

Groundwater Condition

REPORT | SANTA CLARA COUNTY

November 2022

SUMMARY

This report summarizes October 2022 groundwater storage, recharge, pumping, and level conditions for the Santa Clara Subbasin (the Santa Clara Plain and Coyote Valley groundwater management areas) and the Llagas Subbasin.

Groundwater levels have stabilized in most parts of the county and continue to increase in some areas due to Valley Water's managed recharge operations and ongoing water conservation by the community. Groundwater levels in most wells are currently higher than last month and almost half of wells are higher than October 2021. The end of 2022 groundwater storage is projected to be in low Stage 1 (Normal) of the Water Shortage Contingency Plan.

- October managed recharge is 74% to 117% of the five-year average.
- September pumping is 91% to 104% of the five-year average.
- Groundwater levels in index wells for October 2022 range from 20 feet higher to 3 feet lower than the October levels of 2021.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
October 2022 managed recharge estimate	8,100	900	1,700
YTD managed recharge estimate	49,200	9,900	16,500
YTD managed recharge as % of five-year average	117%	74%	103%
September 2022 pumping estimate	6,700	1,200	4,600
YTD pumping estimate through September 2022	52,900	9,000	29,300
September 2022 pumping as % of five-year average	100%	104%	91%
Current index well groundwater levels compared to October of 2021	20 feet higher	2 feet lower	3 feet lower

All volumes are in acre-feet. YTD = Year-to-date.

Contact Us For questions, contact
Scott Elkins at (408) 630-2885



November 2022 Groundwater Condition Report

Groundwater Recharge

- Figures 1, 2, and 3 show the cumulative managed recharge for 2022 compared to the average of the previous five years (2017 – 2021).
- Compared to the average of the previous five years, managed recharge for October 2022 was higher in the Santa Clara Plain, lower in Coyote Valley, and slightly higher in the Llagas Subbasin.
- 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

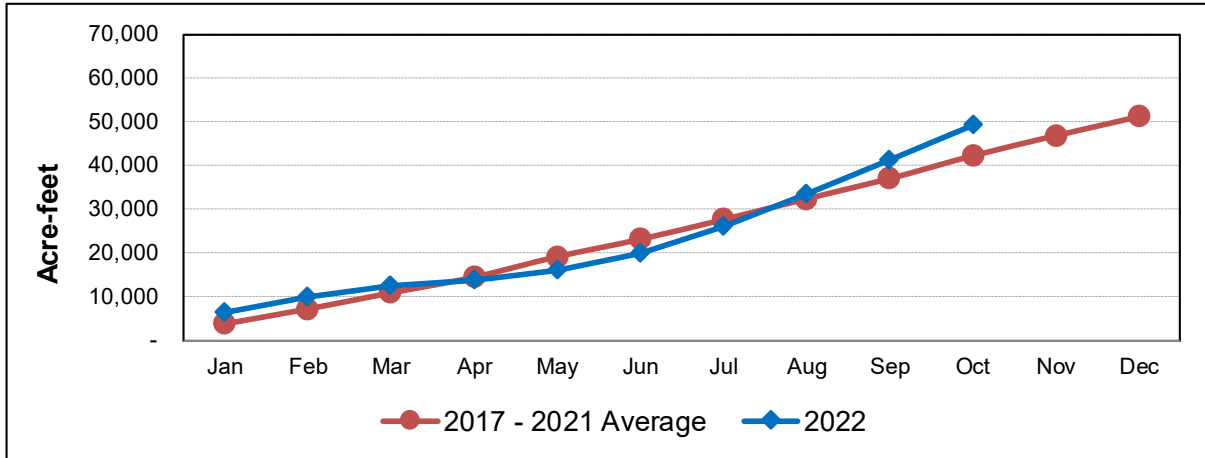


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

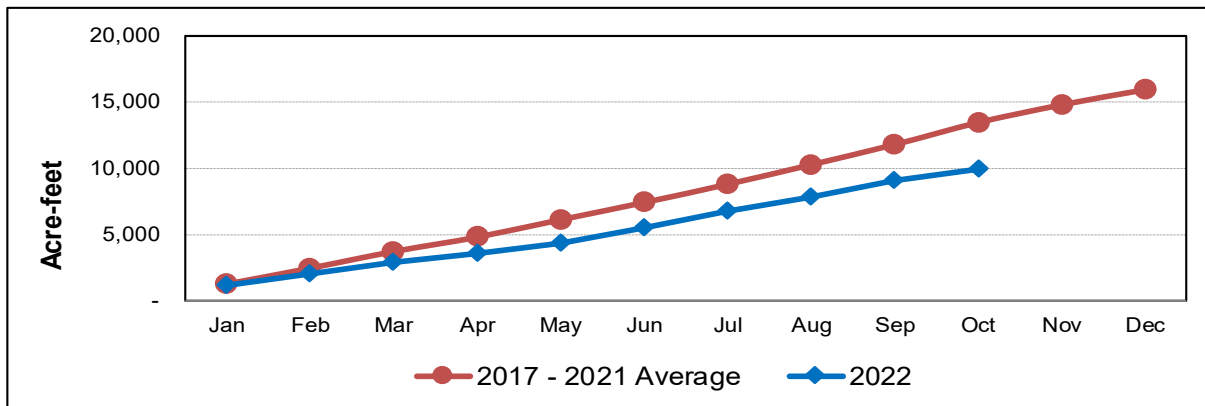
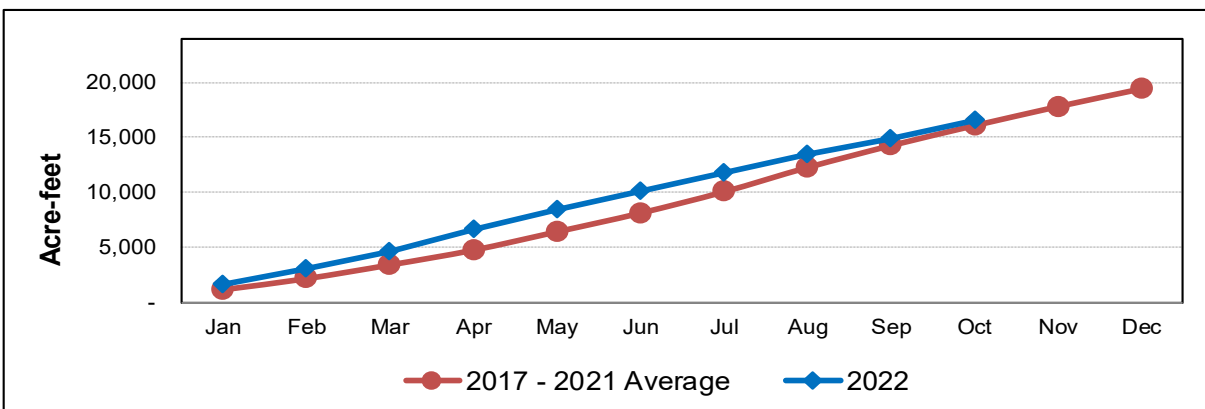


