Groundwater Condition

REPORT | SANTA CLARA COUNTY

October 2021

SUMMARY

This report summarizes September 2021 groundwater storage, recharge, pumping, and level conditions for the Santa Clara Subbasin (including the Santa Clara Plain and Coyote Valley groundwater management areas) and the Llagas Subbasin.

Over the last month, groundwater levels in some areas of the county have stabilized or increased slightly, while other areas had continued declines due to the ongoing drought. Current groundwater levels in all index wells are below their five-year averages as a result of reduced recharge and increased pumping. Valley Water has obtained emergency imported water supplies for additional recharge. Groundwater storage at the end of 2021 is projected to be in Stage 2 (Alert) of Valley Water's Water Shortage Contingency Plan.

- January to September managed recharge is 46% to 75% of the five-year average.
- January to August pumping is 103% to 132% of the five-year average.
- Groundwater index well water levels for September 2021 range from 8 to 17 feet lower than the September levels of 2020.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
September 2021 managed recharge estimate	3,000	1,100	1,400
YTD managed recharge estimate	21,800	9,100	12,000
YTD managed recharge as % of five-year average	46%	69%	75%
August 2021 pumping estimate	8,500	1,600	5,100
January to August pumping estimate	56,300	8,700	27,400
January to August pumping as % of five-year average	132%	120%	103%
Current index well groundwater levels compared to September of 2020	14 feet lower	8 feet lower	17 feet lower

All volumes are in acre-feet; All data is for 2021 except where noted; YTD = Year-to-date

Contact Us For questions, contact **Roger Pierno** at **(408) 630-2738**

Valley Water
Clean Water • Healthy Environment • Flood Protection

Groundwater Recharge

- Figures 1, 2, and 3 show the cumulative managed recharge for 2021 compared to the average of the previous five years (2016 – 2020).
- Through September, managed recharge is lower in the Santa Clara Plain, Coyote Valley, and Llagas Subbasin than the average of the previous five years due to drought conditions and limited surface water supplies.
- Managed recharge depends on many factors, including water demand and availability, regulatory needs, groundwater storage, and facility maintenance.

Figure 1. Estimated Cumulative Managed Recharge in the Santa Clara Plain

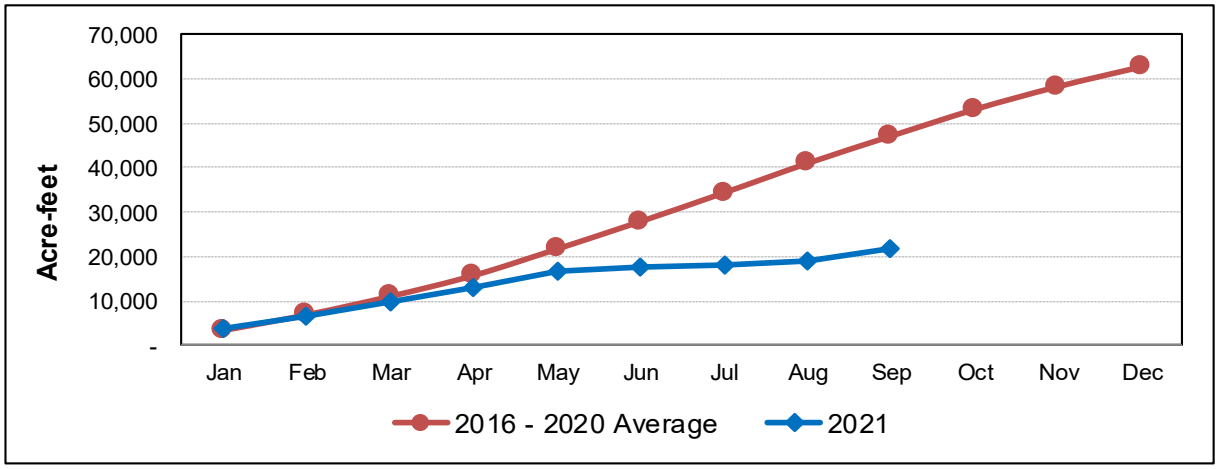


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

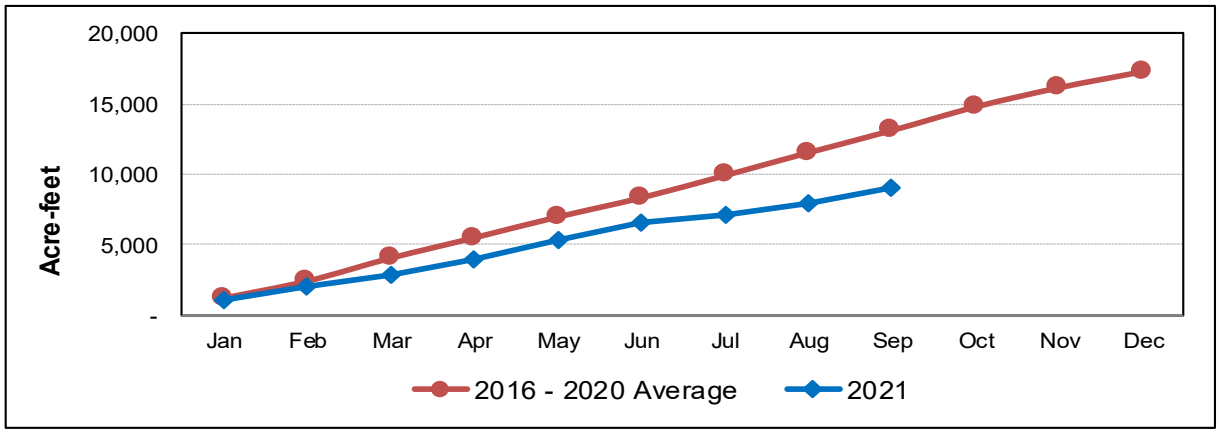
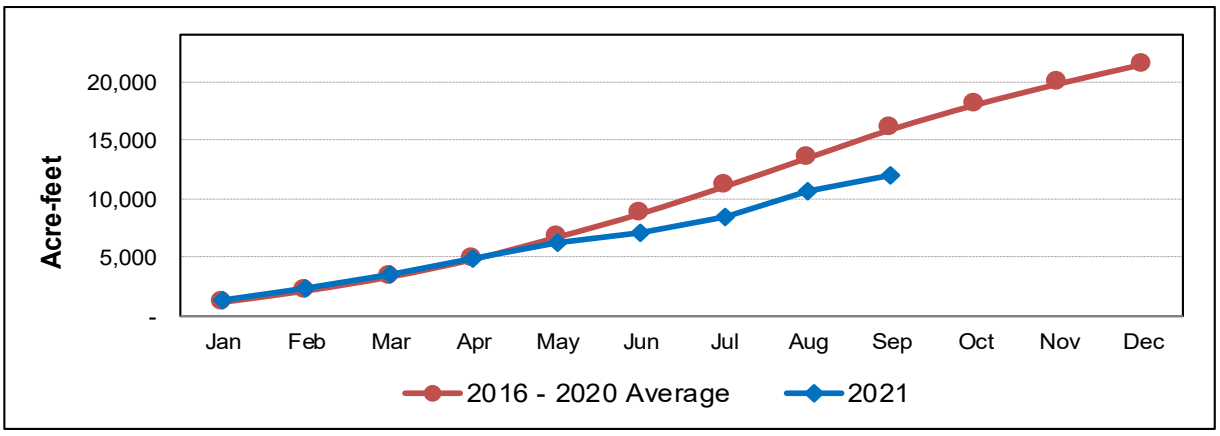


