

# Groundwater Condition

## REPORT | SANTA CLARA COUNTY

January 2023

### SUMMARY

This report summarizes December 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 are increasing in most areas due to seasonal recovery, Valley Water's managed recharge operations, and ongoing water conservation by the community. While groundwater levels in most monitoring wells are higher than last month, many are lower relative to December 2021. The end of 2022 groundwater storage is projected to be in low Stage 1 (Normal) of the Water Shortage Contingency Plan.

- December managed recharge is 81% to 109% of the five-year average.
- November pumping is 98% to 112% of the five-year average.
- Groundwater levels in index wells for December 2022 range from 14 feet higher to 6 feet lower than the December levels of 2021.

**Table 1. Summary of Current Groundwater Conditions**

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
December 2022 managed recharge estimate	4,100	2,500	1,100
YTD managed recharge estimate	55,900	12,800	19,500
YTD managed recharge as % of five-year average	109%	81%	101%
November 2022 pumping estimate	5,600	1,200	3,300
YTD pumping estimate through November 2022	64,100	12,000	40,200
YTD pumping as % of five-year average	98%	112%	100%
Current index well groundwater levels compared to December of 2021	14 feet higher	6 feet lower	5 feet lower

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

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

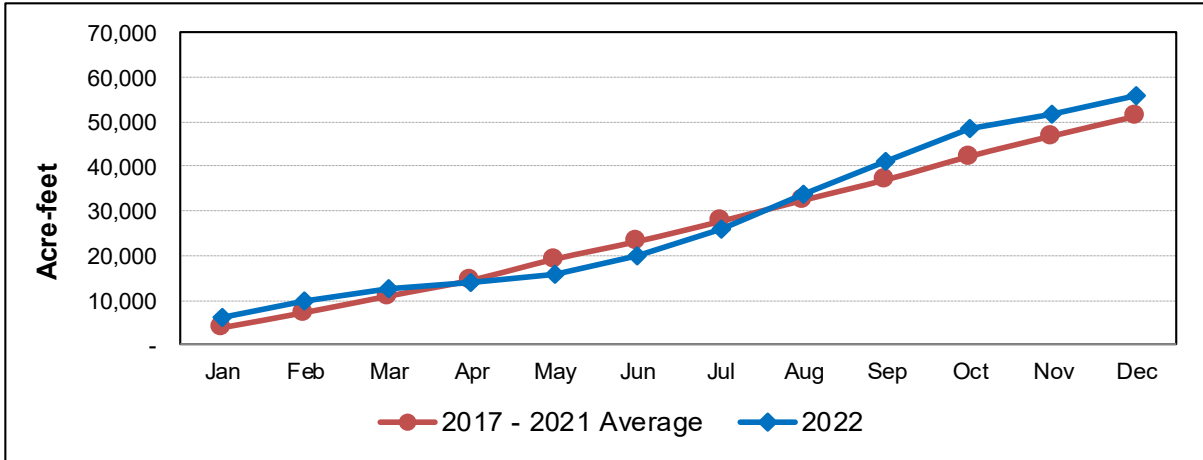


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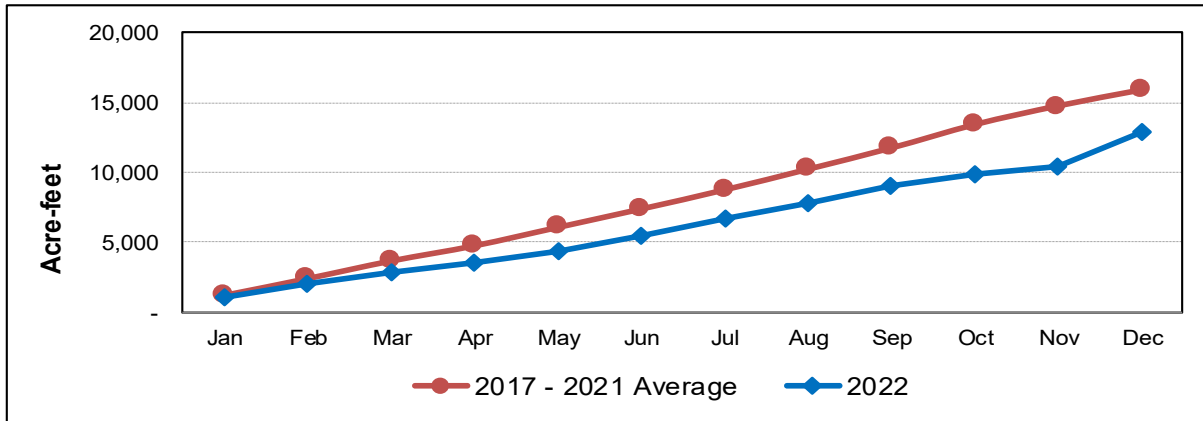
### Groundwater Recharge

- 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 December 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.