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



November 2022 Groundwater Condition Report

Groundwater Pumping

- Figures 4, 5, and 6 show the cumulative groundwater pumping for 2022 compared to the average of the previous five years (2017 – 2021).
- Pumping estimates for September 2022 are based on monthly pumping data reported by water retailers and other high-volume pumpers. September is the most recent available pumping data.
- Compared to the average of the previous five years, pumping for September 2022 was the same in the Santa Clara Plain, slightly higher in Coyote Valley, and lower in the Llagas Subbasin.

Figure 4. Estimated Cumulative Santa Clara Plain Pumping

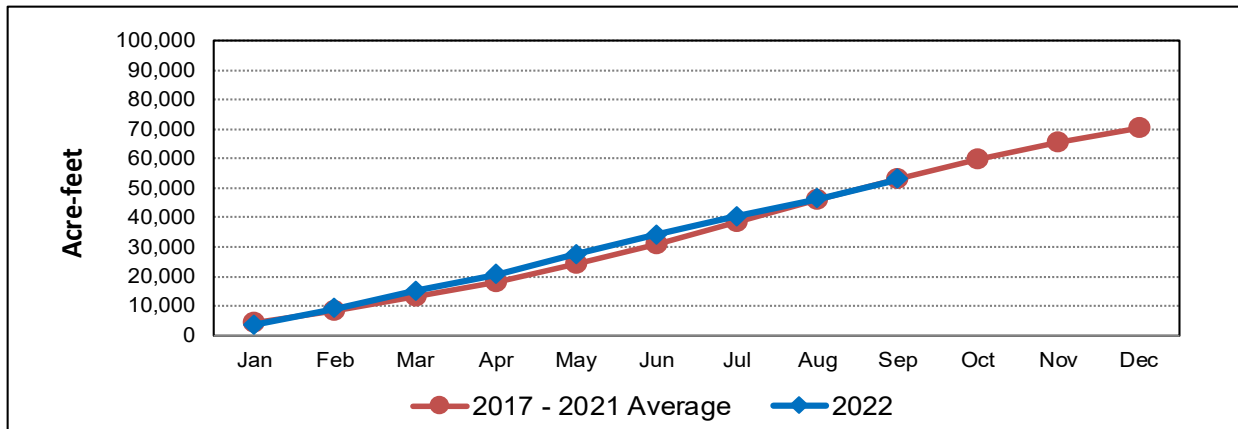


Figure 5. Estimated Cumulative Coyote Valley Pumping

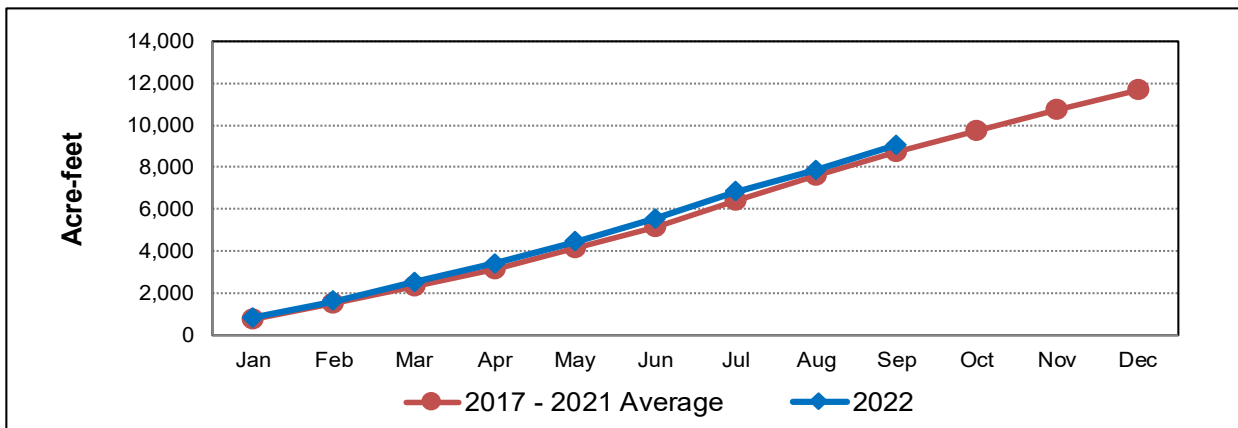
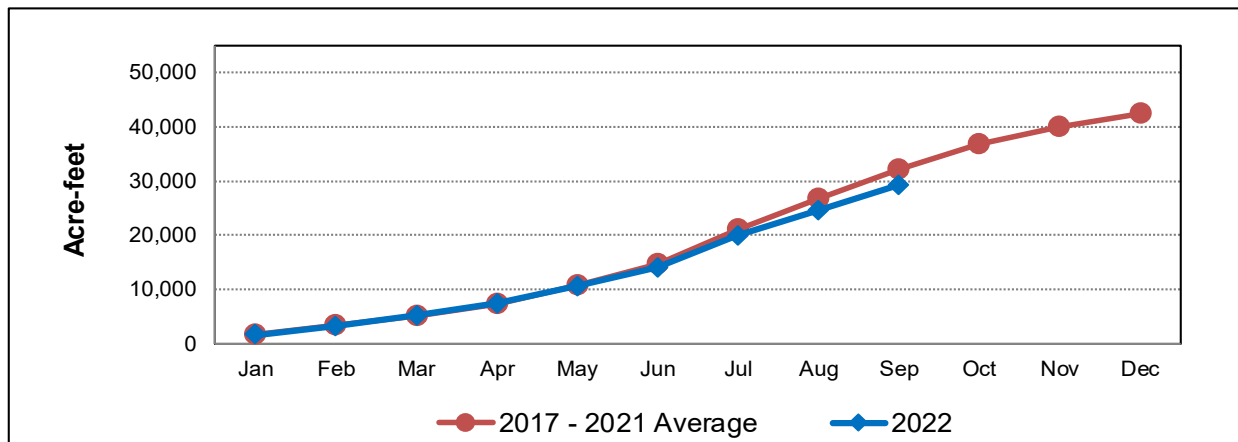


