

# Groundwater Condition

## REPORT | SANTA CLARA COUNTY

January 2024

### SUMMARY

This report summarizes December 2023 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 conditions remain healthy throughout the county. Groundwater levels in most regional monitoring wells are higher than last month due to normal, seasonal increases. All water levels are higher relative to December 2022 and nearly all are higher than the prior five-year average for December. The end of 2023 groundwater storage is estimated to be in Stage 1 (Normal) of the Water Shortage Contingency Plan.

- December managed recharge is 94% to 175% of the five-year average.
- November pumping is 76% to 118% of the five-year average.
- Groundwater levels in index wells for December 2023 range from 4 feet to 38 feet higher than the December levels of 2022.

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

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
December 2023 managed recharge estimate	6,900	1,200	1,700
YTD managed recharge estimate	86,800	14,100	22,700
YTD managed recharge as % of five-year average	175%	94%	115%
November 2023 pumping estimate	5,700	1,300	3,800
YTD pumping estimate	49,900	13,100	39,300
YTD pumping as % of five-year average	76%	118%	100%
Current index well groundwater levels compared to December of 2022	17 feet higher	4 feet higher	38 feet higher

All volumes are in acre-feet. All data is for 2023 except where noted. YTD = Year-to-date

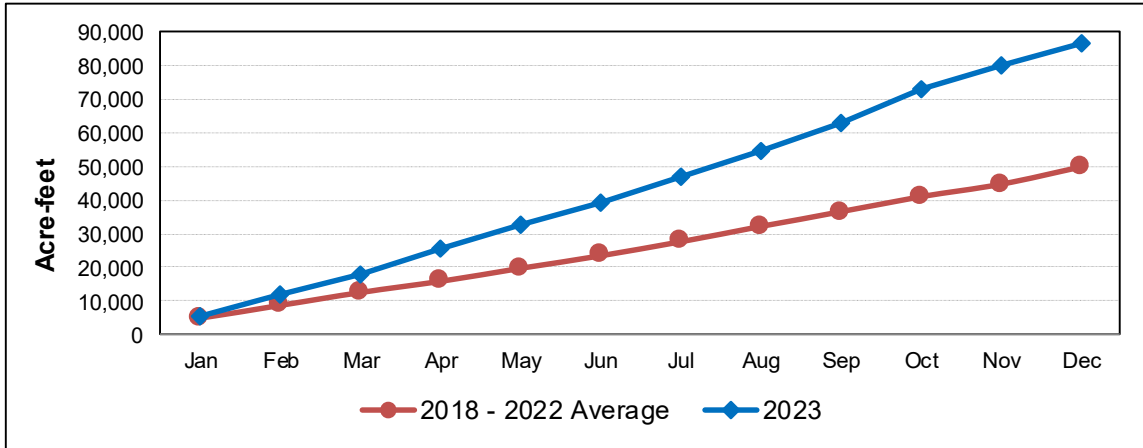
**Contact Us** For questions, contact  
Scott Elkins at (408) 630-2885



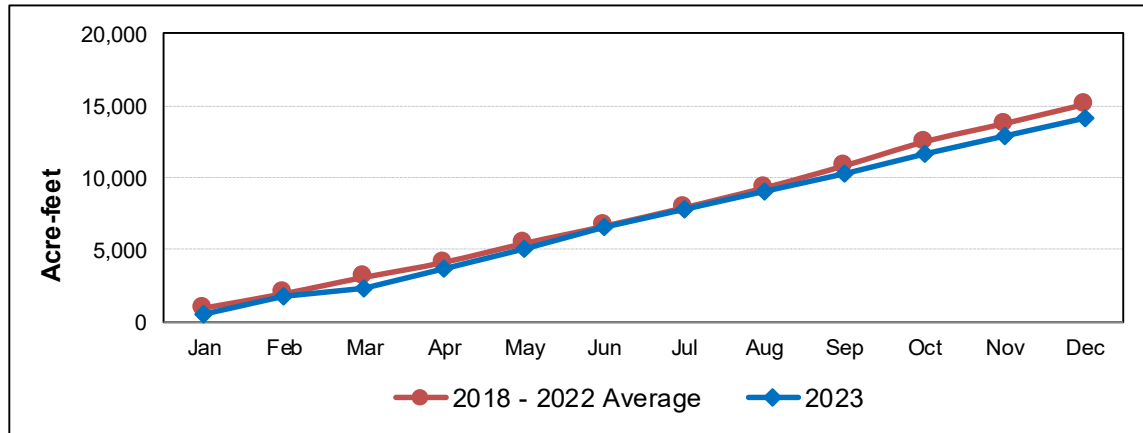
## Groundwater Recharge

- Figures 1, 2, and 3 show the cumulative managed recharge for 2023 compared to the average of the previous five years (2018 – 2022).
- Compared to the average of the previous five years, managed recharge for December 2023 was higher in the Santa Clara Plain and the Llagas Subbasin, and lower in Coyote Valley.
- Managed recharge depends on many factors, including water demand and availability, regulatory needs, groundwater storage, and facility maintenance.

