other opportunities that may be available to GSAs; and

WHEREAS, pursuant to the requirements of SGMA, the City held a public hearing on this date after publication of notice pursuant to California Government Code section 6066 to consider adoption of this Resolution.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF EL PASO DE ROBLES DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. All of the above recitals are true and correct and incorporated herein by reference.

Section 2. The Mayor is authorized to sign a resolution for the City of El Paso de Robles to become a Groundwater Sustainability Agency in accordance with the Sustainable Groundwater Management Act over the portion of the Paso Robles Sub-basin which lies under and within the jurisdictional boundaries of the City of Paso Robles (and excluding that portion of the City's boundaries that overlie the Atascadero Sub-basin as designated by the Department of Water Resources).

Section 3. The City Manager is authorized and directed to submit a notice of this Resolution along with all other required information to the California Department of Water Resources in accordance with the Sustainable Groundwater Management Act.

Section 4. The City Groundwater Sustainability Agency shall consider the interests of all beneficial uses and users of groundwater within the jurisdictional boundaries of the City and will develop an outreach program for all such stakeholders.

Section 5. The City Groundwater Sustainability Agency shall establish and maintain a list of persons interested in receiving notices regarding the City's involvement in the preparation of one or more Groundwater Sustainability Plans in the Paso Robles Sub-basin, where any person may request in writing to be placed on the City's list of interested persons.

APPROVED this 17TH day of January, 2017, by the following vote:

AYES: Gregory, Hamon, Strong, Reed, Martin
NOES:
ABSENT:
ABSTAIN:

Steven W. Martin, Mayor

ATTEST:

Kristen L. Buxkemper, Deputy City Clerk

I hereby certify that the foregoing is a full, true and correct copy of Resolution 17-009 Authorizing the City to become a Groundwater Sustainability Agency for the PR Sub-Basin. on file in the Office of the City Clerk.
In witness hereof, my hand and official seal:

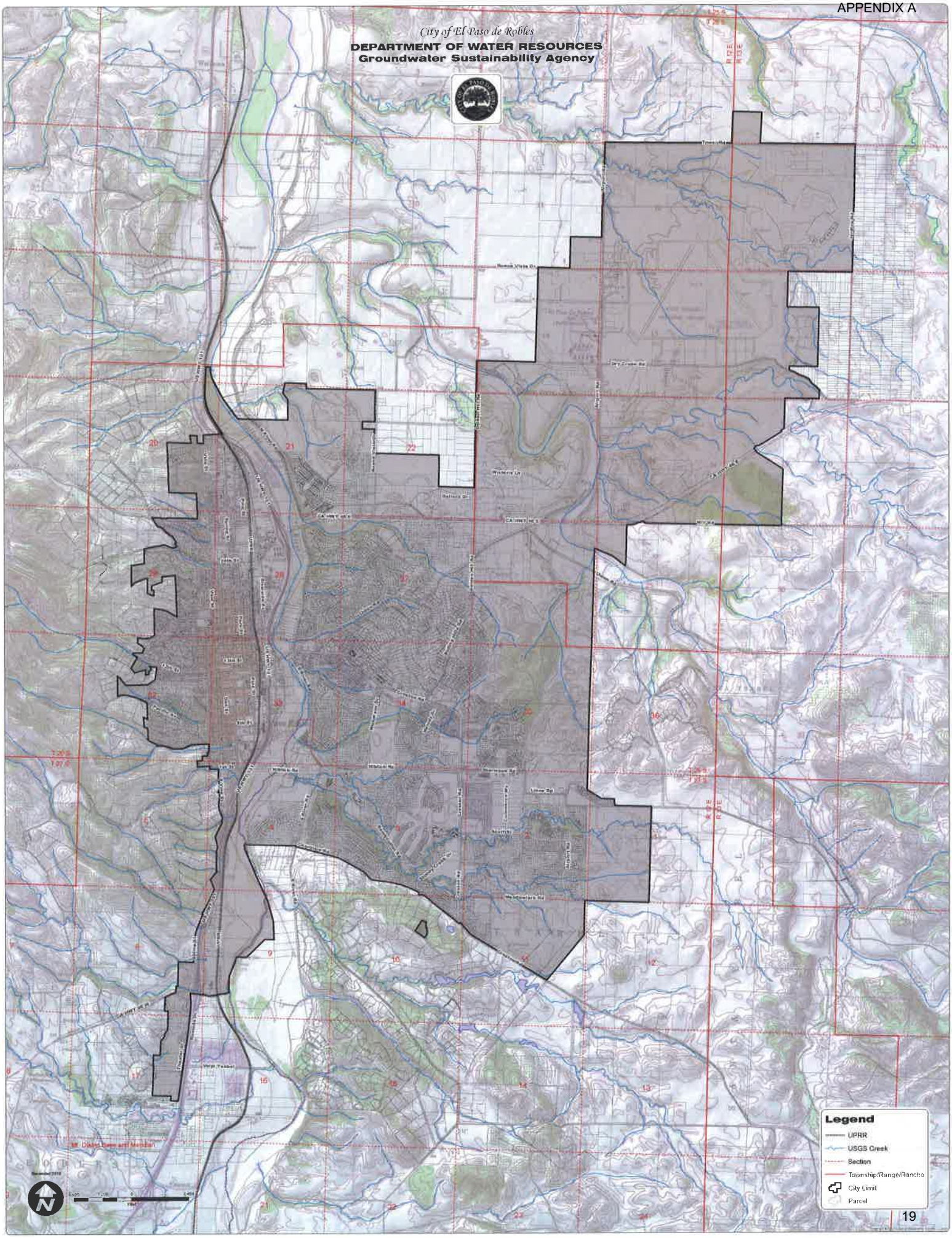
1/23/17
Date

Kristen L Buxkemper
Deputy City Clerk

82481.00000\29454130.2

ENCLOSURE NO. 3

CITY OF PASO ROBLES BOUNDARY MAP
(SHAPE FILES ARE ELECTRONIC ONLY)


City of El Paso de Robles
DEPARTMENT OF WATER RESOURCES
Groundwater Sustainability Agency
Legend
UPRR
USGS Creek
Section
Township/Range/Rancho
City Limit
Parcel