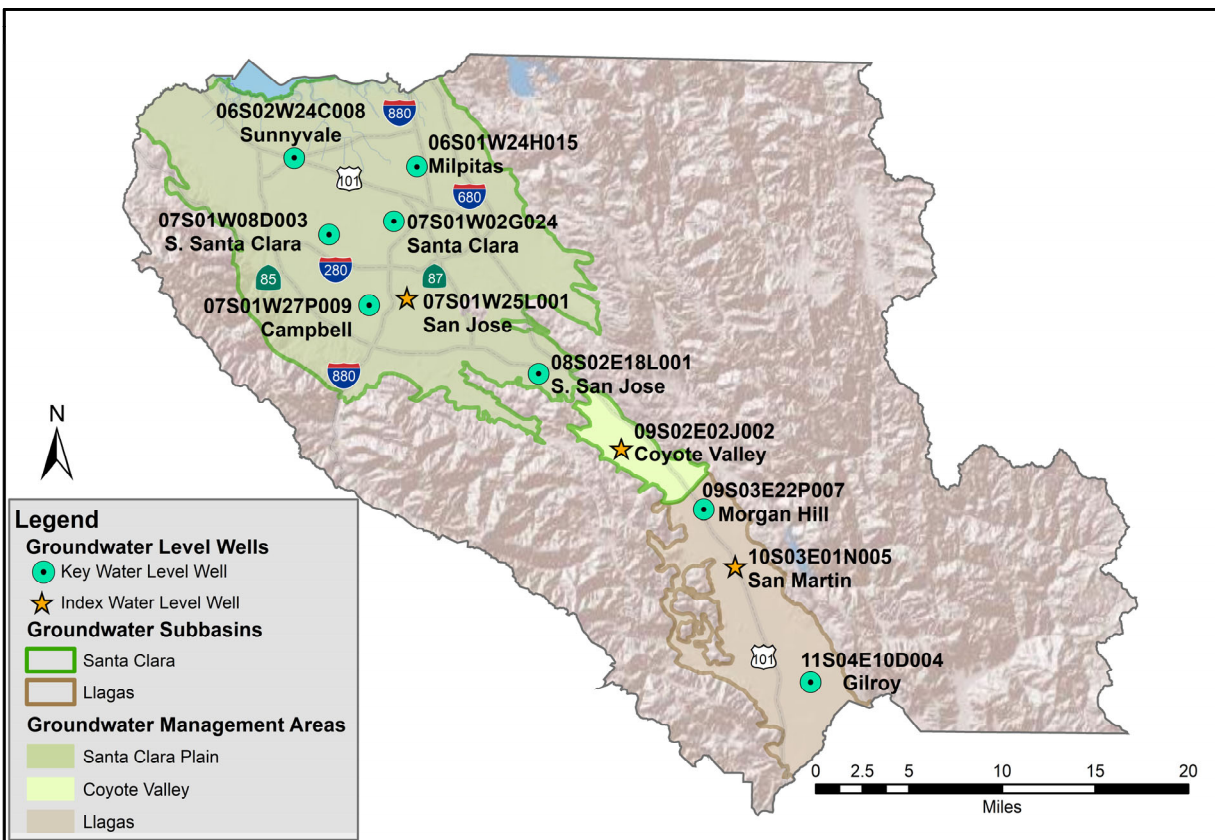
Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels in most regional monitoring wells throughout the county have stabilized or slightly increased since last month. While most current water levels are slightly lower than this time last year, some remain substantially higher. Water levels in all monitoring wells except two are lower than the average of October for the previous five years. However, all monitoring wells remain higher than the lowest levels observed during the previous drought. Table 2 summarizes current groundwater levels with historical comparisons for eleven 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



This section intentionally left blank

November 2022 Groundwater Condition Report

Table 2. Comparisons to October 2022 Depth to Water (DTW) in Regional Wells

Location	State Well ID	October 2022 DTW (feet)	Difference in October 2022 DTW (feet) Compared to:			
			September 2022	October 2021	Prior 5-year Average for October	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-11 (artesian)	1	10	-7	32
Sunnyvale	06S02W24C008	-26 (artesian)	-1	-2	-11	5
San Jose	07S01W25L001	92	2	20	0	46
Santa Clara	07S01W02G024	24	6	25	-1	67
S. Santa Clara	07S01W08D003	83	2	13	-10	62
Campbell	07S01W27P009	126	1	35	5	71
S. San Jose	08S02E18L001	42	-1	-9	-18	28
Coyote Valley	09S02E02J002	27	1	-2	-7	10
Morgan Hill	09S03E22P007	85	-2	-2	-24	10
San Martin	10S03E01N005	74	-1	-3	-27	6
Gilroy	11S04E10D004	47	7	-2	-14	16

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. Well 09S03E22P005 was replaced with well 09S03E22P007; water level data from well 09S03E22P005 were used for historical comparison calculations.