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



Groundwater Pumping

- Figures 4, 5, and 6 show the cumulative groundwater pumping for 2021 compared to the average of the previous five years (2016 – 2020).
- Pumping estimates for January to August 2021 are based on monthly reporting pumping data and pumping data from water retailers. August is most recent available pumping.
- 2021 pumping to date is higher than the average of the previous five years in the Santa Clara Plain, Coyote Valley, and Llagas Subbasin.

Figure 4. Estimated Cumulative Santa Clara Plain Pumping

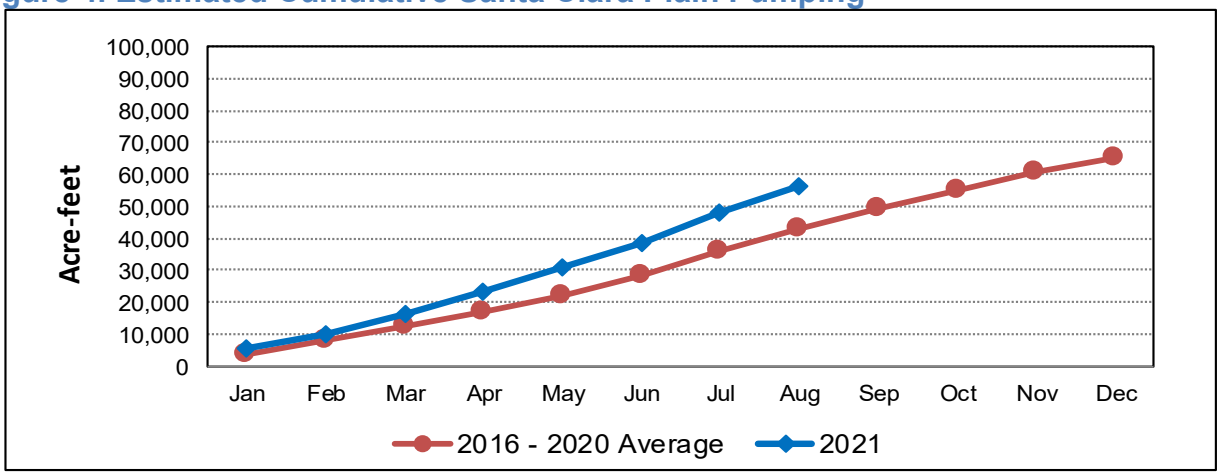


Figure 5. Estimated Cumulative Coyote Valley Pumping

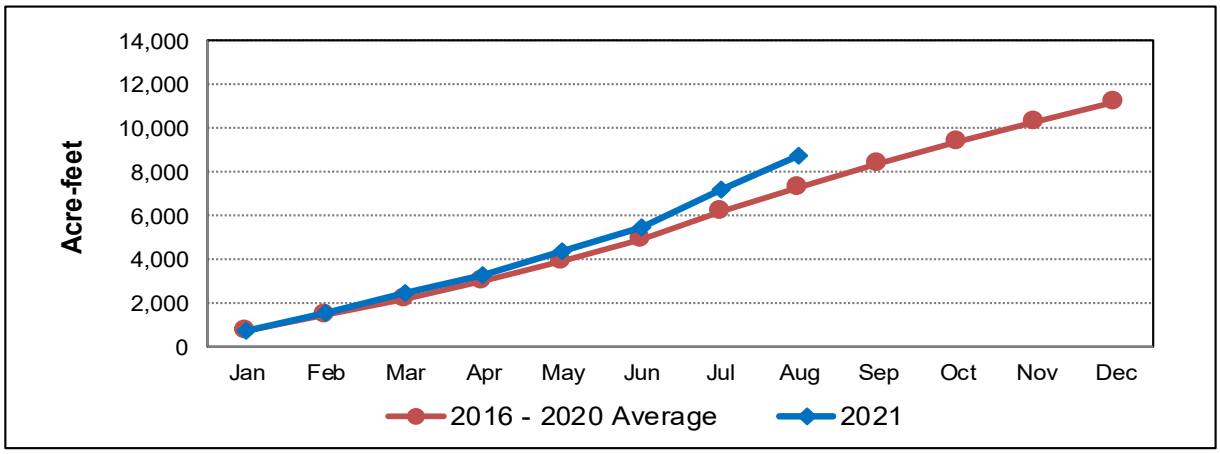
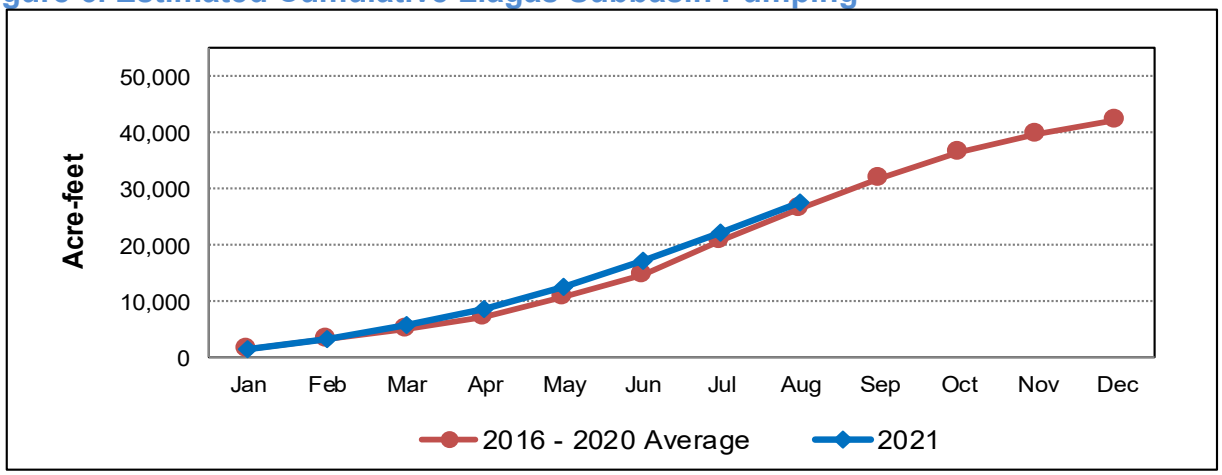


Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels in some areas of the county have stabilized or increased slightly, while other areas had continued declines due to drought conditions. Table 2 summarizes current groundwater levels with historical comparisons for eleven key regional monitoring wells that are distributed across the three management areas, as shown in Figure 7.

Figure 7. Locations of Regional Water Level Monitoring Wells

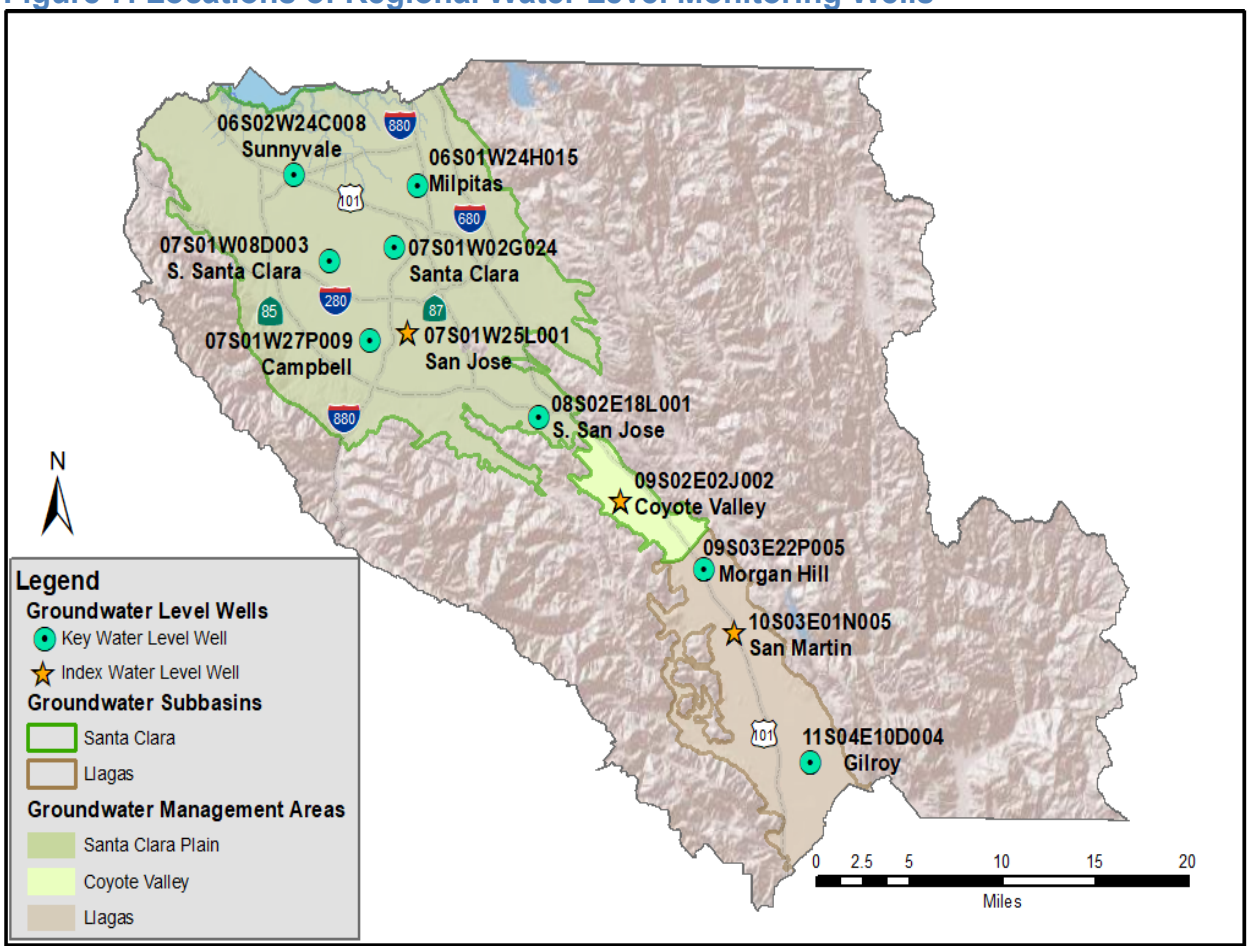


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Table 2. Comparisons to September 2021 Depth to Water (DTW) in Regional Wells