ENCLOSURE NO. 4

LIST OF PRIVATE PARTIES

APN_1	Owner	Assessee	Address1	City	State	Zip
008022001	SALMANZADEH FAMILY TRUST	SALMANZADEH JULIE TRE ETAL	3700 SPRING ST	PASO ROBLES	CA	93446
009461049	R & H GOLF LP A CA LP	R & H GOLF LP A CA LP	1460 SPANISH CAMP RD	PASO ROBLES	CA	93446
009751022	PEREZ EDDIE F & ELAYNE L	PEREZ EDDIE F & ELAYNE L	2464 CRESTON RD	PASO ROBLES	CA	93446
009795001	OLSEN INVESTMENTS LLC	OLSEN INVESTMENTS LLC	3161 LINNE RD	PASO ROBLES	CA	93446
009795002	OLSEN INVESTMENTS LLC A CA LLC	OLSEN INVESTMENTS LLC A CA LLC	3161 LINNE RD	PASO ROBLES	CA	93446
009795005	GOULART LOIS D REVOCABLE LIVING TRUST	GOULART LOIS D TRE	255 HANSON RD	PASO ROBLES	CA	93446
009796004	CONDICT WINFIELD S FAMILY TRUST	CONDICT WAYNE A TRE ETAL	1 CHATTANOOGA ST	IRVINE	CA	92620
009796006	CONDICT PRESTON F	VANKLEY F & J ETAL	1556 SENTIMENTAL LN	OUR TOWN	CA	93446
009796009	CONDICT GREGORY R	CONDICT GREGORY R HEIRS OF ETAL	PO BOX 3889	PASO ROBLES	CA	93447
009796010	CONDICT RANDALL C	TOSCH AJ & M ETAL	560 AAROE DR	OUR TOWN	CA	93446
009796017	CONDICT KEVIN C	BUETTNER LILLIAN M TRE ETAL	9416 CUMMINGS RD	DURHAM	CA	95938
009796018	CONDICT WAYNE A	CONDICT WAYNE A	1557 SENTIMENTAL LN	OUR TOWN	CA	93446
009796020	CONDICT WINFIELD S FAMILY TRUST	CONDICT WAYNE A TRE ETAL	1 CHATTANOOGA ST	IRVINE	CA	92620
009821002	ESTRADA SILAS & TERESA TRUST	ESTRADA SILAS TRE ETAL	220 S VINE ST	PASO ROBLES	CA	93446
009821007	COOK JOHN & KATHLEEN LIVING TRUST	COOK JOHN H TRE ETAL	1466 LA CIMA RD	SANTA BARBARA	CA	93101
009851012	CGLPT ENTERPRISES GEN PTP	CGLPT ENTERPRISES GEN PTP	4490 BUENA VISTA DR	PASO ROBLES	CA	93446
009863006	GAVIN TODD	GAVIN TODD	2550 CATTLEMAN WAY	PASO ROBLES	CA	93446
009863007	HARROD PASO LP A CA LP	HARROD PASO LP	PO BOX 3200	SALINAS	CA	93912
009863009	HARROD PASO LP A CA LP	HARROD PASO LP	PO BOX 3200	SALINAS	CA	93912
025011026	WOODRUM CHAD	WOODRUM CHAD & MELISSA	805 RED CLOUD RD	PASO ROBLES	CA	93446
025011027	WEBER MICHAEL E	WEBER MICHAEL E	1640 LYLE LN	PASO ROBLES	CA	93446
025011028	COLLINS JULIA	COLLINS JULIA & RODNEY	1690 LYLE LN	PASO ROBLES	CA	93446
025011029	DREA MELISSA L	DREA MELISSA L	17 GILBERT HILL	BERMUDA	FR	99999
025011031	GONZALES CRISTINA S	SIMOES MATILDE L ETAL	1575 LYLE LN	PASO ROBLES	CA	93446
025011032	CRUME ALFRED G	CRUME ALFRED G & MARY R	1555 LYLE LN	PASO ROBLES	CA	93446
025362001	WHITE BRUCE	WHITE BRUCE	PO BOX 539	PASO ROBLES	CA	93447
025362004	BLAKE DANIEL A & JANICE A LIVING TRUST	BLAKE DANIEL A TRE ETAL	4374 UNION RD	PASO ROBLES	CA	93446
025362009	GRAF TRUST	GRAF FRANCES A TRE	2902 ARDMORE RD	PASO ROBLES	CA	93446
025362011	GOLDSTEIN FAMILY LLC A CA LLC	GOLDSTEIN FAMILY LLC	1355 HIGHWAY 46 WEST	PASO ROBLES	CA	93446
025362012	VIEIRA RICHARD A & KATHLEEN M 2009 REVOCABLE TRUST	VIEIRA KATHLEEN M TRE ETAL	2910 ARDMORE RD	PASO ROBLES	CA	93446
025362013	HONZEL CHARLES R	HONZEL CHARLES R & PL	PO BOX 1332	PASO ROBLES	CA	93446
025362036	EHRKE JAMES T	EHRKE JAMES T	9926 SAGE HILL WY	ESCONDIDO	CA	92026
025371017	RAK FRANK R JR REVOCABLE LIVING TRUST	RAK FRANK R JR TRE	PO BOX 3212	PASO ROBLES	CA	93447
025371021	HAYLEY JULIET E	HAYLEY MICHAEL S & JULIET E	3189 E HWY 46	PASO ROBLES	CA	93446
025371024	OBRIEN DAVID P	OBRIEN DAVID P & LIESL A	2785 CLARK VALLEY RD	LOS OSOS	CA	93402
025381008	WILCOX RANCH LP A CA LP	WILCOX RANCH LP	67225 SARGENTS RD	SAN ARDO	CA	93450
025390004	GREGORY CHARLES S & DAWN P 2009 REVOCABLE TRUST	GREGORY CHARLES S TRE ETAL	PO BOX 4068	PASO ROBLES	CA	93447
025390009	RIVER OAKS II LLC A DE LLC	RIVER OAKS II LLC	PO BOX 4280	PASO ROBLES	CA	93447
025410005	BAER DEREK A	BAER DEREK A & SONJIA M	1711 EXPERIMENTAL STATON RD	PASO ROBLES	CA	93446
025410007	MOE MARILYN R 2009 REVOCABLE TRUST	MOE MARILYN R TRE	1631 EXPERIMENTAL STATION	PASO ROBLES	CA	93446
025410008	DOBROTH ERIC	DOBROTH ERIC & SARA	1700 EXPERIMENTAL STATION RD	PASO ROBLES	CA	93446
025410009	CVT TRUST (TR 1)	TSUI CHERYL V TRE ETAL	1520 EXPERIMENTAL STATION RD	PASO ROBLES	CA	93446
025410010	LAPOINTE PAUL & JOYCE LIVING TRUST	LAPOINTE PAUL E TRE ETAL	1412 EXPERIMENTAL STATION RD	PASO ROBLES	CA	93446
025411004	SIMPSON ANDREA	SIMPSON ANDREA	2935 WATSON CT E	CONCORD	CA	94518
025411013	HARDWICK TRUST OF 1999	HARDWICK THOMAS K TRE ETAL	908 WALNUT DR	PASO ROBLES	CA	93446
025422013	JOHNSTON PETER F & JOCELYN W FAMILY TRUST	JOHNSTON PETER F TRE ETAL	1815 EXPERIMENTAL STATION RD	PASO ROBLES	CA	93446
025434006	DIAMOND STERLING & JUDY REVOCABLE TRUST	DIAMOND STERLING N TRE ETAL	5920 BUENA VISTA DR	PASO ROBLES	CA	93446
025434007	BUTTERFIELD JACOB B	BUTTERFIELD JACOB B & LAURIE A	200 CRESTMONT	SLO	CA	93401
025435008	PASO ROBLES HORSE PARK A CA LLC	PASO ROBLES HORSE PARK A CA LLC	2279 WILLOW CREEK RD	PASO ROBLES	CA	93446
025435010	SMITH GARY D	SMITH GARY D ETAL	8105 SAN DIEGO RD	ATASCADERO	CA	93422
025436013	PASO ROBLES CITY OF	CITY OF PASO ROBLES (955)	1000 SPRING ST	PASO ROBLES	CA	93446
025436015	BOATMAN GARY P	HOFFMAN GWYNN H TRE ETAL	1511 PARK ST	PASO ROBLES	CA	93446
025436018	WILSON RUSSELL R INTER VIVOS TRUST	WILSON RUSSELL R TRE	3580 AIRPORT RD	PASO ROBLES	CA	93446
025436019	DIDONNA ANTHONY & MAXINE TRUST	DIDONNA ANTHONY R TRE ETAL	3490 AIRPORT RD	PASO ROBLES	CA	93446
025436029	HANDLEY JERRY L	HANDLEY JERRY L & KATHERINE A	PO BOX 1011	PASO ROBLES	CA	93447
025436039	EBERLE WINERY LTD A LTD PTP	EBERLE WINERY LTD	PO BOX 2459	PASO ROBLES	CA	93447
025441001	PR11 LLC A CA LTD LIABILITY COMPANY	PR11 LLC A CA LTD LIABILITY COMPANY	2021 THE ALAMEDA #145	SAN JOSE	CA	95126
025441002	PR11 LLC A CA LTD LIABILITY COMPANY	PR11 LLC A CA LTD LIABILITY COMPANY	2021 THE ALAMEDA #145	SAN JOSE	CA	95126
025441004	RUTZ FAMILY INC A CA CORP	RUTZ FAMILY INC	PO BOX 2030	PASO ROBLES	CA	93447
025442003	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442005	GEARHART KELLY V	MILLER JAMES H JR ETAL	PO BOX 4725	PASO ROBLES	CA	93447
025442006	PASO ROBLES VINEYARD INC A CALIF CORP	PASO ROBLES VINEYARD INC A CAL COR	PO BOX 2030	PASO ROBLES	CA	93447
025442007	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442008	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442009	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442010	BALDWIN MARIETTE	BALDWIN MARIETTE	PO BOX 182	PASO ROBLES	CA	93447
025442011	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442012	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442013	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442014	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442015	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442017	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442018	PASO ROBLES VINEYARDS INC A CALIFORNIA CORPORATION	PASO ROBLES VINEYARDS INC A CA COR	PO BOX 2030	PASO ROBLES	CA	93447
025442020	GEARHART KELLY V	MILLER JAMES H JR ETAL	PO BOX 4725	PASO ROBLES	CA	93447
025442021	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025442022	VINA VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025442023	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443002	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443013	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443015	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443016	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443017	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443018	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025443019	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444001	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444004	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444006	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444008	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444009	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444010	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444011	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444012	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444013	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447
025444014	VINO VISTA LLC A CA LLC	VINO VISTA LLC	PO BOX 510	PASO ROBLES	CA	93447