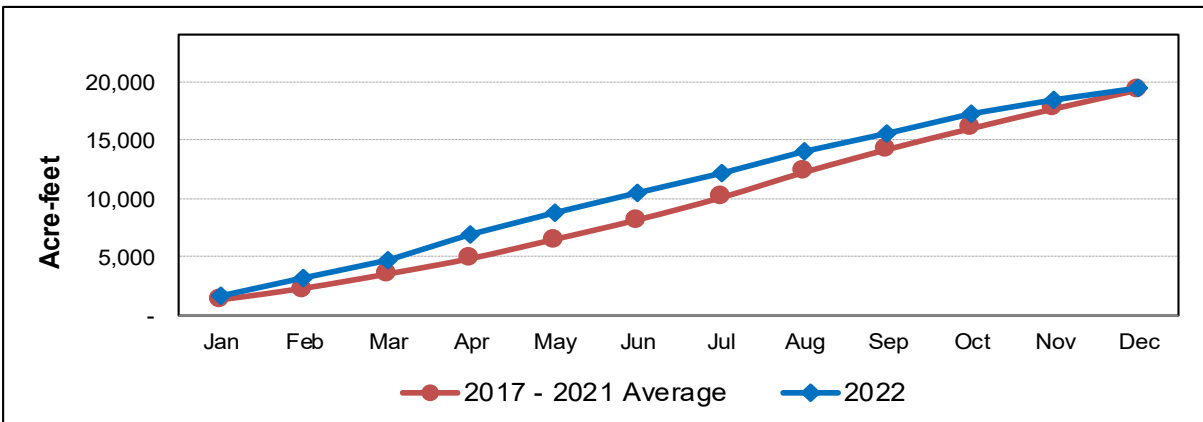
**Figure 1. Estimated Cumulative Managed Recharge in the Santa Clara Plain**



**Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley**



**Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin**

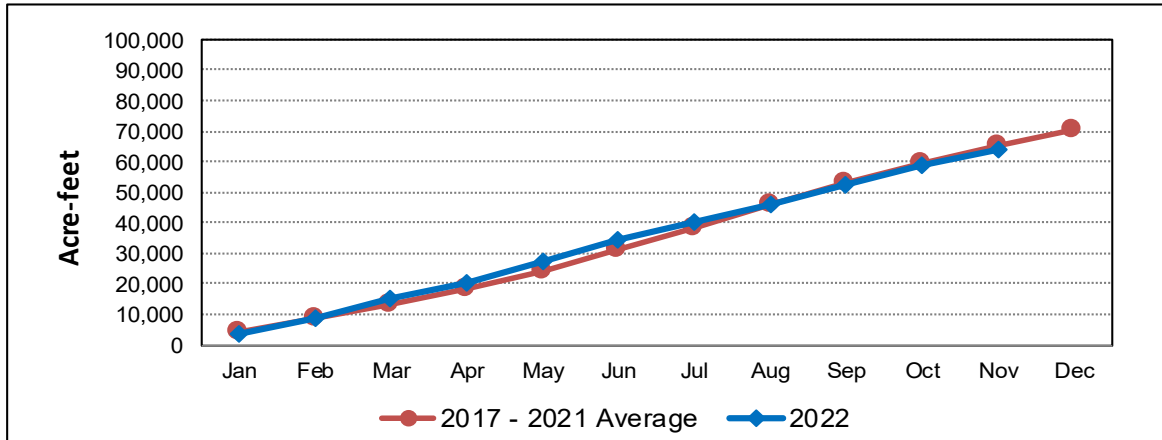


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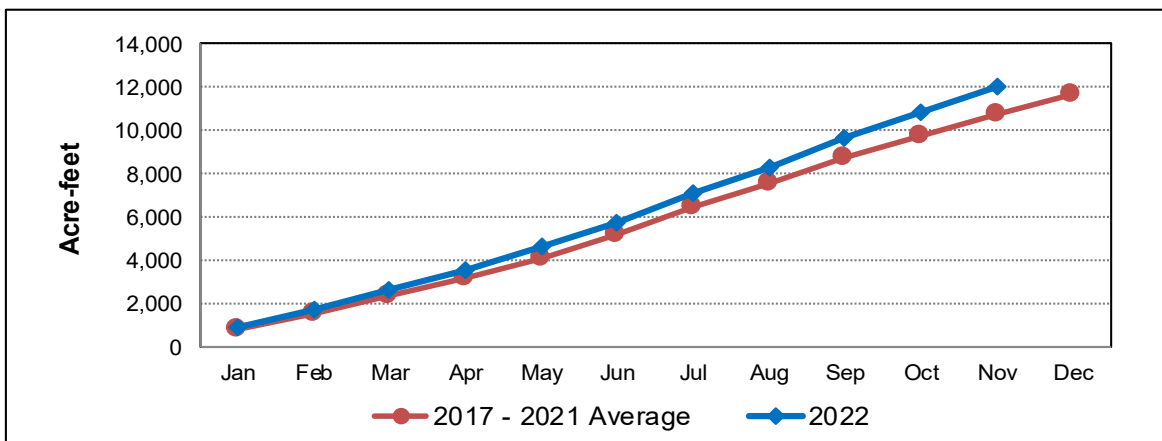
### Groundwater Pumping

- 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 November 2022 are based on monthly pumping data reported by water retailers. November is the most recent available pumping data.
- Compared to the average of the previous five years, pumping for November 2022 was slightly lower in the Santa Clara Plain, higher in Coyote Valley, and the same in the Llagas Subbasin.

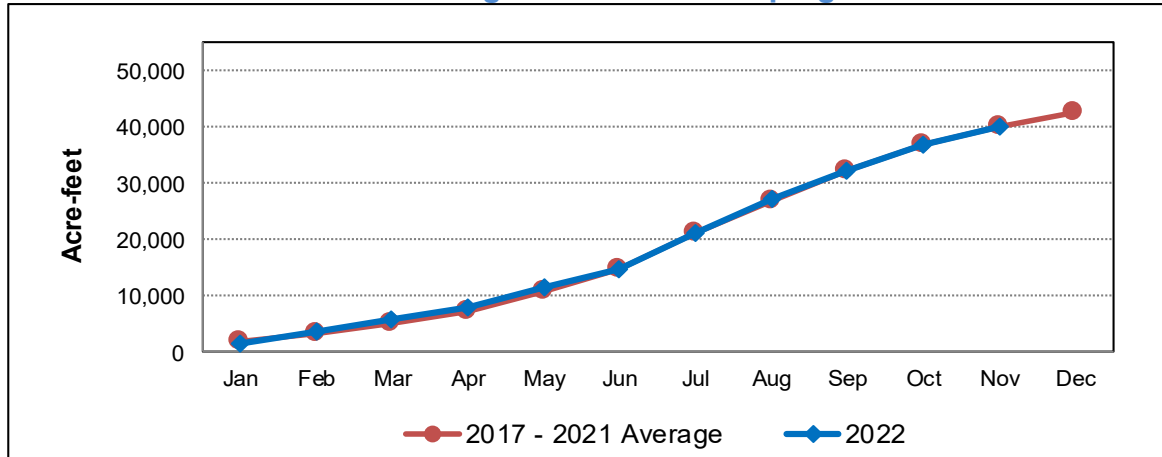
**Figure 4. Estimated Cumulative Santa Clara Plain Pumping**