Location	State Well ID	September 2021 DTW (feet)	September 2021 DTW (feet) Compared to:			
			August 2021	September 2020	Prior 5-year Average for September	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-1 (artesian)	0	-14	-21	22
Sunnyvale	06S02W24C008	-29 (artesian)	-1	-8	-9	8
San Jose	07S01W25L001	116	0	-14	-29	22
Santa Clara	07S01W02G024	54	1	15	-36	37
S. Santa Clara	07S01W08D003	97	1	-17	-29	48
Campbell	07S01W27P009	164	1	-17	-43	33
S. San Jose	08S02E18L001	31	-1	-6	-5	39
Coyote Valley	09S02E02J002	28	2	-8	-11	9
Morgan Hill	09S03E22P005	68	-2	-10	-12	27
San Martin	10S03E01N005	70	-3	-17	-29	11
Gilroy	11S04E10D004	59	-1	-25	-21	4

Notes: Negative values in the last 4 columns indicate current groundwater levels are lower than the comparison time. The maximum DTW during the 2012–2016 drought occurred between July 2014 and December 2015, depending on the well.

Figures 8 through 18 show ten-year hydrographs for each of the eleven regional monitoring wells.

Figure 8. Milpitas Well Hydrograph

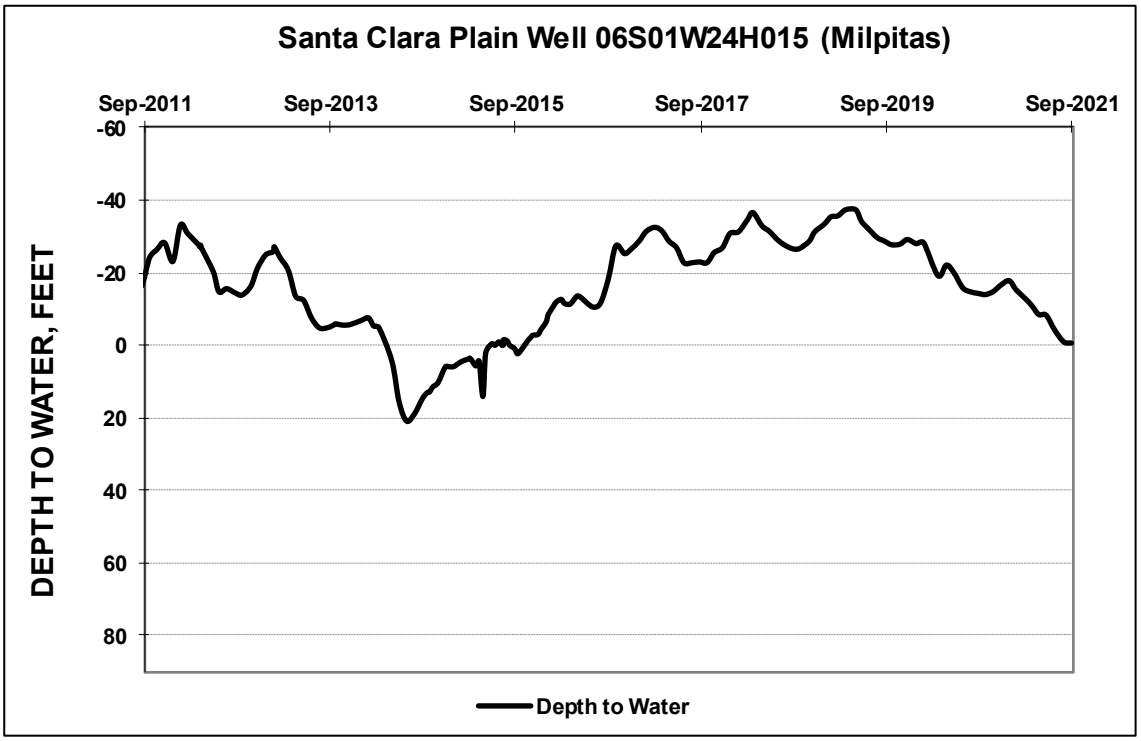


Figure 9. Sunnyvale Well Hydrograph