ENCLOSURE NO. 5

LIST OF INTERESTED PARTIES

City of Paso Robles GSA

Interested Parties List

John Neil	AMWC	jneil@amwc.us
Willy Cunha	Shandon-San Juan Water District	wcunha@sunviewvineyards.com
Nick DeBar	City of Atascadero	ndebar@atascadero.org
Tom Moss	Monterey County	mosst@co.monterey.ca.us
Rob Johnson	Monterey County Water Resources Agency	johnsonr@co.monterey.ca.us
Steve Sinton	Shandon-San Juan Water District	sjsinton@earthlink.net
Patricia Wilmore	Paso Robles Wine Country Alliance	pwilmore@pasowine.com
Darrell Gentry	San Miguel CSD	darrell.gentry@sanmiguelcsd.org
Paul Clark	SLO County Farm Bureau	paul@paulclarklaw.com
Jeff Briltz	Templeton CSD	jbriltz@templetoncsd.org
Dana Merrill	Estrella-El Pomar-Creston Water District	info@mesavineyard.com
Jerry Reaugh	Estrella-El Pomar-Creston Water District	jerry@reaughj.com
Sue Harvey	Environmental - North County Watch	susan@ifsusan.com
Randy Diffenbaugh	Rancho Salinas Mutual Benefit Water Company	rdiff@yahoo.com
Sue Luft	Rural Residential	luftsue@gmail.com
Larry Werner	Engineering	lwerner@northcoastengineering.com
Courtney Howard	SLO County	choward@co.slo.ca.us
Carolyn Berg	SLO County	cberg@co.slo.ca.us
Angela Ruberto	SLO County	aruberto@co.slo.ca.us
John Wallace	Engineering	johnw@wallacegroup.us
John Dornellas	Heritage Ranch CSD	john@heritageranchcsd.org
John Hollenbeck	Engineering	johnhollenbeckpe@gmail.com
Steve Baker	Rural Residential	sbaker1440@gmail.com
Mladen Bandov	SLO County	mbandov@co.slo.ca.us
Kari Wagner	Engineering	kariw@wallacegroup.us
Rachelle Rickard	City of Atascadero	rrickard@atascadero.org
Iris Priestaf	Engineering	IPriestaf@toddgroundwater.com
Kevin Peck	Shandon-San Juan Water District	kp538349@gmail.com
Susan Hayes	Farm Supply	shayes@farmsupplycompany.com
Craig Thomas	Spanish Lakes Mutual Water Company	cncthomas@charter.net
Jim Hagen	Spanish Lakes Mutual Water Company	jdhagen44@hotmail.com
Mark Gabler	Walnut Hills Mutual Water Company	mark.gabler@att.net
Dan Lloyd	Santa Ysabel Ranch Mutual Water Company	danrlloyd@yahoo.com
Karen Capadona	Green River Mutual Water Company	kncapadona@gmail.com
Greg Powell	Mustang Springs Mutual Water Company	greg@make-it.com
Susan Howard	Shandon CSA 16	susan@shilohtax.com

SHANDON-SAN JUAN WATER DISTRICT

RESOLUTION 17-003
RESOLUTION FORMING THE SHANDON-SAN JUAN GROUNDWATER SUSTAINABILITY AGENCY

The following Resolution is hereby offered and read:

WHEREAS, in 2014, the California Legislature adopted, and the Governor signed into law, three bills (SB 1168, AB 1739, and SB 1319) collectively referred to as the Sustainable Groundwater Management Act (SGMA) (Water Code §§ 10720 *et seq.*), that became effective on January 1, 2015, and that have been subsequently amended; and

WHEREAS, the intent of SGMA, as set forth in Water Code section 10720.1, is to provide for the sustainable management of groundwater basins at a local level by providing local groundwater agencies with the authority, and technical and financial assistance necessary, to sustainably manage groundwater; and

WHEREAS, SGMA requires the formation of a groundwater sustainability agency (GSA) or agencies for all basins designated by the California Department of Water Resources (DWR) as high or medium priority on or before June 30, 2017; and

WHEREAS, SGMA further requires the adoption of a groundwater sustainability plan (GSP) for all basins designated by DWR as high or medium priority and subject to critical conditions of overdraft on or before January 31, 2020; and

WHEREAS, the Paso Robles Area Groundwater Subbasin (Basin No. 3-004.06) (Basin) has been designated by DWR as a high priority basin subject to critical conditions of overdraft; and

WHEREAS, the Shandon-San Juan Water District is a "local agency" within the Basin as defined in Water Code Section 10721(n) and thus is eligible to form a GSA in the Basin; and

WHEREAS, the Salinas Valley Basin Groundwater Sustainability Agency, City of El Paso de Robles, San Miguel Community Services District, Heritage Ranch Community Services District, and the County of San Luis Obispo are also local agencies within the Basin, and it is anticipated that they will each become the GSA for their respective service areas within the Basin; and

WHEREAS, adoption of a GSA is exempt from the requirements of the California Environmental Quality Act (Public Resources Code §§ 21000 et seq.) (CEQA) pursuant to Section 15061(b)(3) of the CEQA Guidelines; and

WHEREAS, on April 6, 2017, the San Luis Obispo Local Agency Formation Commission (LAFCO) conditionally approved the formation of the Estrella-El Pomar-Creston Water District (EPCWD) for the purpose of serving as (or part of) a GSA for its portion of the Basin and which could be formed as early as Fall 2017; and

WHEREAS, the Shandon-San Juan Water District desires to form a GSA to cover all areas within the boundaries of the Shandon-San Juan Water District as of the June 30, 2017 deadline; and

WHEREAS, the Shandon-San Juan Water District has published a notice of public hearing consistent with the requirements contained within Water Code Section 10723(b); and

WHEREAS, the Shandon-San Juan Water District conducted such a public hearing on June 8, 2017; and

WHEREAS, the Shandon-San Juan Water District is committed to the sustainable management of groundwater within the Paso Basin in the manner required by SGMA and intends to coordinate with the other GSAs and affected parties, and to consider the interests of all beneficial users and uses of groundwater within the Paso Basin through a memorandum of agreement with the other GSAs.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED by the Board of the Shandon-San Juan Water District, that:

Section 1: The foregoing recitals are true and correct and are incorporated herein by reference.

Section 2: The Shandon-San Juan Water District hereby decides to become the GSA for, and undertake sustainable groundwater management within the boundaries of the Shandon-San Juan Water District, and A map of the GSA Boundary is attached hereto as Exhibit A and incorporated herein.

Section 3: The President of the Board of the Shandon-San Juan Water District, or designee, is hereby authorized and directed to submit notice of adoption of this Resolution in addition to all other information required by SGMA, including but not limited to, all information required by Water Code Section 10723.8, to DWR, and to support the development and maintenance of an interested persons list as described in Water Code Section 10723.4 and a list of interested parties as described in Water Code Section 10723.8(a)(4).

Section 4: The President of the Board of the Shandon-San Juan Water District, or designee, is hereby authorized to take such other and further actions as may be necessary to effectuate the purposes of this Resolution.

Upon motion of Director Turrentine, seconded by Director Sinton,

and on the following roll call vote, to wit:

AYES: 5

NOES: 0

ABSENT: 0

ABSTAINING: 0

the foregoing resolution is hereby adopted on the 8th day of June, 2017.

Willy Cunha,
President of the Board of Directors

ATTEST:

Stephanie Bertoux,
Secretary of the Board of Directors

Dated: June 8, 2017

NOTICE OF EXEMPTION

SHANDON-SAN JUAN WATER DISTRICT

365 TRUESDALE RD. • PO BOX 150 • SHANDON • CALIFORNIA 93461 • (805) 239-0555

Forming Shandon-San Juan Ground Sustainability Agency

Project Location (Specific address):
Paso Robles Groundwater Base
Project Location (County):
San Luis Obispo

Project Applicant & Phone No.:
Shandon-San Juan Water District (805) 239-0555
Applicant Address (specific):
365 Truesdale RD. PO Box 150
Shandon, CA 93461

Description of Nature, Purpose and Beneficiaries of Project

Form a Groundwater Sustainability Agency (GSA) for the District portion of the Paso Robles Groundwater Basin. To cooperate with the other Basin GSA's to write a single Groundwater Sustainability Plan (GSP).

Name of Public Agency Approving Project: Shandon-San Juan Water District

Exempt Status:

Statutory Exemption {Sec. 15262 }

Reasons why project is exempt: The activity is statutorily exempt from CEQA because it is a planning study that collects inventories groundwater data and studies & uses that data to create a GSP. The GSP will include water budgets, strategies, and potential actions projects and programs. Future implementation of any identified actions, projects or programs would be subject to CEQA review.

Willy Cunha President Board of Director
Shandon- San Juan Water District (805) 239-0555

Lead Agency Contact Person **Telephone**

Signature _____ Date 06/05/17

Name (Print) Willy Cunha Title President of the Board of Directors

P.O. Box 180
1150 Mission Street
San Miguel, CA 93451

Tel. 805-467-3388
Fax 805-467-9212

www.sanmiguelcsd.org

November 22, 2016

Mark Nordberg, GSA Project Manager
Sustainable Groundwater Management Program
California Department of Water Resources
901 P Street, Room 213A
P.O. Box 942836
Sacramento, CA 94236

Re: San Miguel Community Services District Notice of Intent to become a Groundwater Sustainability Agency for Portions of the Paso Robles Groundwater Basin

Dear Mr. Nordberg:

Pursuant to California Water Code section 10723.8 of the Sustainable Groundwater Management Act of 2014 ("SGMA"), the San Miguel Community Services District ("SMCSD") hereby provides this notice of its decision to become a Groundwater Sustainability Agency ("GSA") for those portions of the Paso Robles Groundwater Sub-basin ("PR Basin"), Department of Water Resources ("DWR"), Bulletin 118, Sub-basin No. 3-04.06 within SMCSD's service area and sphere of influence. SMCSD's service area and sphere of influence overlie a portion of the PR Basin as depicted in Exhibit 1.