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

Figure 8. Milpitas Well Hydrograph

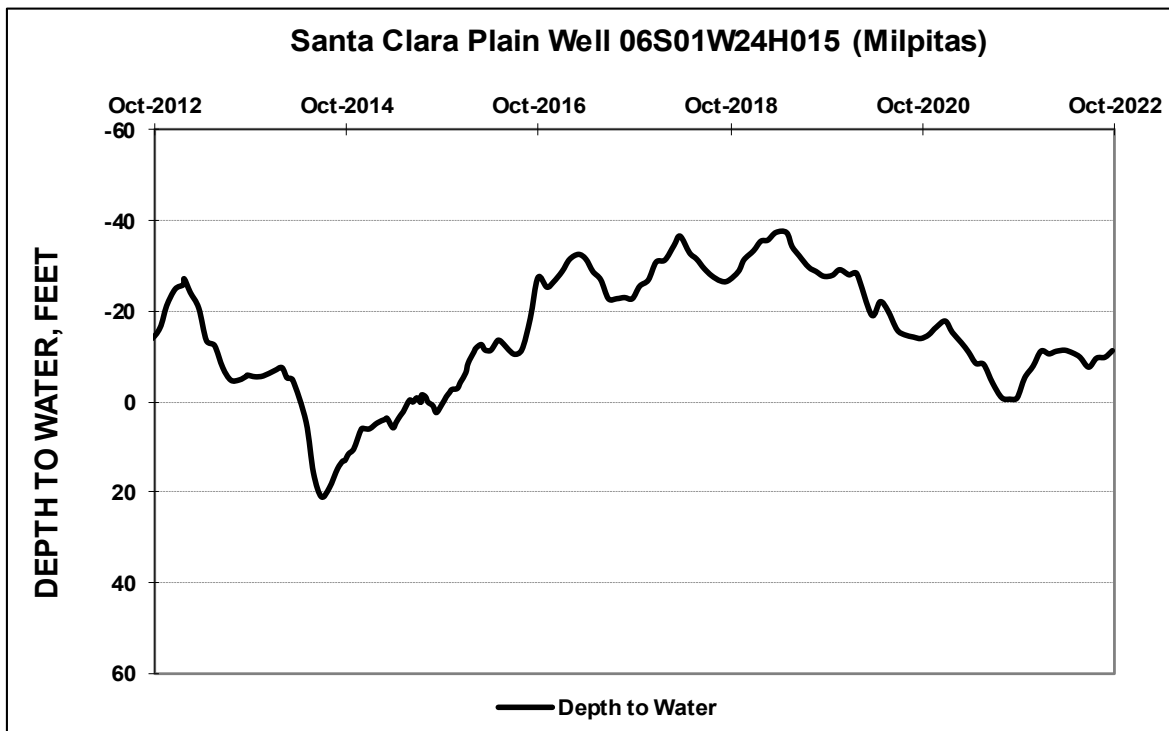


Figure 9. Sunnyvale Well Hydrograph

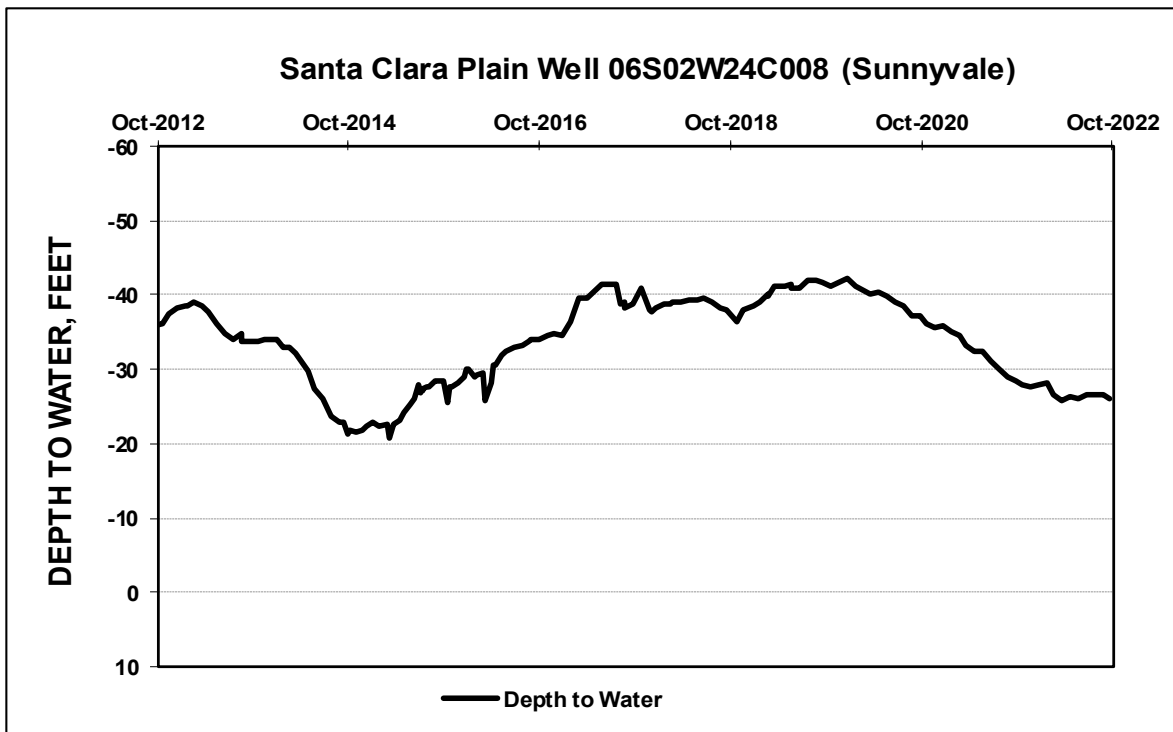


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