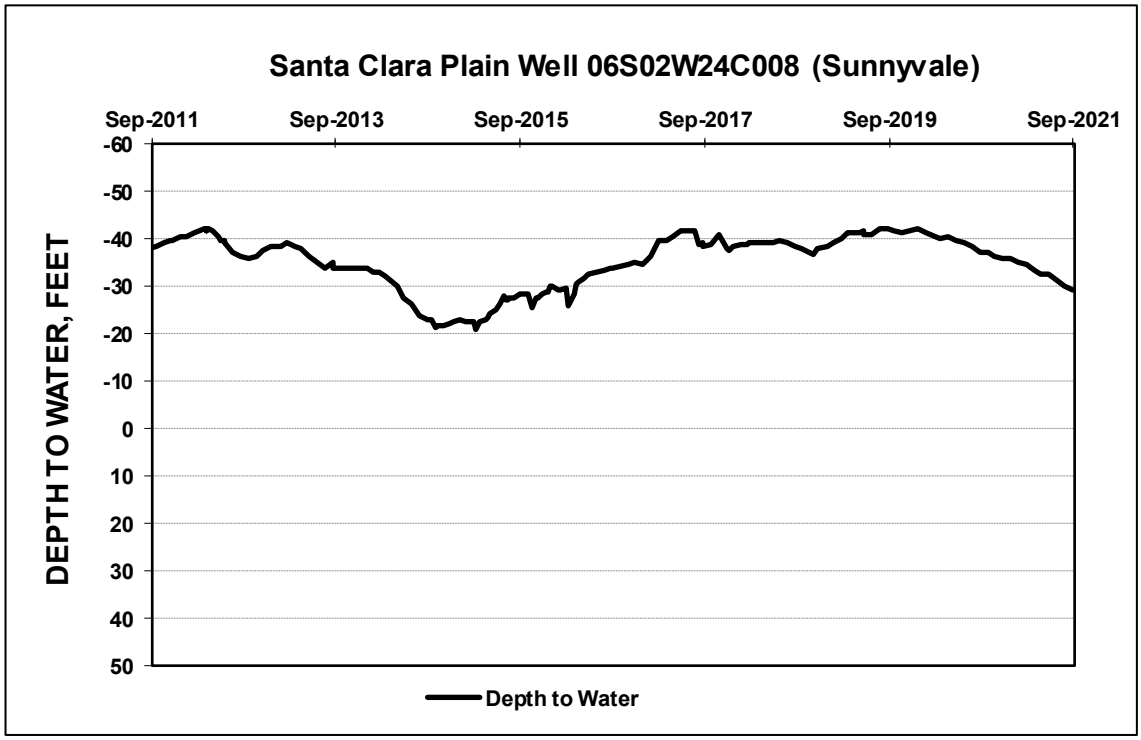


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

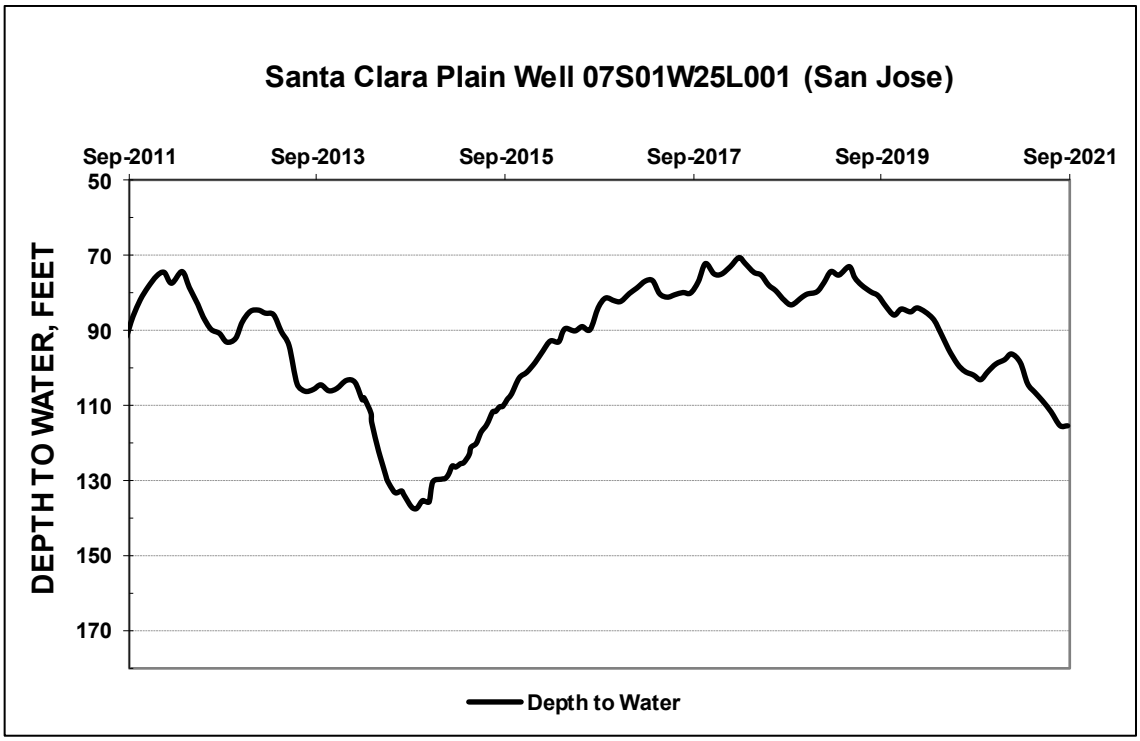


Figure 11. Santa Clara Well Hydrograph

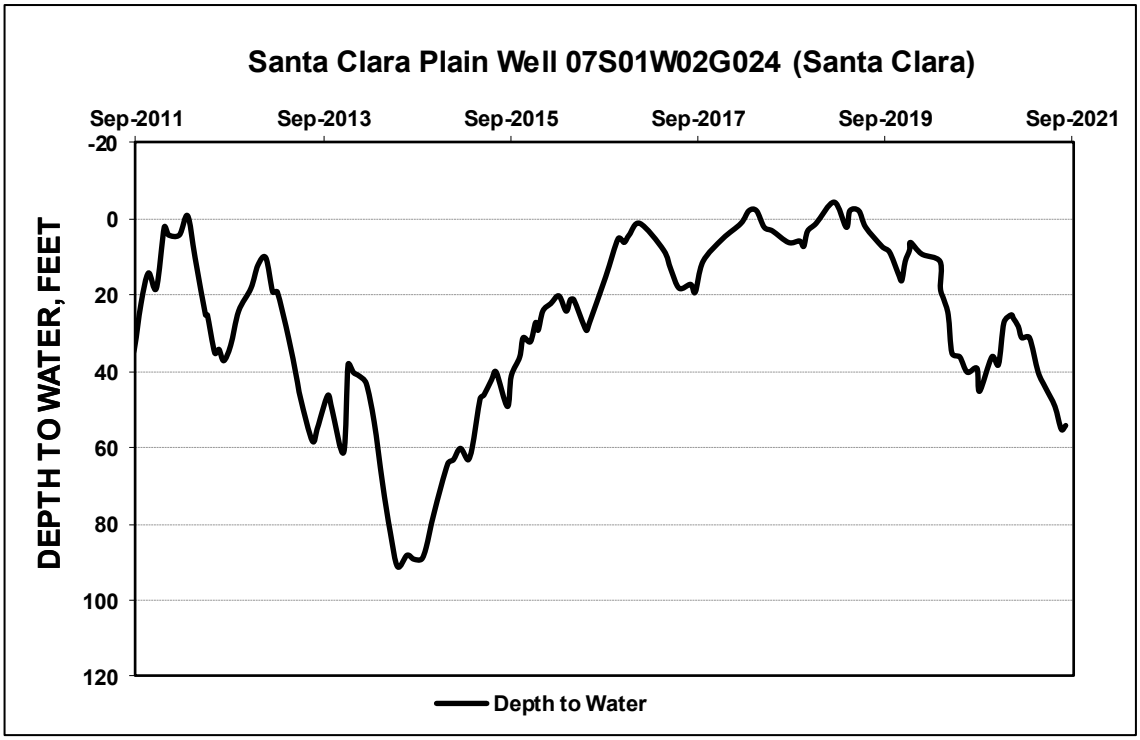


Figure 12. South Santa Clara Well Hydrograph

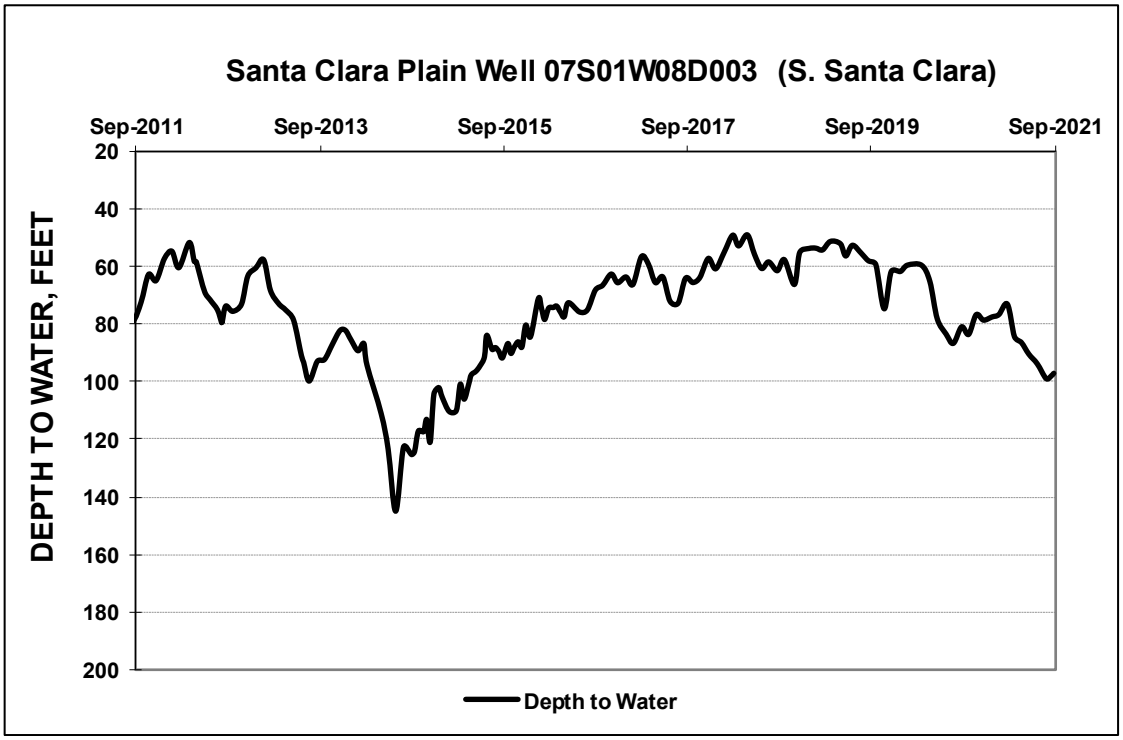
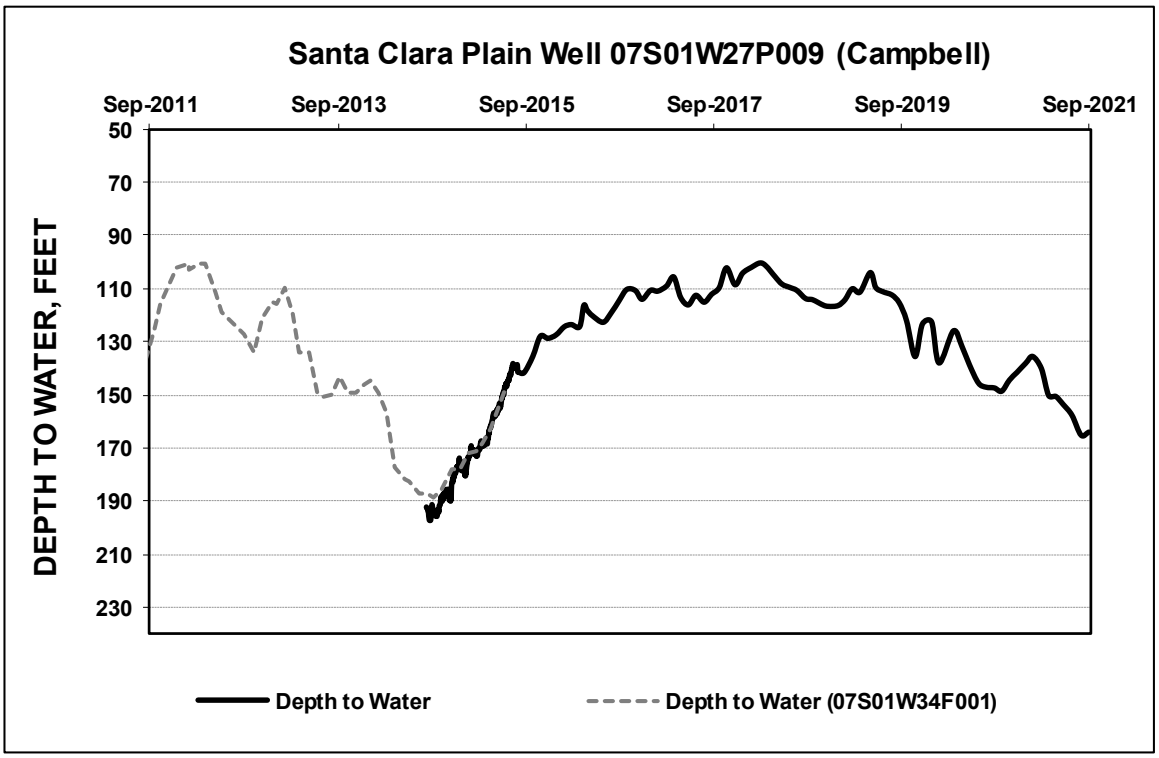


Figure 13. Campbell Well Hydrograph



The Campbell index well was replaced in August 2015 with a nearby well with similar water levels. Prior to August 2015, data from the former index well (07S01W34F001) is used.