**Figure 5. Estimated Cumulative Coyote Valley Pumping**



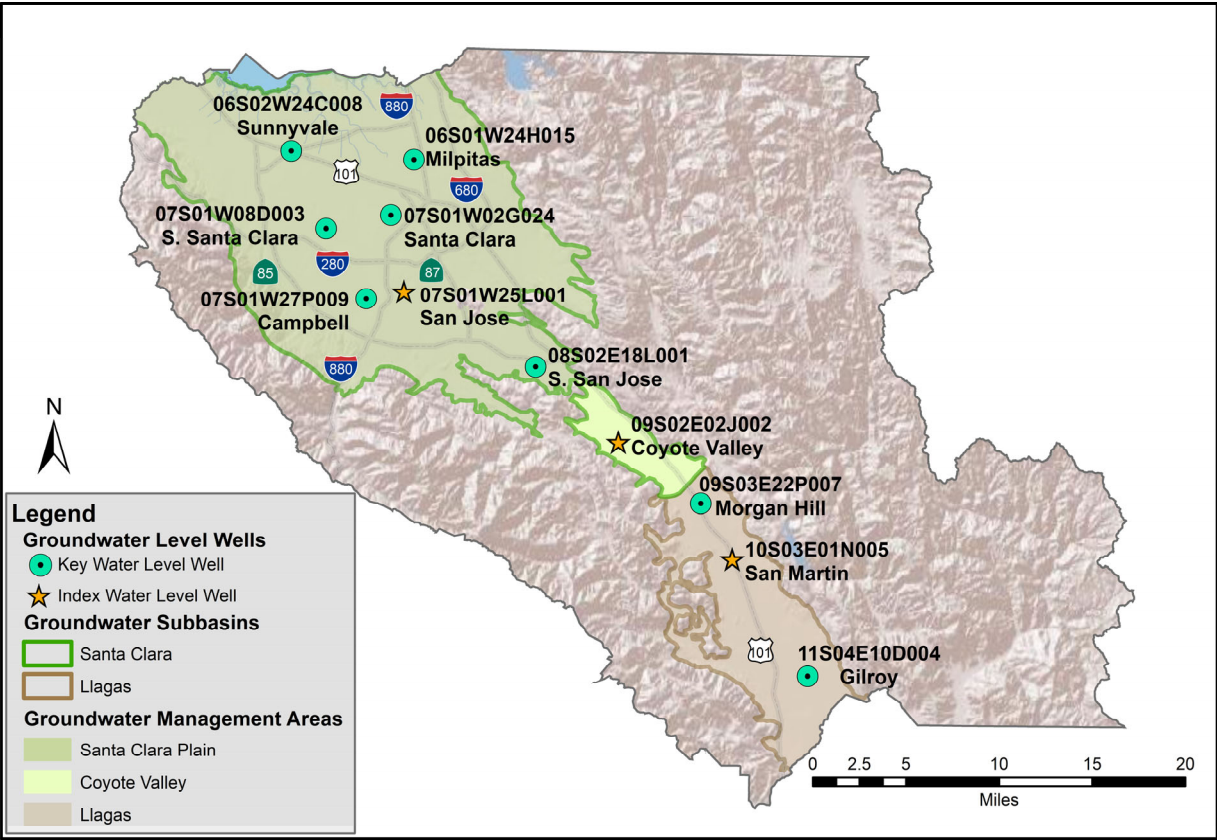
**Figure 6. Estimated Cumulative Llagas Subbasin Pumping**



Groundwater Levels

Groundwater levels in most regional monitoring wells throughout the county have increased since last month, however most water levels remain lower than this time last year. Most wells are lower than the average of December for the previous five years. 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



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

Location	State Well ID	December 2022 DTW (feet)	Difference in December 2022 DTW (feet) Compared to:			
			November 2022	December 2021	Prior 5-year Average for December	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-16 (artesian)	3	8	-7	36
Sunnyvale	06S02W24C008	-25 (artesian)	0	-2	-10	5
San Jose	07S01W25L001	87	3	14	1	51
Santa Clara	07S01W02G024	20	4	14	-2	71
S. Santa Clara	07S01W08D003	81	-2	5	-14	64
Campbell	07S01W27P009	121	4	22	6	77
S. San Jose	08S02E18L001	41	0	-8	-19	29
Coyote Valley	09S02E02J002	27	2	-6	-9	10
Morgan Hill	09S03E22P007	84	1	-21	-27	11
San Martin	10S03E01N005	70	4	-5	-26	10
Gilroy	11S04E10D004	28	9	-3	-10	35

**Notes:** Depth to water is measured to the hundredth of a foot but data shown here are rounded to the nearest foot. 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**