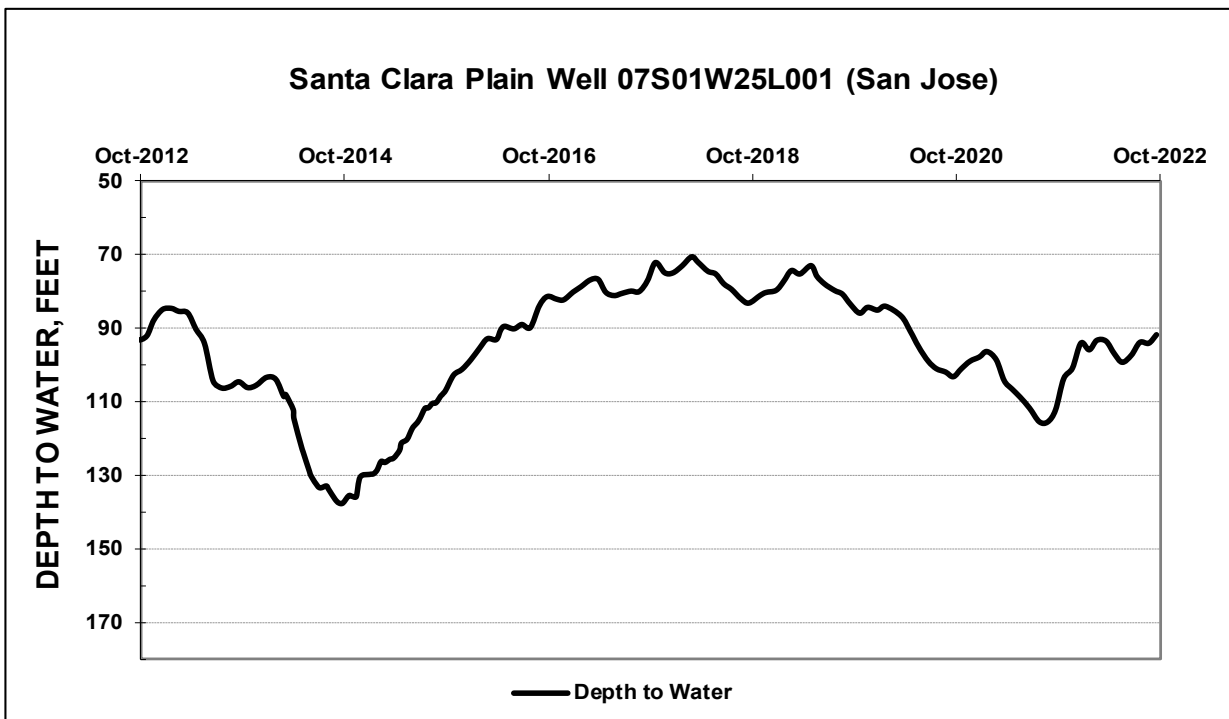


Figure 11. Santa Clara Well Hydrograph

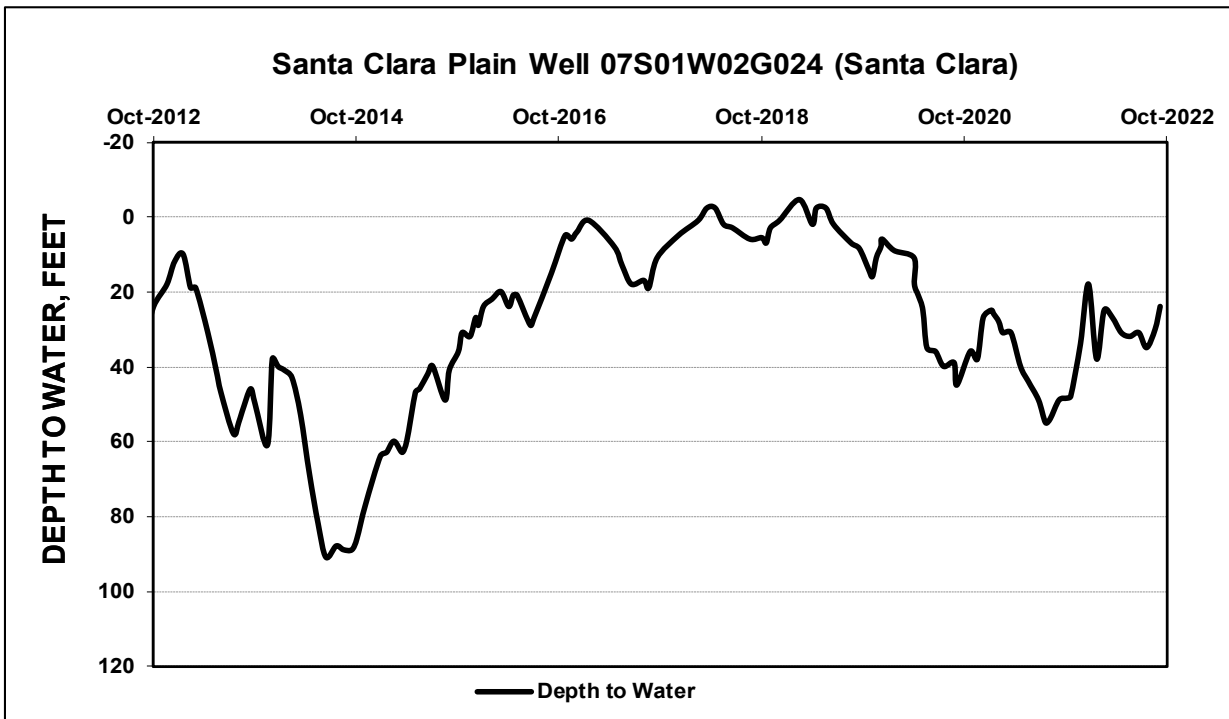


Figure 12. South Santa Clara Well Hydrograph

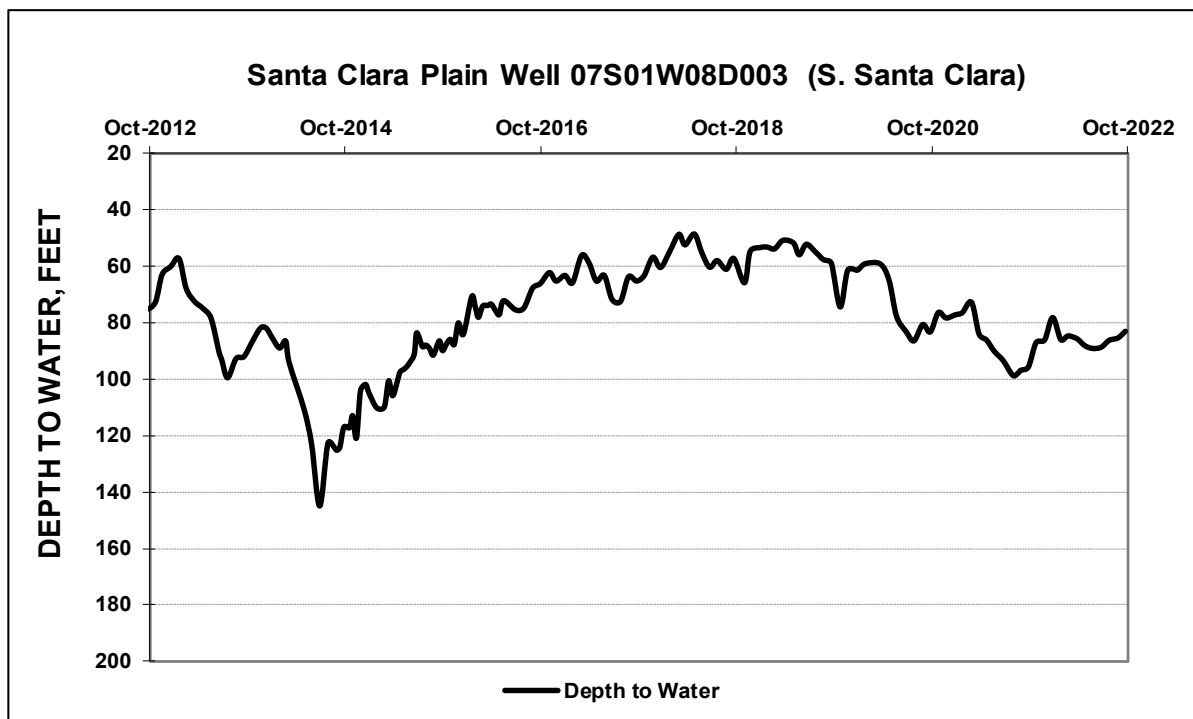