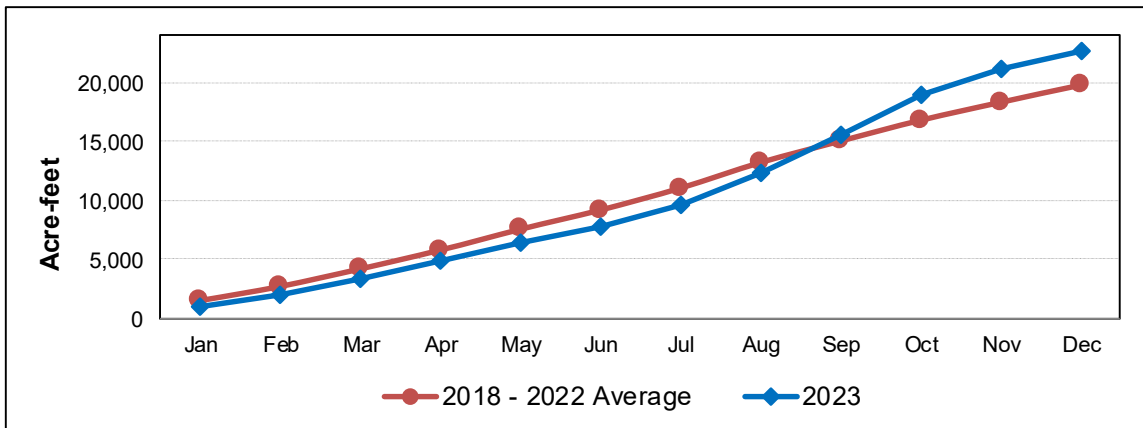
**Figure 1. Estimated Cumulative Managed Recharge in the Santa Clara Plain**