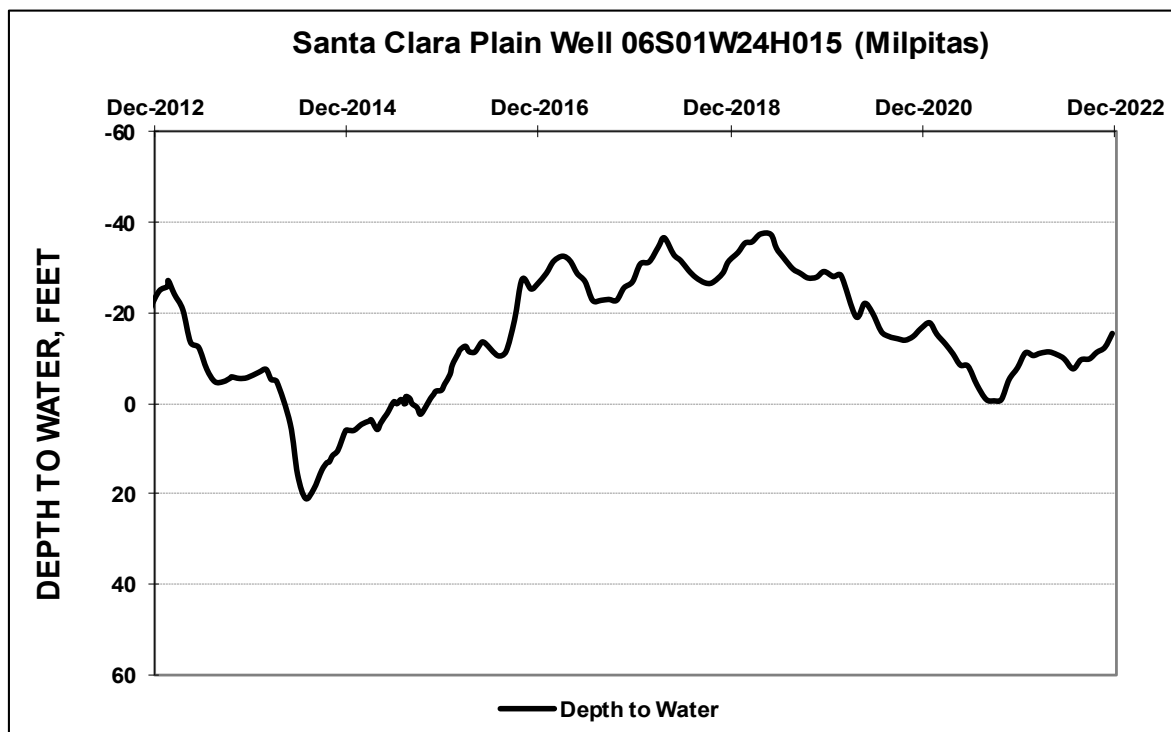


Figure 9. Sunnyvale Well Hydrograph

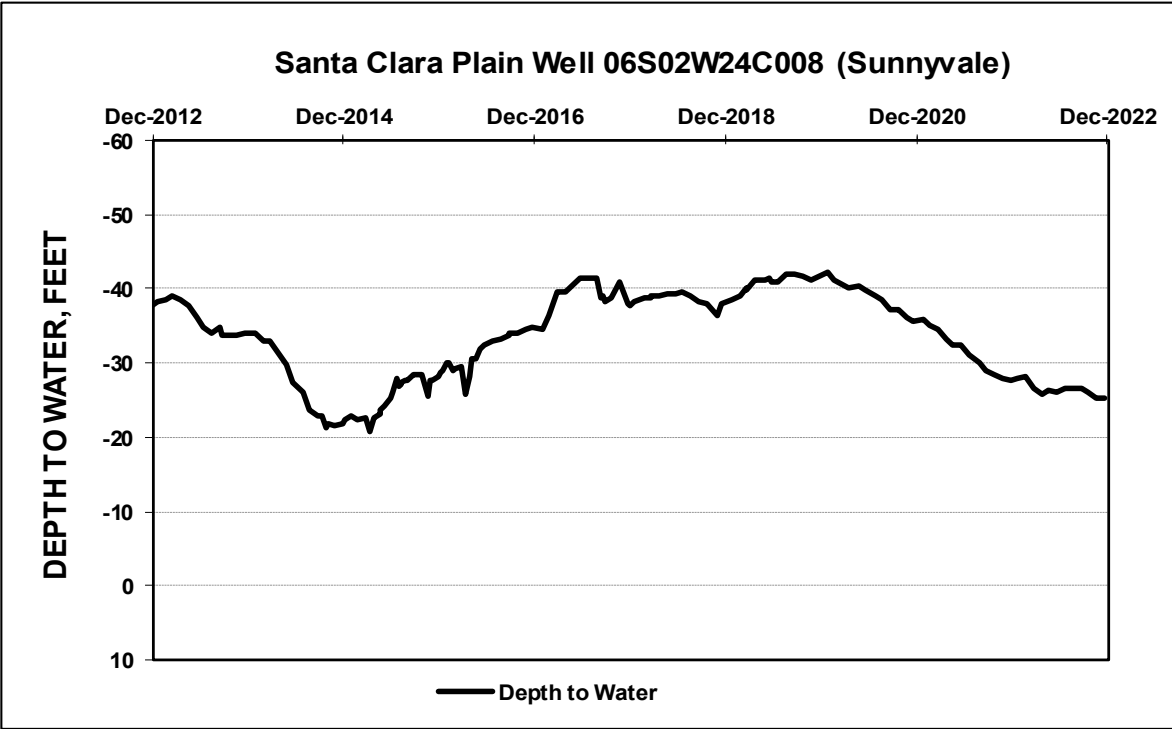