As mandated under SGMA, DWR has identified the PR Basin as a high priority basin. Accordingly, the PR Basin must be managed sustainably by one or more GSAs in accordance with the timelines established in SGMA. SMCSD is a local public agency of the State of California organized and operating under the Community Services District Law ("CSD Law"), Government Code §61000 *et seq*. Per Government Code §61100(a) & (b) of the CSD Law, SMCSD has activated powers to "supply water for any beneficial uses, in the same manner as a municipal water district, formed pursuant to the Municipal Water District Law of 1911, Division 20 (commencing with Section 71000) of the Water Code" and to "collect, treat, or dispose of sewage, wastewater, recycled water, and storm water" within its service area in "the same manner as a sanitary district, formed pursuant to the Sanitary District Act of 1923, Division 6 (commencing with Section 6400) of the Health and Safety Code." Pursuant to Government Code §61100(a) & (b), SMCSD exercises water supply and management responsibilities throughout its service area.

SMCSD's water management responsibilities in the PR Basin include operation and maintenance of a wastewater treatment plant, management and infiltration of treated wastewater into the PR Basin via SMCSD owned infiltration ponds, and supplying customers with water for beneficial use by pumping groundwater from the PR Basin. Becoming a GSA will support SMCSD's existing efforts to eliminate overdraft in the SMCSD's portion of the PR Basin while protecting water quality and ensuring future water supply sustainability in the San Miguel area (in

cooperation with the County of San Luis Obispo and other water supply agencies in the PR Basin).

In accordance with Section 10723(b) of the Water Code, and Section 6066 of the Government Code, SMCSD published a notice of public hearing regarding SMCSD' s potential decision to become a GSA. The notice of public hearing was published in a newspaper of general circulation in northern San Luis Obispo County, the Paso Robles Press and San Luis Obispo Tribune, thereby notifying interested parties and the public of SMCSD's intent to consider becoming a GSA in portions of the PR Basin.

The notice and proof of publication is enclosed herewith as Exhibit 2. On October 27, 2016, the SMCSD Board of Directors, at a properly noticed special board meeting, held a public hearing to consider whether SMCSD should file a notice of intent to become a GSA for a portion of the PR Basin. No written comments were received prior to the public hearing, and the SMCSD heard and considered the verbal comments of the members of the public who provided comments at the October 27, 2016 public hearing.

Following closure of the public hearing, SMCSD's Board of Directors adopted Resolution No. 2016-34, enclosed herewith as Exhibit 3, wherein SMCSD's governing body determined to become a GSA for all of those portions of the PR Basin within SMCSD's service area and sphere of influence. SMCSD is not proposing any new bylaws, ordinances, or other new authorities associated with this GSA formation, but it will continue to work collaboratively with the County of San Luis Obispo and other water supply agencies, as well as other neighboring local agencies, to ensure all of the groundwater in the PR Basin is managed in accordance with the requirements of SGMA.

To the best of SMCSD's knowledge, other entities considering formation of a GSA near SMCSD's service area and sphere of influence in the PR Basin may include:

- County of San Luis Obispo
- City of Paso Robles
- City of Atascadero
- Templeton Community Services District, and
- Atascadero Mutual Water District.

The SMCSD Board of Directors in Resolution No. 2016-34 authorized the Board President and District General Manager and District General Counsel to negotiate MOUs, or other appropriate agreement(s), with other public agencies and/or entities that utilize or manage water in the PR Basin, as may be necessary for the purpose of implementing a cooperative, coordinated governance structure for the management of the PR Basin.

SMCSD has begun discussions with the agencies listed above, stakeholders, and interested parties overlying portions of the PR Basin near SMCSD's service area and sphere of influence, and is working cooperatively with these parties to establish basin-wide coordination and governance for groundwater management (while reducing, to the maximum extent practical, duplication of effort, overlap of jurisdiction, and inter-agency conflict).

As required by Water Code Section 10723.8(a)(4), SMCSD established and is maintaining a list of interested parties that will continue to be amended as necessary during the GSA formation and Groundwater Sustainability Plan ("GSP") development process. As required by SGMA, SMCSD will consider all classes of beneficial uses and users of groundwater within the PR Basin, as well as the interests of those entities responsible for developing GSPs.

An initial list of interested parties is enclosed herewith as Exhibit 4. The interested persons list will be used by SMCSD to ensure that, pursuant to California Water Code Section 10723.2, SMCSD considers the interests of all beneficial uses and users of groundwater in the PR Basin, as well as those responsible for implementing a GSP or GSPs in the PR Basin. SMCSD will update the interested parties list as new information becomes available and negotiations with other public agencies progress.

It is my understanding, based on opinion of SMCSD's legal counsel, that all applicable and required information listed in Water Code §10723.8(a) has been provided to DWR in this correspondence and supporting exhibits. SMCSD's GSA formation notification to DWR complies with all of the requirements of SGMA (as amended). However, to the extent that DWR requires additional information to complete the GSA formation notification process, SMCSD will promptly provide such information.

If you have any questions, or require further information, please contact Darrell Gentry, SMCSD General Manager at (805) 467-3388.