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



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

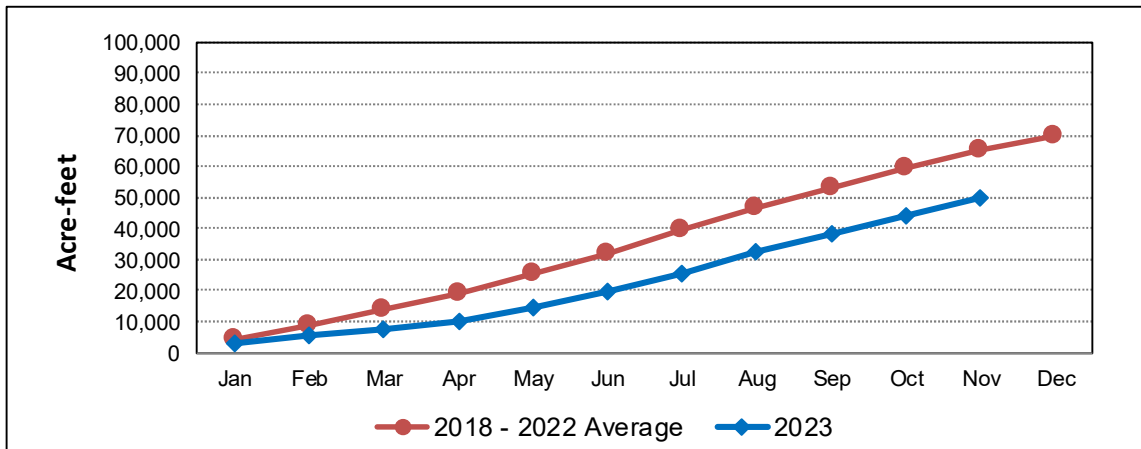


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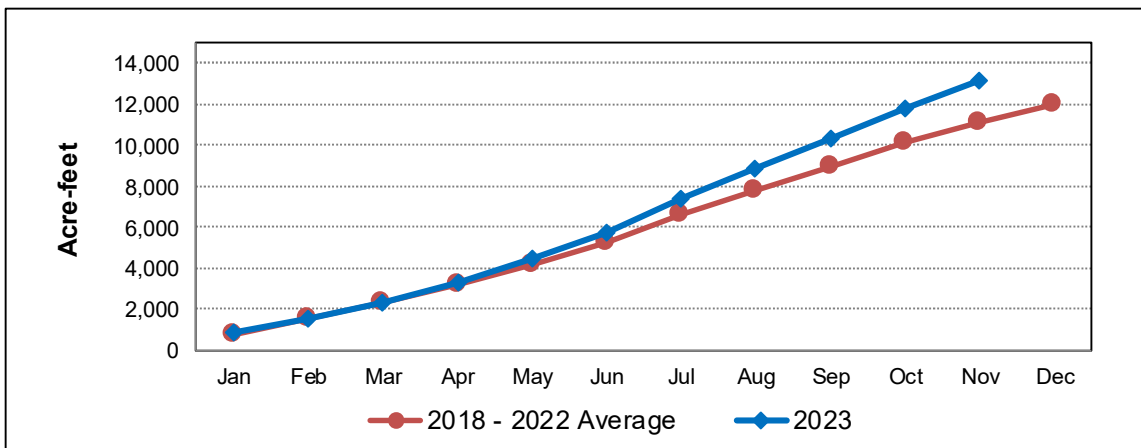
### Groundwater Pumping

- Figures 4, 5, and 6 show the cumulative groundwater pumping for 2023 compared to the average of the previous five years (2018 – 2022).
- Pumping estimates for November 2023 include monthly pumping data reported by water retailers and non-monthly pumping, primarily from domestic and agricultural uses.
- Compared to the average of the previous five years, pumping for November 2023 was higher in Coyote Valley, lower in the Santa Clara Plain, and the same in the Llagas Subbasin.

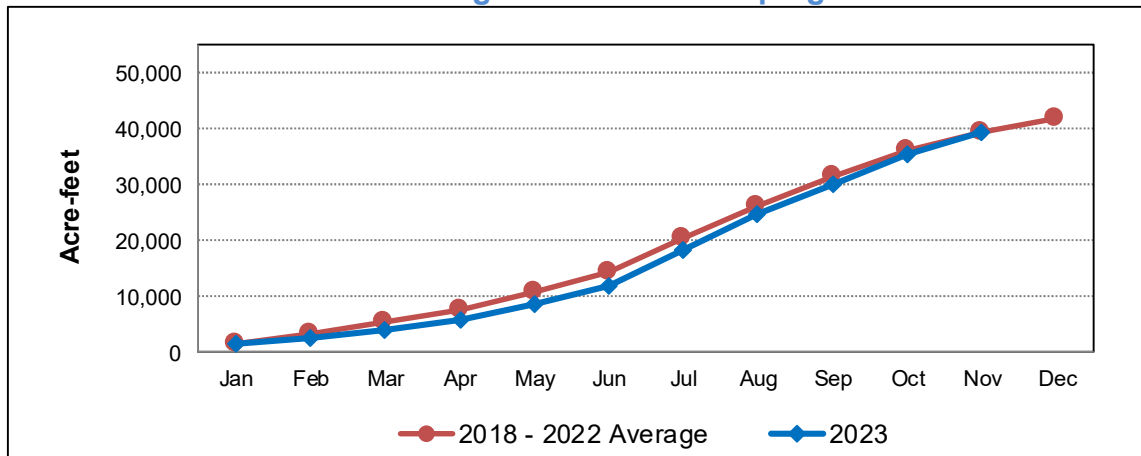
**Figure 4. Estimated Cumulative Santa Clara Plain Pumping**