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

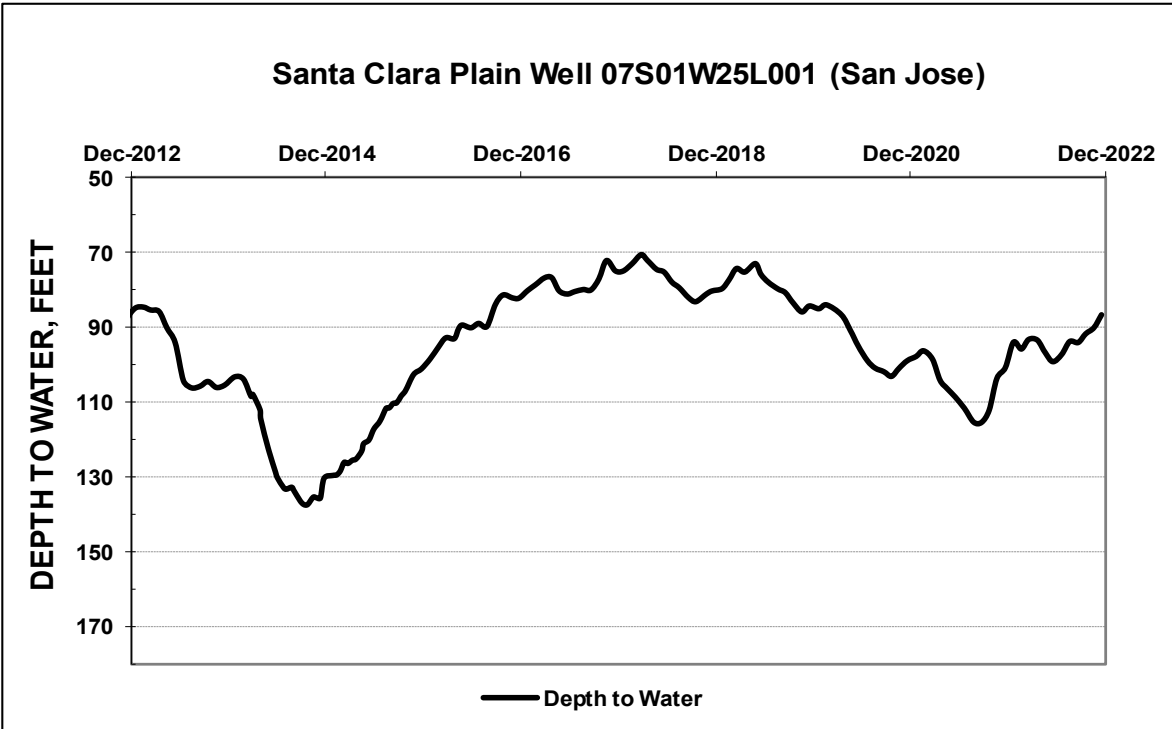


Figure 11. Santa Clara Well Hydrograph

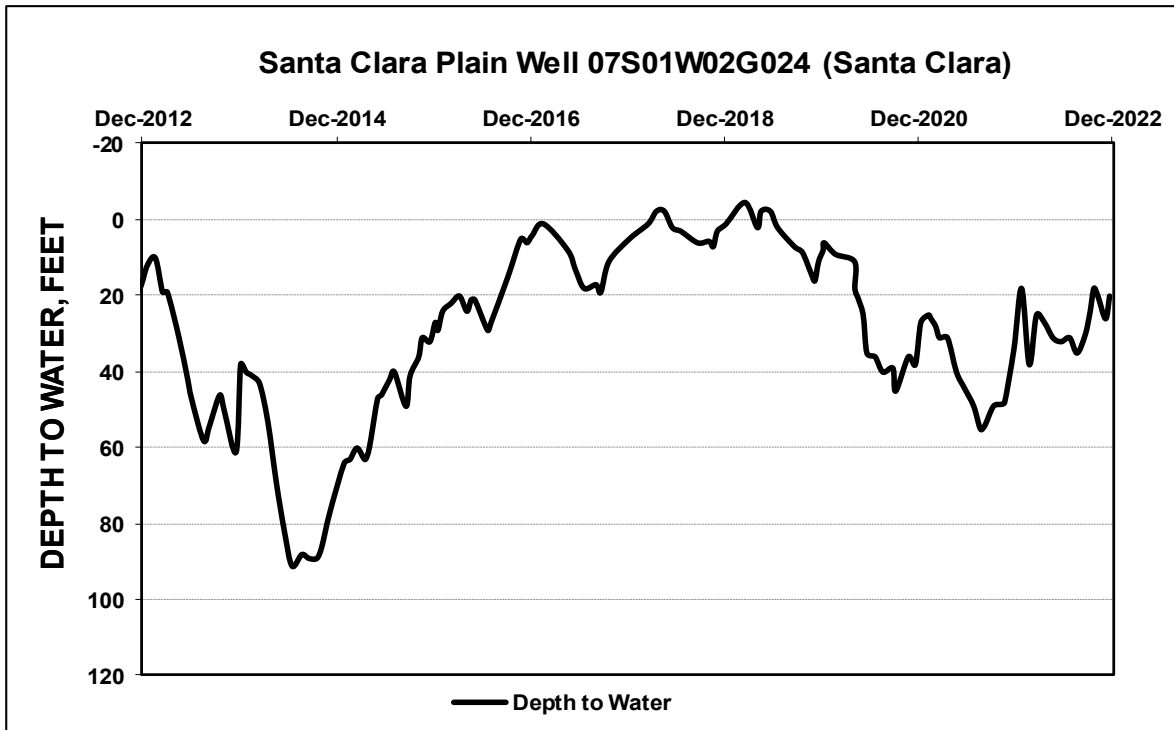