Sincerely,

Darrell Gentry

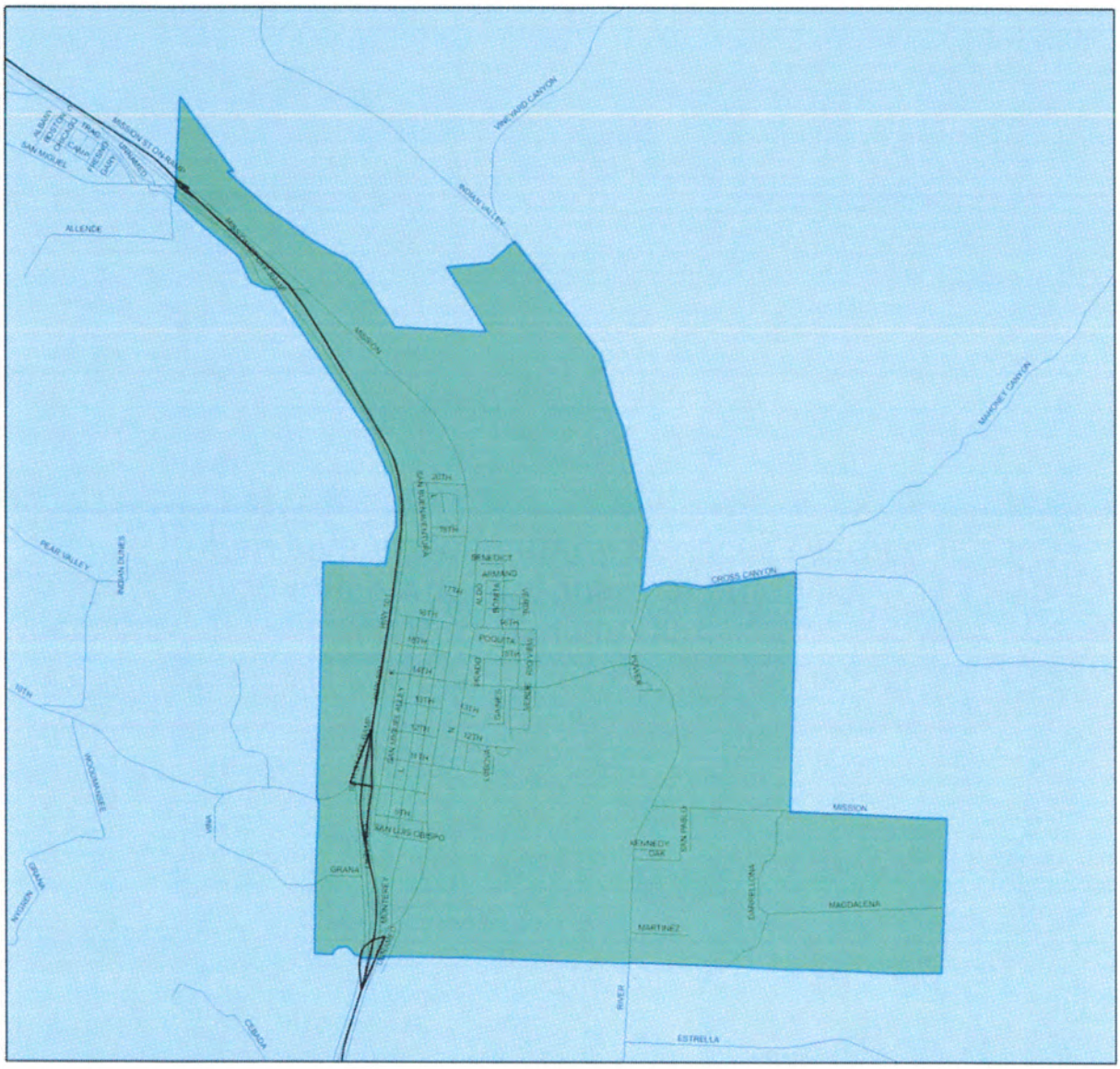
Darrell Gentry,
District General Manager
San Miguel Community Services District

Attachments: Exhibits 1-4

EXHIBIT 1

(PR BASIN AREA MAP/ESTRELLA SUB-BASIN MAP)

San Miguel Community Services District Service Area & Sphere of Influence Recommendation

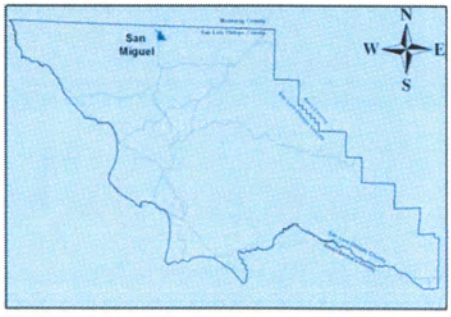


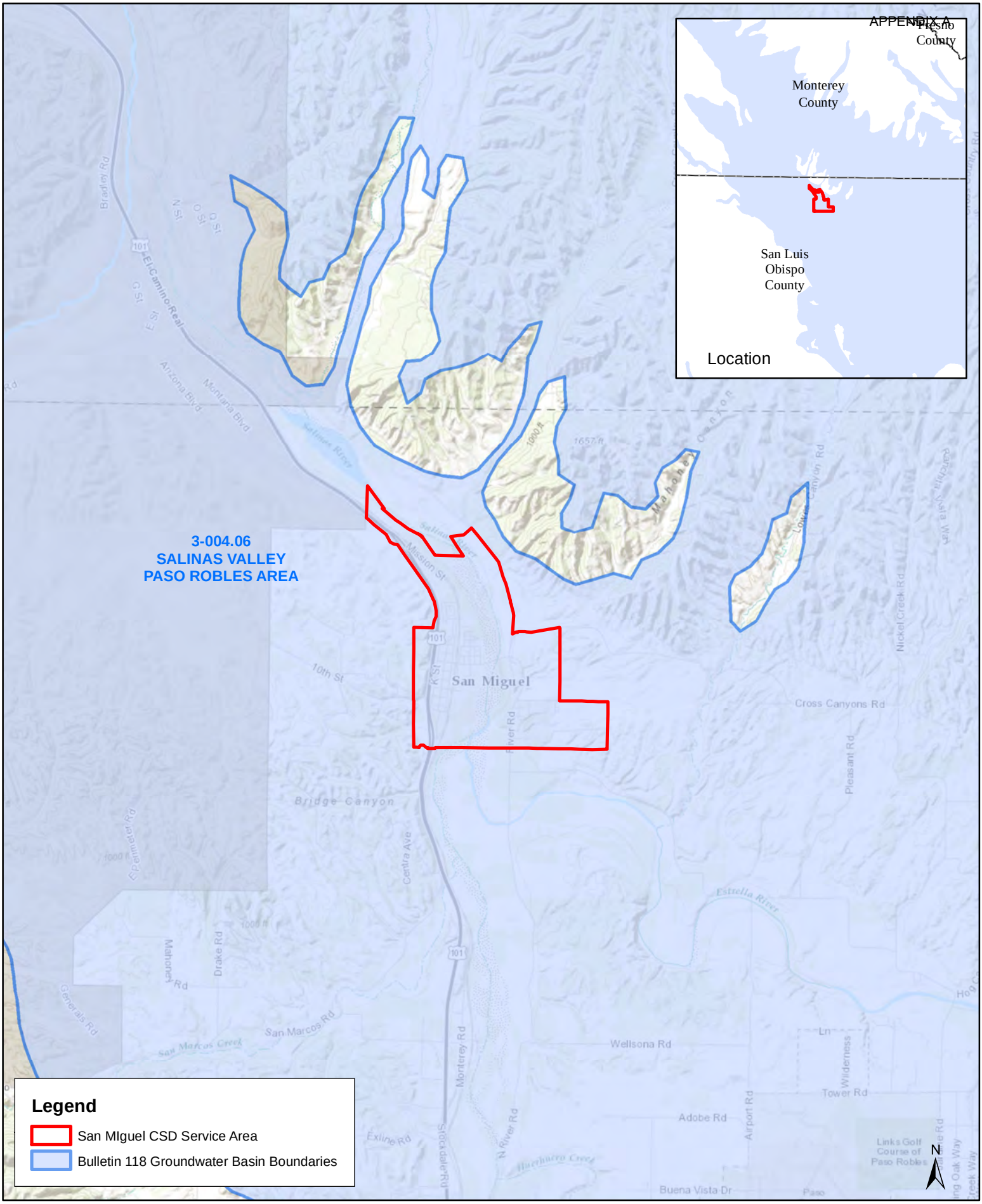
Legend

- Major Roads
- Service Area
- Sphere of Influence (Same as Service Area)