Figure 14. South San Jose Well Hydrograph

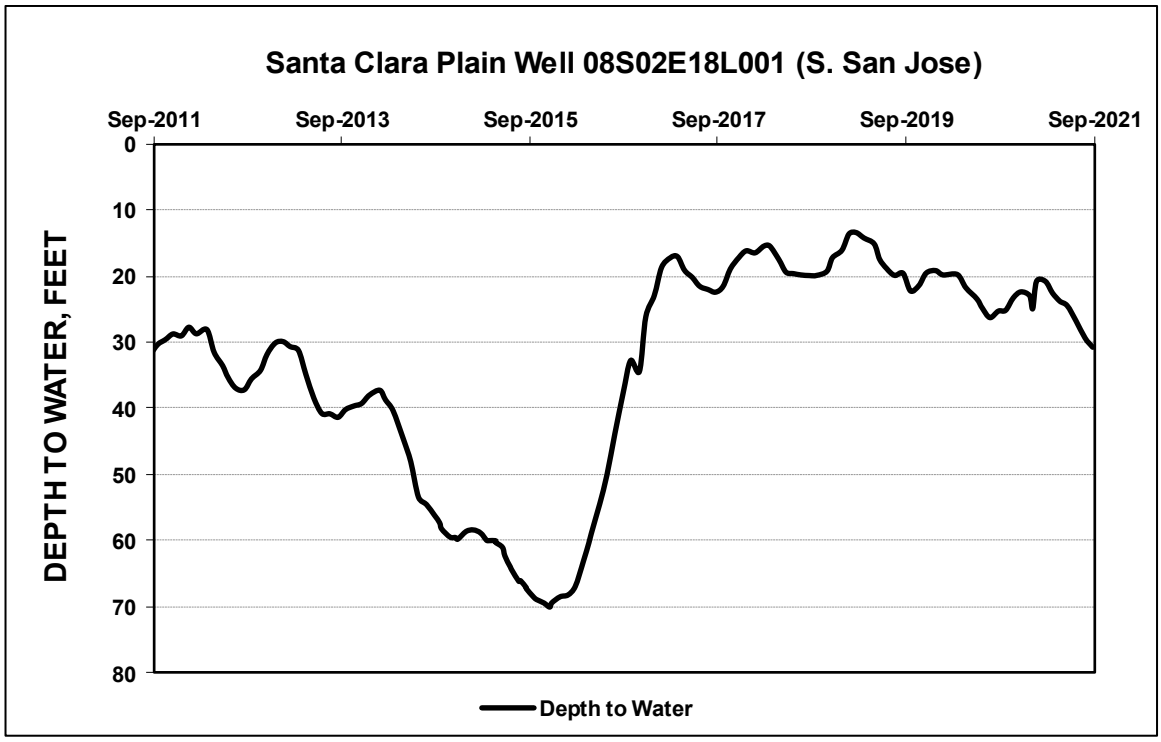


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

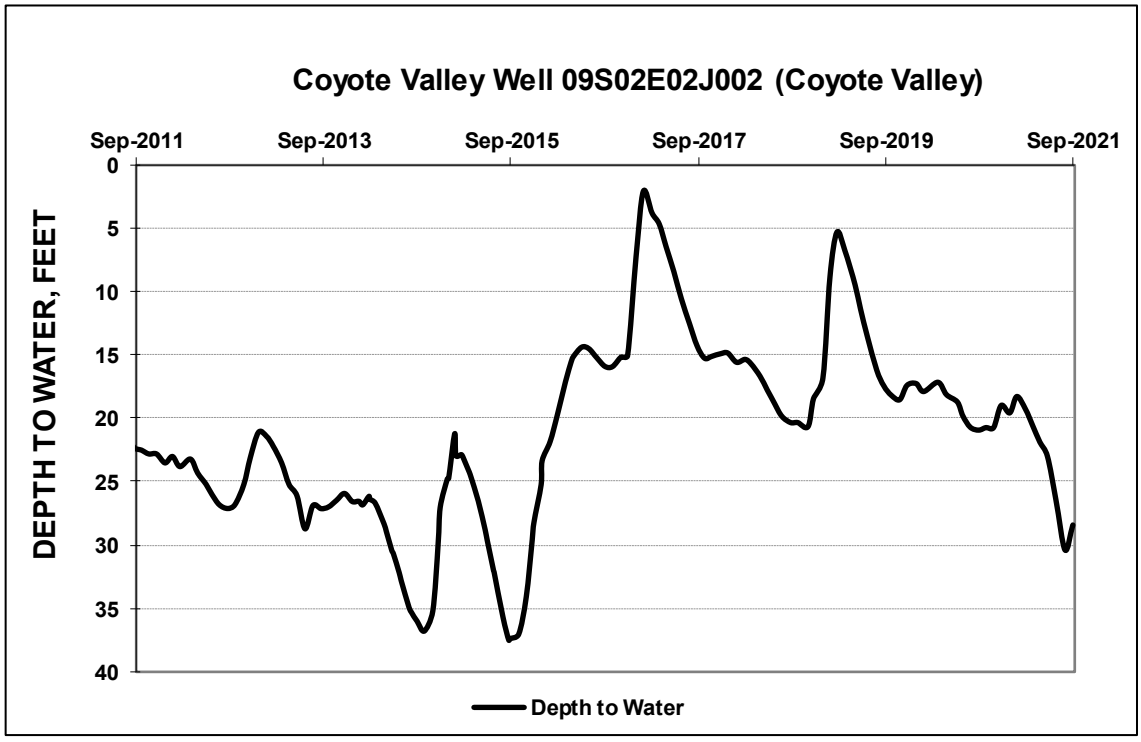


Figure 16. Morgan Hill Well Hydrograph