Figure 12. South Santa Clara Well Hydrograph

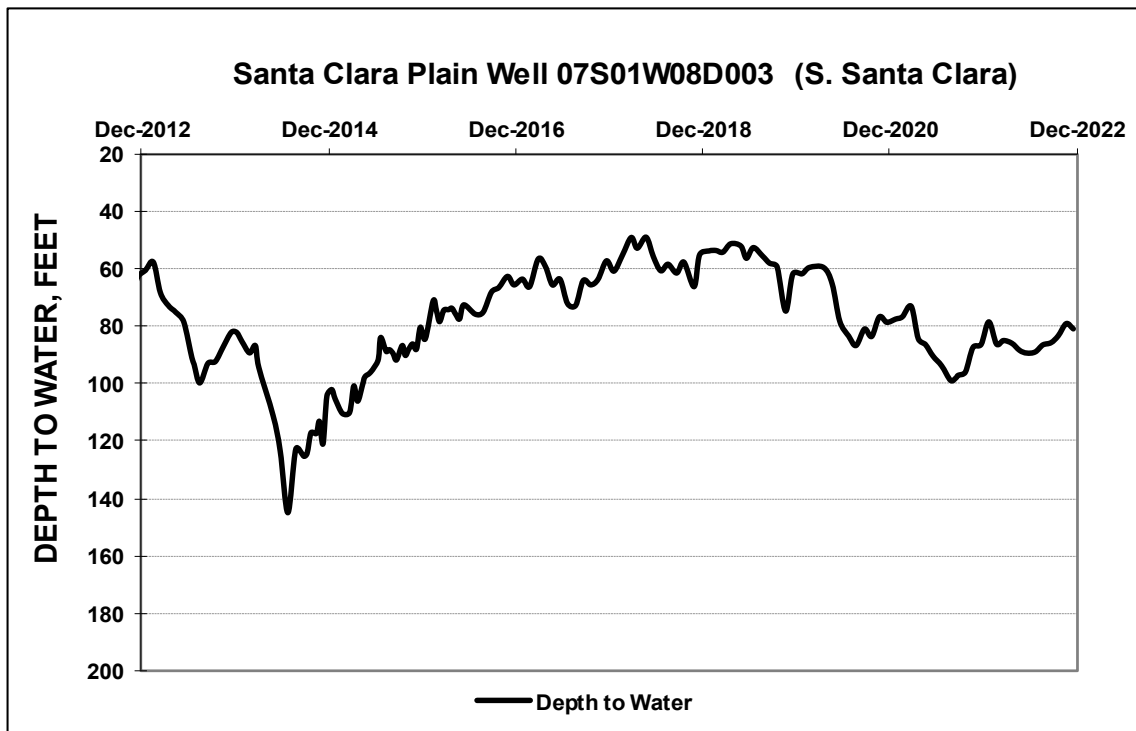
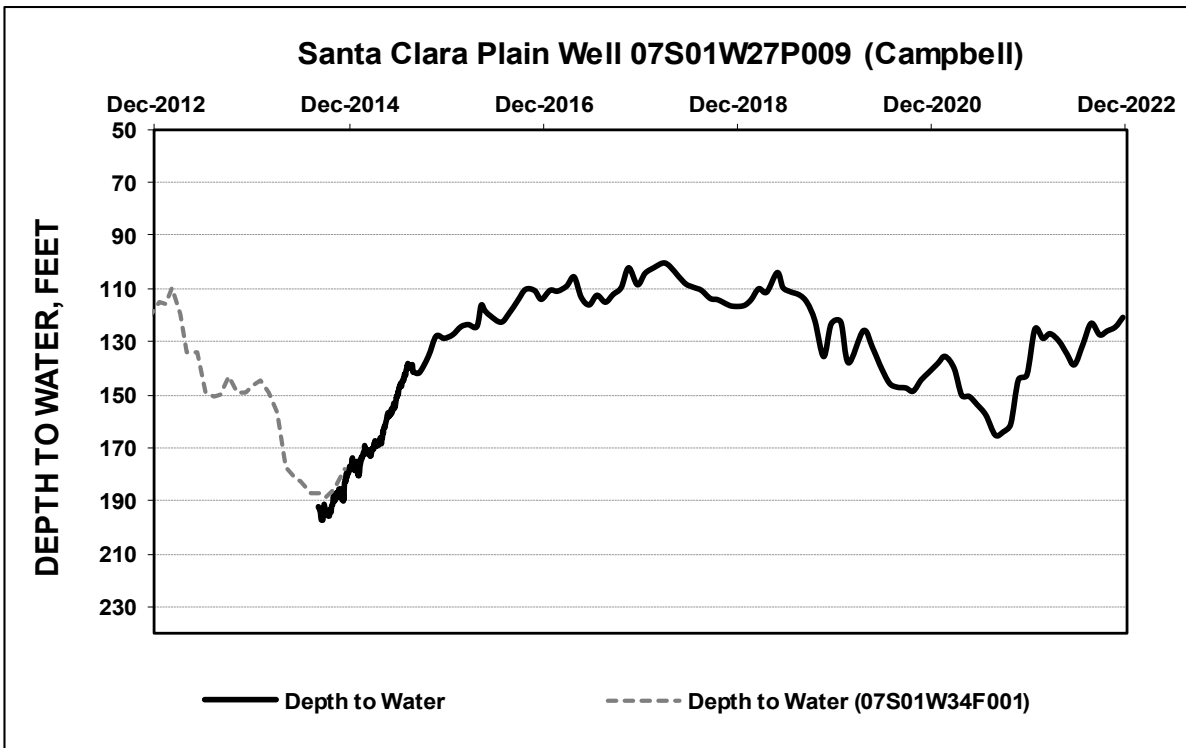