LOCAL AGENCY FORMATION COMMISSION
SLO LAFCO

Prepared By SLOLAFCO
Name: San Miguel_SOI Bndy
Date: 7/1/2013





San Miguel Community Services District
GSA Submittal

0 0.5 1 2 Miles

For a map of all the GSA's submitted, see: http://www.water.ca.gov/groundwater/sgm/gsa_map.cfm

Date: 12/16/2016

EXHIBIT 2

(NOTICE OF PUBLIC HEARING

PROOF OF PUBLICATION)

SAN MIGUEL COMMUNITY SERVICES DISTRICT

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN THAT THE San Miguel Community Services District Board of Directors will hold a public hearing on:

Thursday, October 27, 2016, 7:00 P.M., 1150 Mission Street to consider the following:

1. Adopting **Resolution No 2016-33**, To Form a Groundwater Sustainability Agency (GSA) pursuant to California Water Code section 10723.8 of the Sustainable Groundwater Management Act of 2014 for all properties within the District water service and sphere of influence boundaries.

Description:

2. To consider approving the enacting resolution to form and establish a GSA for purpose of managing water resources within the jurisdictional and sphere of influence boundaries of the San Miguel Community Services District that establishes the following objectives:

> A consistent and minimum reliable water supply is essential to the public health, safety and welfare of the people and community of San Miguel, and
>
> Will enact rules, regulations and standards for water reuse, recycling, conservation, and
>
> Work collaboratively with others to eliminate or reduce overdraft conditions that may exist in the SMCSD's portion of the PR Basin, while protecting water quality and ensuring future water supply sustainability in the San Miguel area (in cooperation with the County of San Luis Obispo and other water supply agencies in the PR Basin), and to assure that the San Miguel Area portion of the Basin is managed in accordance with the requirements of SGMA

The GSA will be comprised of the SMCSD Board of Directors who may enact voluntary and mandatory measures to achieve these specified objectives.

Proposed Environmental Determination:

Categorical Exemption, Class 7, Regulatory Action Taken to Protect Natural Resource.

A copy of the Categorical Exemption form is available at District office and available upon request or at the District website. District contact information is: www.sanmiguelcsd.org or phone – (805) 467-3388.

Interested persons are invited to be present at the public hearing and will be given an opportunity to speak in favor or in opposition to the above-proposed ordinance. Written comments are also acceptable, if submitted or delivered to the District office prior to the public hearing.

Information regarding the proposed ordinance is on file at the District office or may be found on the District's website, www.sanmiguelcsd.org.

BY ORDER OF THE SAN MIGUEL COMMUNITY SERVICES DISTRICT BOARD OF DIRECTORS.

DARRELL W. GENTRY, GENERAL MANAGER AND SECRETARY TO THE BOARD

Date: September 28, 2016

Published Once on Friday, October 7, 2016

and Once on Friday, October 14, 2016

ROBLES CA 93446
If Corporation or LLC-Print State of Incorporation/Organization

I declare that all information in this statement is true and correct. (A registrant who declares as true information which he or she knows is false is guilty of a crime.)

/S/DEBRA LINDBERG

This statement was filed with the County Clerk of San Luis Obispo County on 09/21/2016

TRANSACTING BUSINESS DATE: NOT APPLICABLE

CERTIFICATION

I hereby certify that this copy is a correct copy of

THE TOTAL AMOUNT DUE. Trustor(s): JAMES M. DIMAURO AND NINA M. DIMAURO Recorded: 11/4/2005 as Instrument No. 2005093503 of Official Records in the office of the Recorder of SAN LUIS OBISPO County, California; Date of Sale: 10/31/2016 at 11:00AM Place of Sale: In the breezeway adjacent to the County General Services Building located at 1087 Santa Rosa Street San Luis Obispo, California 93401 Amount of unpaid balance and other charges: $117,345.15 The purported property address is: 2290 HERITAGE LOOP RD, PASO ROBLES, CA 93446 Assessor's Parcel No.: 012-190-029

NOTICE TO POTENTIAL

any incorrectness of the property address or other common designation, if any, shown herein. If no street address or other common designation is shown, directions to the location of the property may be obtained by sending a written request to the beneficiary within 10 days of the date of first publication of this Notice of Sale. If the sale is set aside for any reason, including if the Trustee is unable to convey title, the Purchaser at the sale shall be entitled only to a return o f the monies paid to the Trustee. This shall be the Purchaser's sole and exclusive remedy. The purchaser shall have no further recourse against the Trustor, the Trustee, the Beneficiary, the Beneficiary's Agent,

TOMMY GONG,
County Clerk
By ABAUTISTA, Deputy

New Fictitious Business Name Statement, Expires 09/20/2021

PUB: 9-30, 10-7, 10-14, 10-21-2016 LEGAL #5451

NOTICE OF TRUSTEE'S SALE

T.S. No.: 2016-CA006964 Loan No.: XXXXX Order No.: 5822494 APN: 048-071-020,018,014,012, 010, 048-071-008,004, & 085-171-008

YOU ARE IN DEFAULT UNDER A DEED OF TRUST DATED 9/13/2007. UNLESS YOU TAKE ACTION TO PROTECT YOUR PROPERTY, IT MAY BE SOLD AT A PUBLIC SALE. IF YOU NEED AN EXPLANATION OF THE NATURE OF THE PROCEEDING AGAINST YOU, YOU SHOULD CONTACT A LAWYER.
A public auction sale to the highest bidder for cash, cashier's check drawn on a state or national bank, a check drawn by a state or federal credit union, or a check drawn by a state or federal savings and loan association, or savings association, or savings bank specified in section 5102 of the Financial Code and authorized to do business in this state. Sale will be held by the duly appointed trustee as shown below, of all right, title, and interest conveyed to and now held by the trustee in the hereinafter described property under and pursuant to a Deed of Trust described below. The sale will be made, but without covenant or warranty, expressed or implied, regarding title, possession, or encumbrances, to pay the remaining principal sum of the note(s) secured by the Deed of Trust, with interest and late charges thereon, as provided in the note(s), advances, under the terms of the Deed of Trust, interest thereon, fees, charges and expenses of the Trustee for the total amount (at the time of the initial publication of the Notice of Sale) reasonably estimated to be set forth below. The amount may be greater on the day of sale.