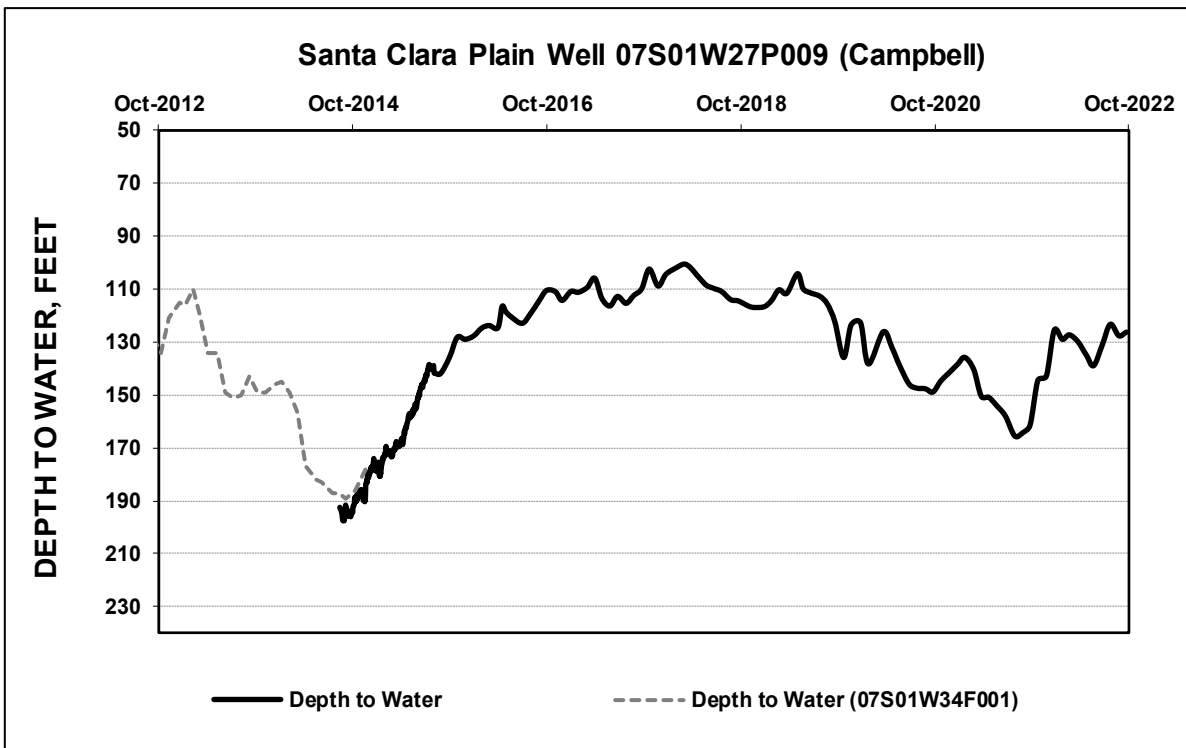


Figure 13. Campbell Well Hydrograph



The Campbell index well was replaced in August 2015 with a nearby well with similar water levels. Data in the chart prior to September 2014 is from the former index well (07S01W34F001).