Figure 13. Campbell Well Hydrograph



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

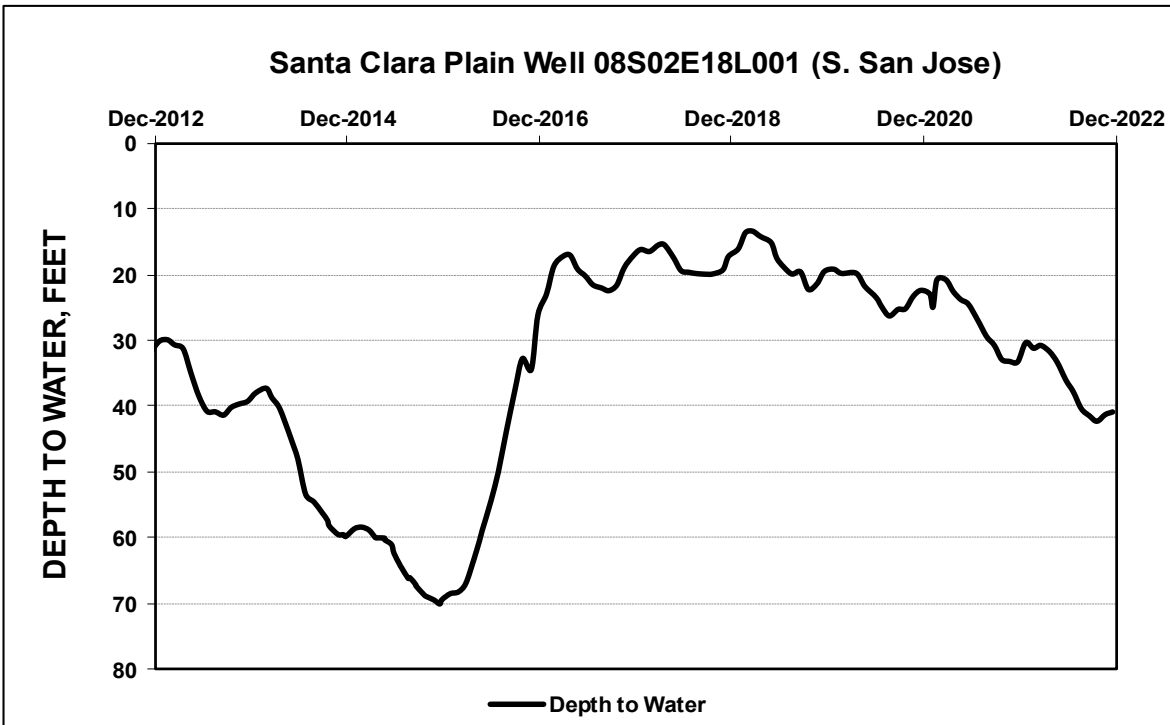




Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

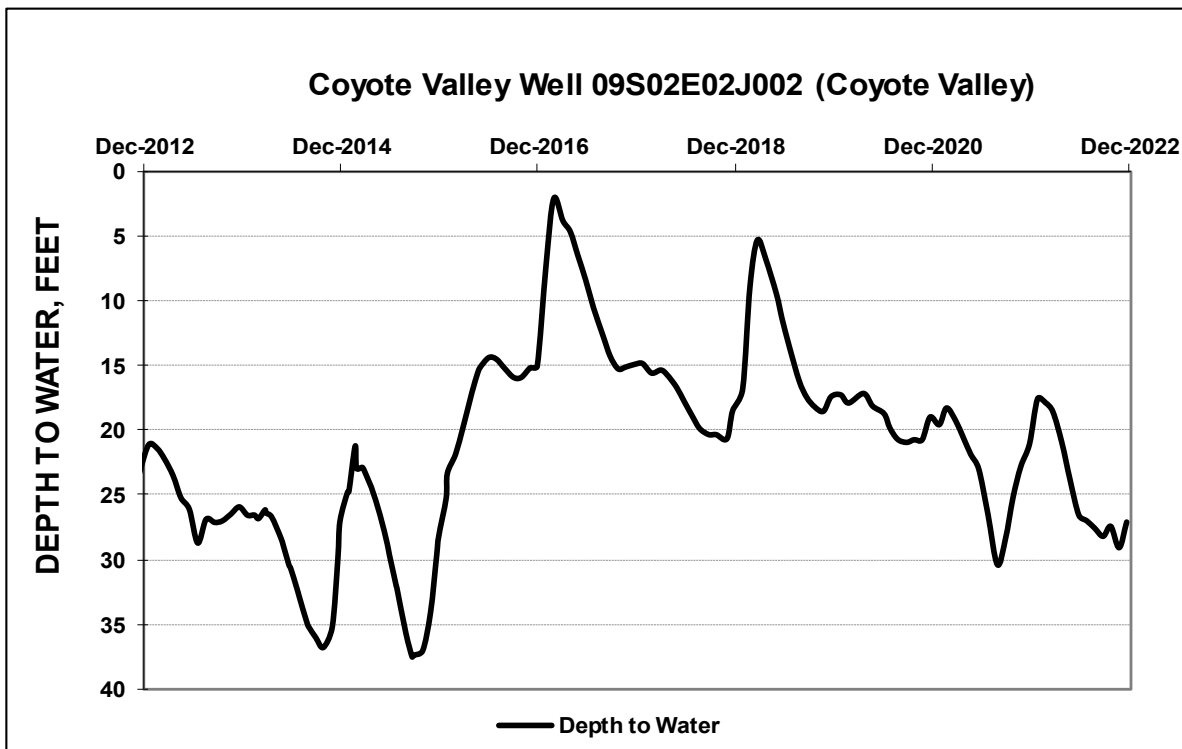
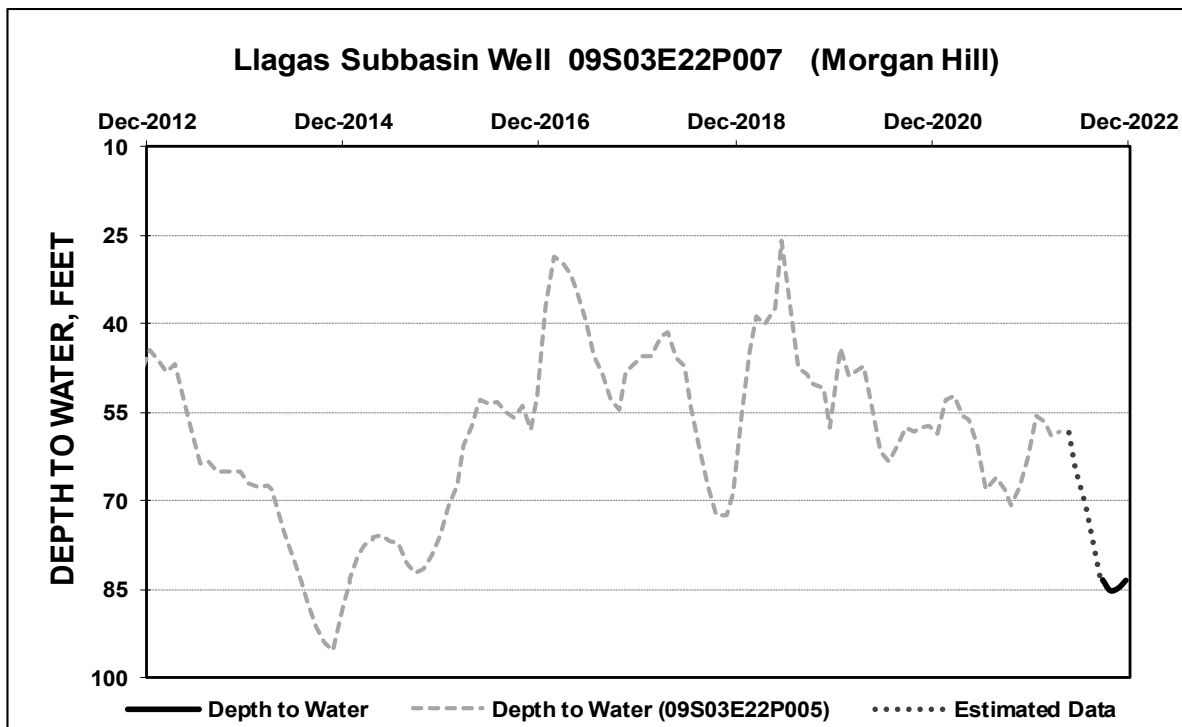