BENEFICIARY MAY ELECT TO BID LESS THAN THE TOTAL

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SAN MIGUEL COMMUNITY SERVICES DISTRICT
NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN THAT THE San Miguel Community Services District Board of Directors will hold a public hearing on:
Thursday, October 27, 2016, 7:00 P.M., 1150 Mission Street to consider the following:
1. Adopting Resolution No 2016-33, To Form a Groundwater Sustainability Agency (GSA) pursuant to California Water Code section 10723.8 of the Sustainable Groundwater Management Act of 2014 for all properties within the District water service and sphere of influence boundaries. Description:
2. To consider approving the enacting resolution to form and establish a GSA for purpose of managing water resources within the jurisdictional and sphere of influence boundaries of the San Miguel Community Services District that establishes the following objectives:

A consistent and minimum reliable water supply is essential to the public health, safety and welfare of the people and community of San Miguel, and

Will enact rules, regulations and standards for water reuse, recycling, conservation, and

Work collaboratively with others to eliminate or reduce overdraft conditions that may exist in the SMCSD's portion of the PR Basin, while protecting water quality and ensuring future water supply sustainability in the San Miguel area (in cooperation with the County of San Luis Obispo and other water supply agencies in the PR Basin), and to assure that the San Miguel Area portion of the Basin is managed in accordance with the requirements of SGMA

The GSA will be comprised of the SMCSD Board of Directors who may enact voluntary and mandatory measures to achieve these specified objectives.
Proposed Environmental Determination:
Categorical Exemption, Class 7, Regulatory Action Taken to Protect Natural Resource.
A copy of the Categorical Exemption form is available at District office and available upon request or at the District website. District contact information is: www.sanmiguelcsd.org or phone – (805) 467-3388.
Interested persons are invited to be present at the public hearing and will be given an opportunity to speak in favor or in opposition to the above-proposed ordinance. Written comments are also acceptable, if submitted or delivered to the District office prior to the public hearing. Information regarding the proposed ordinance is on file at the District office or may be found on the District's website, www.sanmiguelcsd.org.
BY ORDER OF THE SAN MIGUEL COMMUNITY SERVICES DISTRICT BOARD OF DIRECTORS.
DARRELL W. GENTRY, GENERAL MANAGER AND SECRETARY TO THE BOARD
Date: September 28, 2016 Published Once on Friday, October 7, 2016 and Once on Friday, October 14, 2016

EXHIBIT 3

(DISTRICT ADOPTING RESOLUTION)

ORIGINAL

RESOLUTION NO. 2016- 34

RESOLUTION OF THE BOARD OF DIRECTORS OF SAN MIGUEL COMMUNITY SERVICES DISTRICT TO BECOME A GROUNDWATER SUSTAINABILITY AGENCY FOR A PORTION OF THE PASO ROBLES GROUNDWATER BASIN WITHIN THE BOUNDARIES AND SPHERE OF INFLUENCE FOR SAN MIGUEL COMMUNITY SERVICES DISTRICT

WHEREAS in September 2014, the Sustainable Groundwater Management Act SGMA was signed into law with an effective date of January 1, 2015 and codified at California Water Code Section 10720 et seq., and

WHEREAS the legislative intent of SGMA is to among other goals: provide sustainable management of alluvial groundwater basins and sub-basins AS defined by the California Department of Water Resources (DWR); to enhance local management of groundwater; to establish minimum standards for sustainable groundwater management and to provide specified local agencies authority and the technical and financial assistance necessary to sustainably manage groundwater, and

WHEREAS the Water Code, Section 10723a authorizes a local agency with water supply water management or local land use responsibilities or a combination of local agencies with such responsibilities overlying a groundwater basin to decide to become a Groundwater Sustainability Agency GSA under SGMA, and

WHEREAS San Miguel Community Services District (SMCSD) is a local agency with water management responsibilities exercised per Government Code 61100 b within SMCSD's service area including management and infiltration of treated wastewater throughout the SMCSD service area, and

WHEREAS sustainable groundwater management of high priority basins as designated by DWR is required by SGMA, and

WHEREAS the service area of SMCSD overlies portions of the Estrella sub-basin of a portion of the Paso Robles Groundwater Basin DWR Bulletin 118 Basin No. 9-7 hereinafter the SLR Basin which is designated by DWR as a high priority basin, and

WHEREAS California Water Code Section 10723.8 requires that a local agency deciding to serve as a GSA notify DWR within 30 days of the local agency's decision to become a GSA authorized to undertake sustainable groundwater management within a basin and

WHEREAS California Water Code Section 10723.8 mandates that 90 days following the posting by DWR of the local agency's decision to become a GSA that entity shall be presumed to be the exclusive GSA for the designated area within the basin the agency is managing as described in the notice provided that no other GSA formation notice covering the same area has been submitted to DWR, and

ORIGINAL

WHEREAS SMCSD intends to pursue a memorandum of understanding or other Agreement(s) with one or more local agencies in the PR Basin that will achieve the common purpose of creating a governance structure for the entire PR Basin that ensures all of the PR Basin is sustainably managed in a transparent and effective manner under one or more groundwater sustainability plans GSPs, and

WHEREAS in accordance with Section 10723b of the California Water Code and Section 6066 of the California Government Code, a notice of public hearing was published in a general circulation newspaper in San Luis Obispo County regarding SMCSDs intent to consider becoming a GSA for a portion of the PR Basin, and

WHEREAS becoming a GSA supports the SMCSD's ongoing efforts to maintain and replenish the PR Basin, while working to eliminate over-drafting and ensure water supply sustainability within its service area boundaries in cooperation with the state recognized GSA's located within the Paso Robles Basin.

NOW THEREFORE THE SMCSD BOARD OF DIRECTORS HEREBY FINDS DETERMINES RESOLVES AND ORDERS AS FOLLOWS:

Section 1. The above recitals and each of them are true and correct.

Section 2. The SMCSD Board of Directors hereby decides and determines that SMCSD shall become the GSA for all of those portions of the PR Basin underlying or within the jurisdictional boundaries/sphere of influence of SMCSD.

Section 3. SMCSD Staff is directed to submit to DWR within thirty 30 days of the approval of this Resolution all documentation and information required by Water Code Section 10723.8 to support SMCSD's formation of a GSA.

Section 4. The Board President of SMCSD is authorized to execute memorandum(s) of understanding that memorializes the synergistic manner in which SMCSD maintains and/or replenishes its portion of the PR Basin with treated wastewater and otherwise cooperates in the management of the PR Basin in accordance with developed groundwater model(s) and groundwater management plan(s) that protects basin water quality in the Estrella portion of the PR Basin, while ensuring groundwater levels do not drop below specified levels.

Section 5. Board President and District General Manager are further authorized to pursue and negotiate with other local agencies and interested parties in the Estrella portion of the PR Basin such other agreements associated with SGMA compliance as may be deemed prudent by the Board President and/or General Manager. Such agreements-which shall generally be for the purpose of developing and implementing a cooperative and coordinated governance structure for future management of groundwater in some or the entire PR Basin-shall be submitted by the President to the SMCSD Board for consideration and possible approval.