Figure 14. South San Jose Well Hydrograph

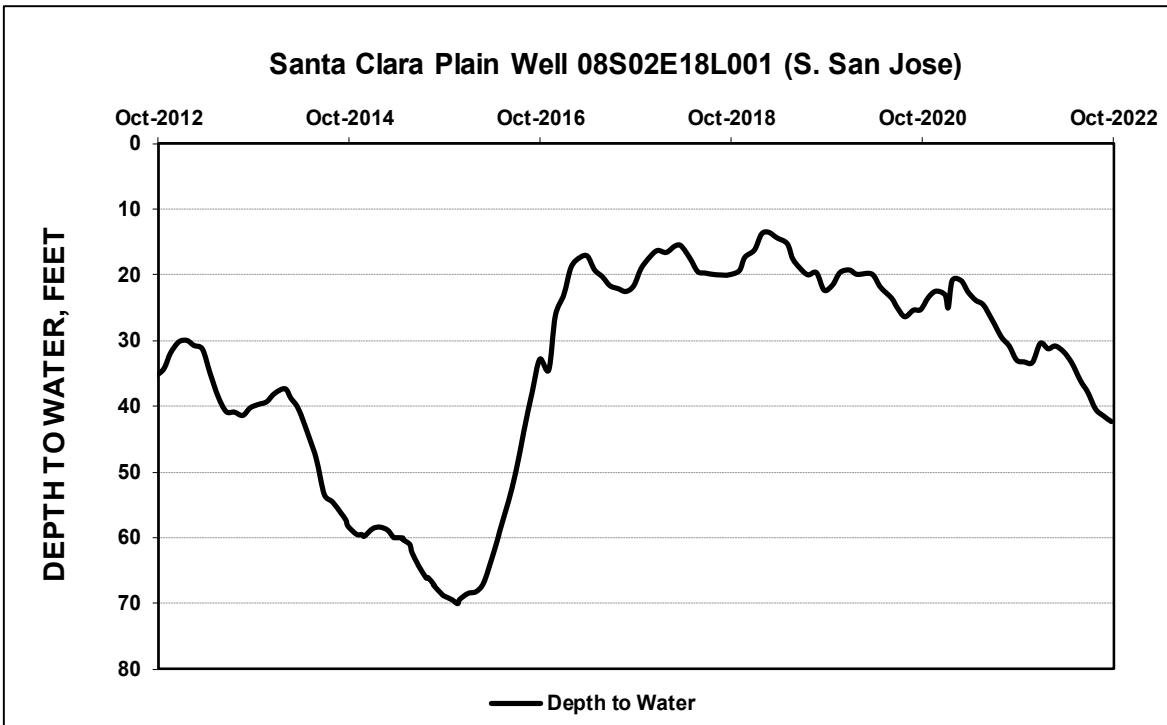


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

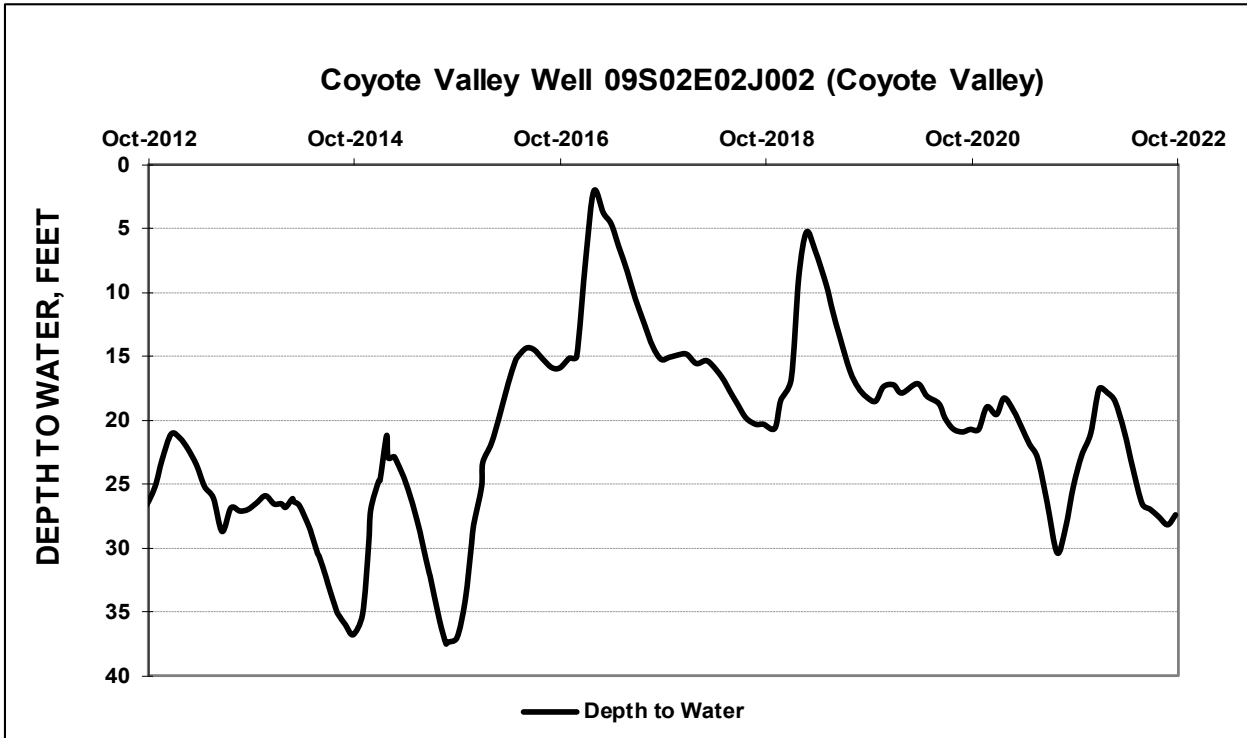
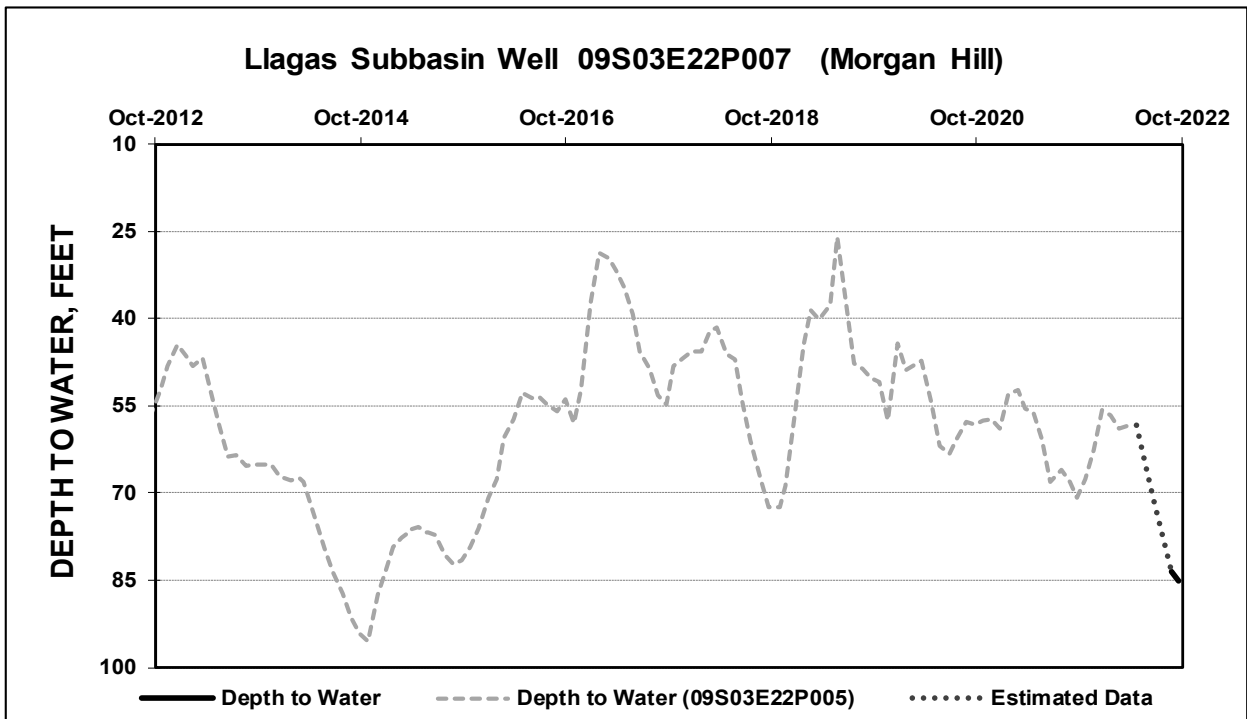