Figure 16. Morgan Hill Well Hydrograph



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)

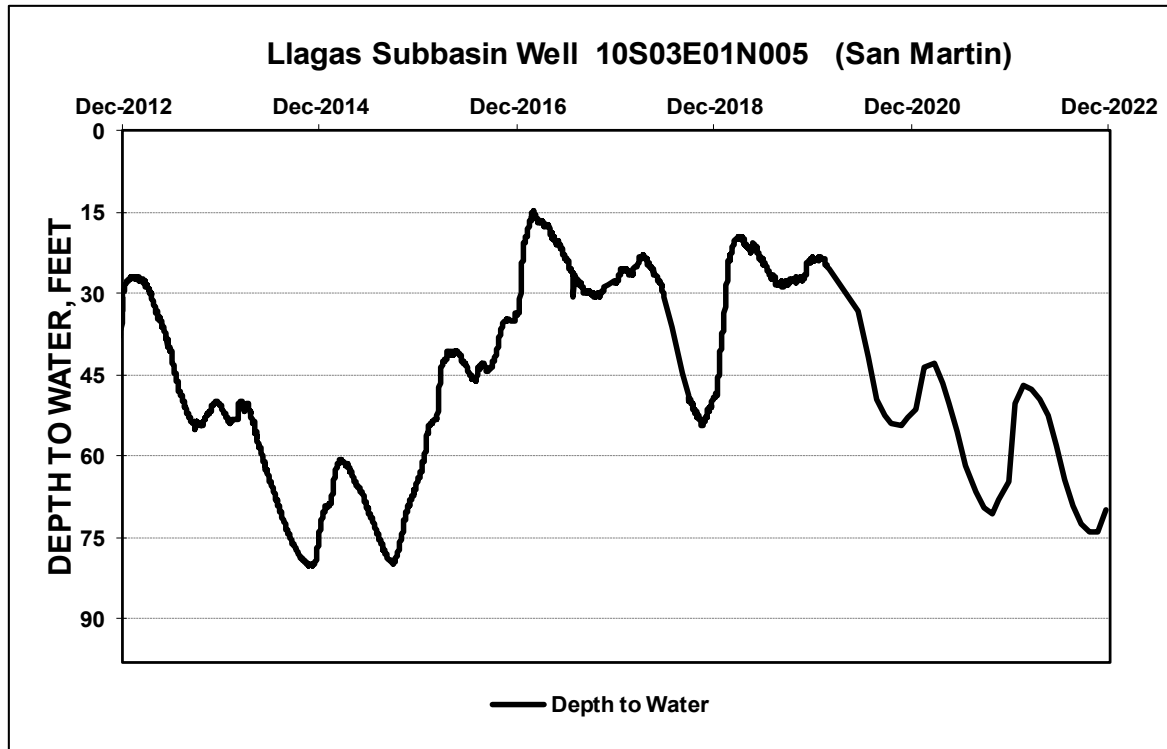


Figure 18. Gilroy Well Hydrograph