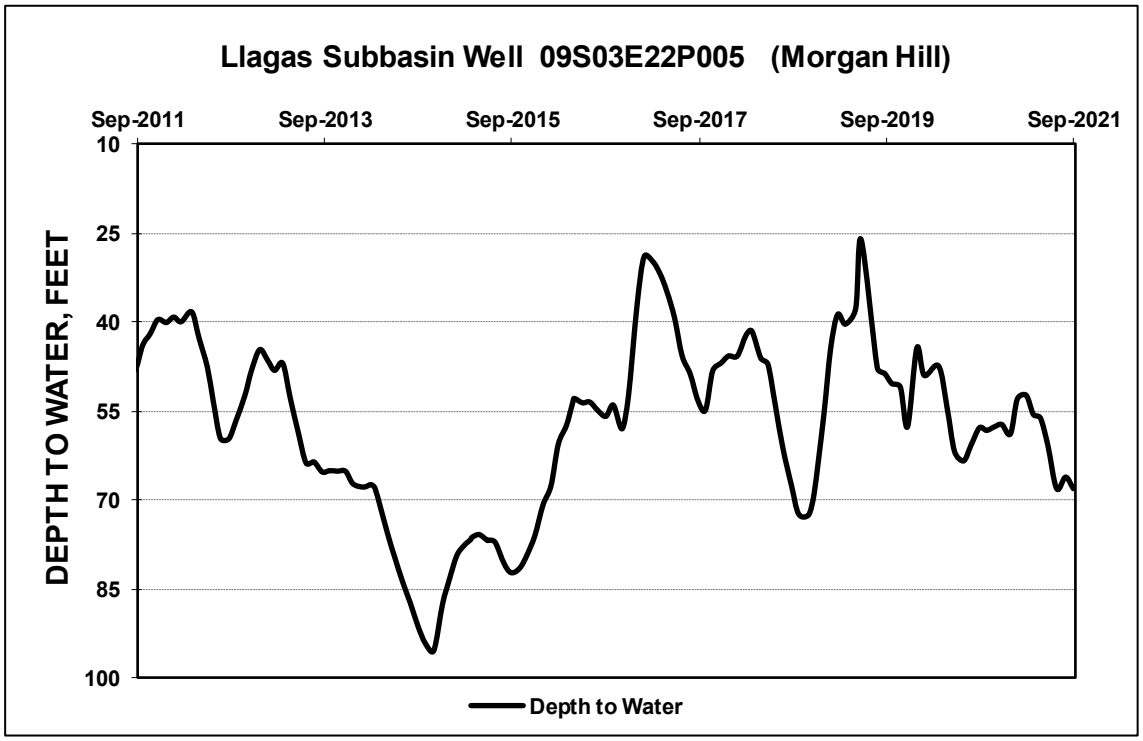


Figure 17. San Martin Well Hydrograph (Index Well for the Llagas Subbasin)

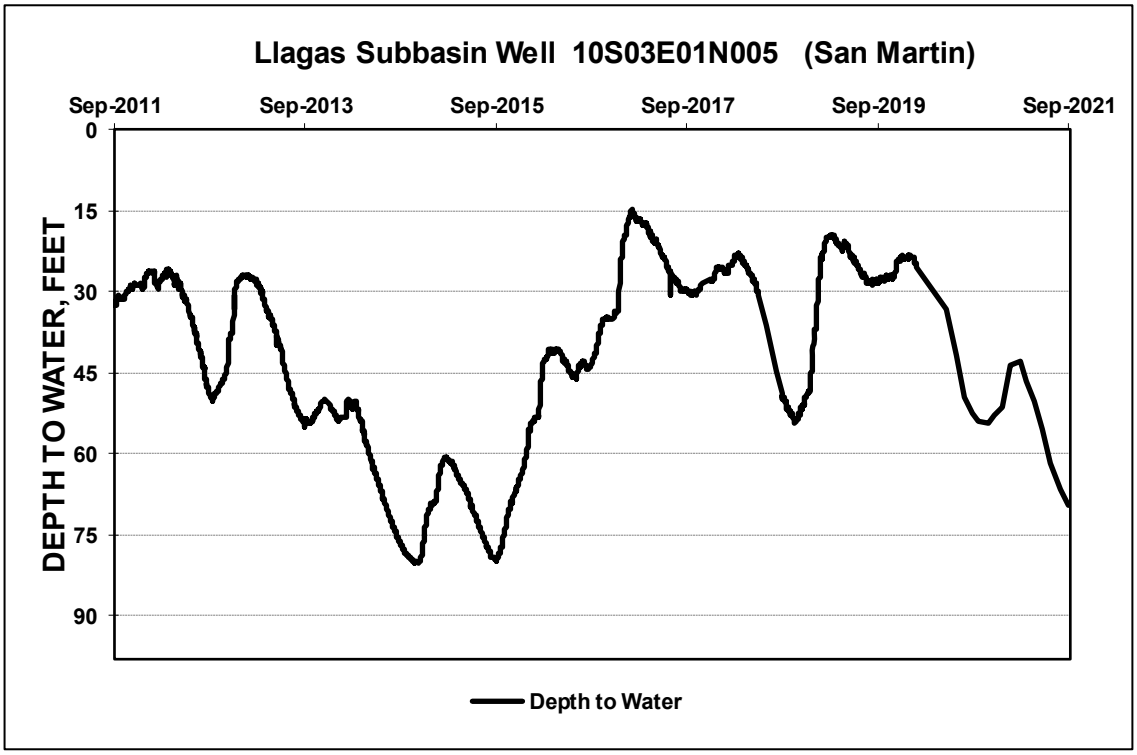


Figure 18. Gilroy Well Hydrograph