Figure 16. Morgan Hill Well Hydrograph



The Morgan Hill well 09S03E22P005 is no longer accessible and was replaced by well 09S03E22P007 in September 2022. Water levels from May 2022 to September 2022, represented by the dotted line, are estimated.

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

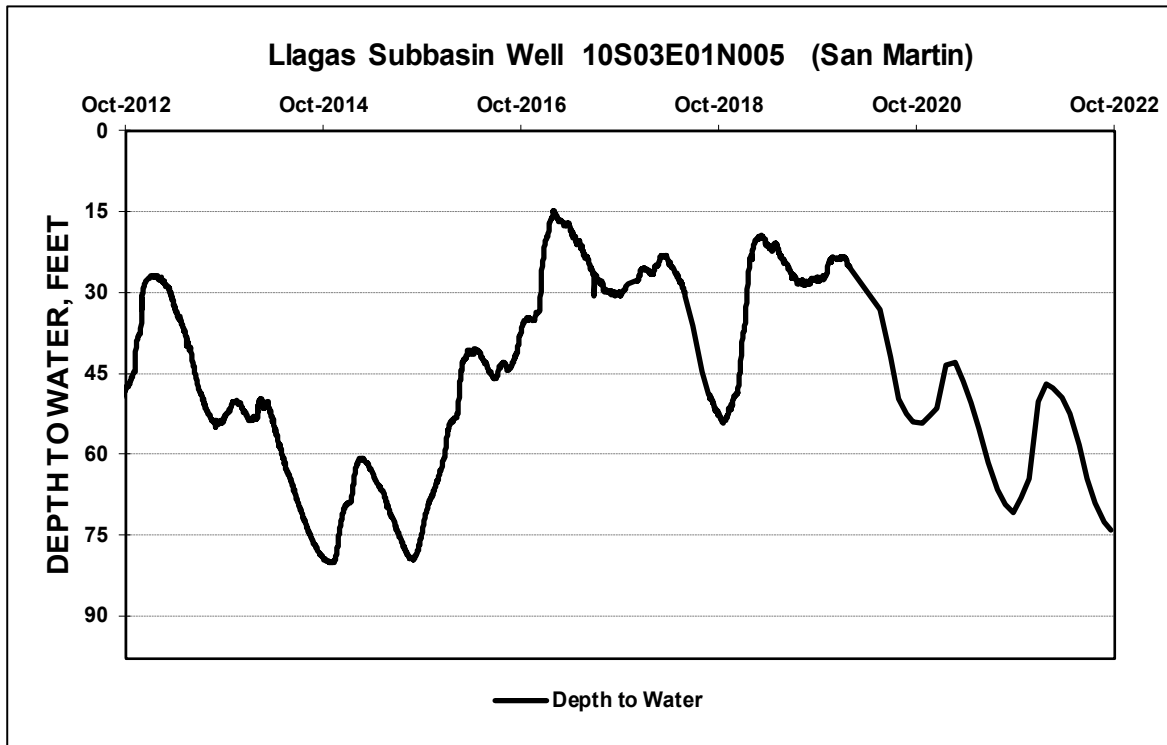


Figure 18. Gilroy Well Hydrograph