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



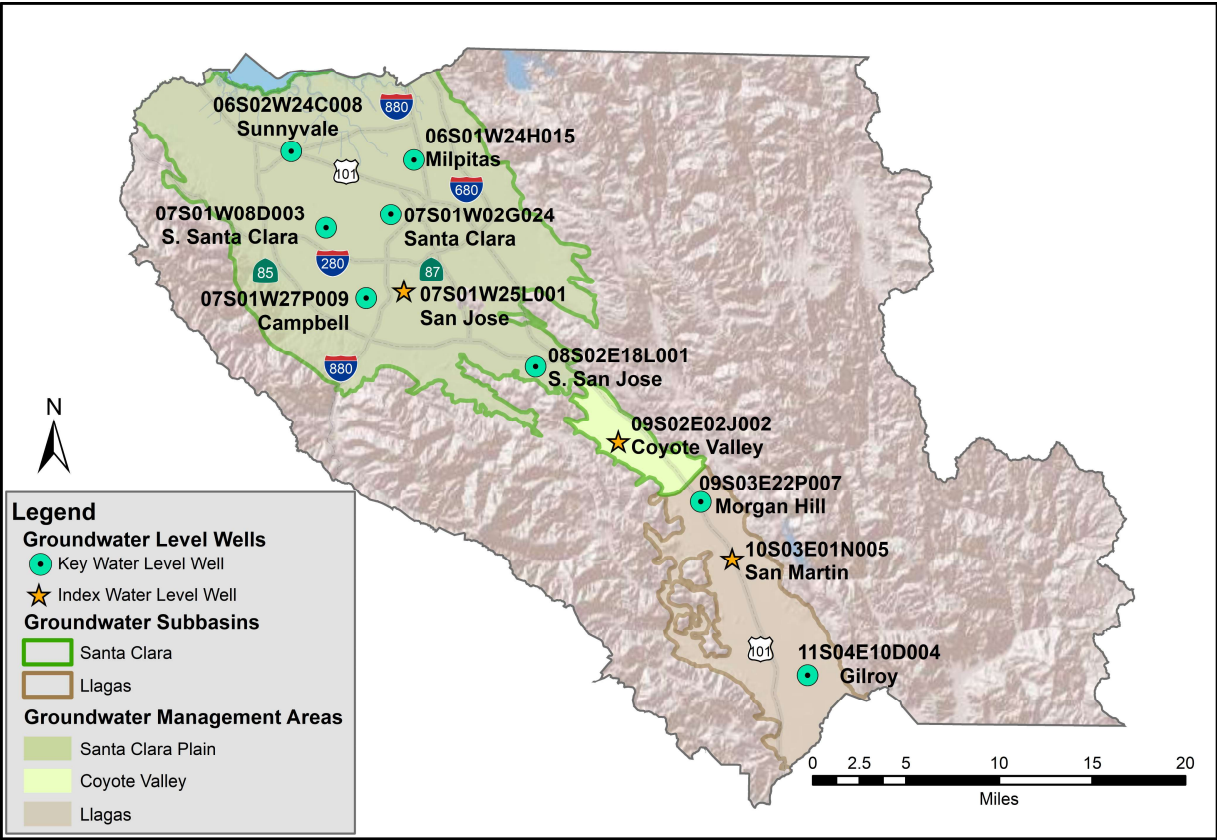
**Figure 6. Estimated Cumulative Llagas Subbasin Pumping**



Groundwater Levels

Groundwater levels in most regional monitoring wells<sup>1</sup> have increased since last month. All water levels are higher than this time last year and all except one are higher than the December average for the previous five years. Table 2 summarizes current groundwater levels with historical comparisons for 11 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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<sup>1</sup> **Note:** While this report summarizes water levels from the 11 combined key and index wells of the regional network (Figure 7), Valley Water monitors groundwater levels from over 230 wells each month and these levels are publicly available at <https://gis.valleywater.org/GroundwaterElevations>.

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**Table 2. Comparisons to December 2023 Depth to Water (DTW) in Regional Wells**

Location	State Well ID	December 2023 DTW (feet)	Difference in December 2023 DTW (feet) Compared to:			
			November 2023	December 2022	Prior 5-year Average for December	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-26 (artesian)	1	11	6	47
Sunnyvale	06S02W24C008	-36 (artesian)	3	11	3	16
San Jose	07S01W25L001	70	2	17	21	68
Santa Clara	07S01W02G024	3	4	13	18	88
S. Santa Clara	07S01W08D003	64	5	17	8	82
Campbell	07S01W27P009	100	3	21	29	97
S. San Jose	08S02E18L001	26	0	15	1	45
Coyote Valley	09S02E02J002	23	-1	4	-2	15
Morgan Hill	09S03E22P007	50	-4	34	8	46
San Martin	10S03E01N005	32	2	38	21	48
Gilroy	11S04E10D004	16	3	12	5	47

**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. Well 09S03E22P005 was replaced with well 09S03E22P007; water level data from well 09S03E22P005 were used for historical comparison calculations. (artesian) indicates aquifer pressure conditions that push water level elevations higher than land surface. The maximum DTW during the 2012–2016 drought occurred between July 2014 and December 2015, depending on the well, and reflect some of the lowest water levels over the past 25 years.

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

**Figure 8. Milpitas Well Hydrograph**

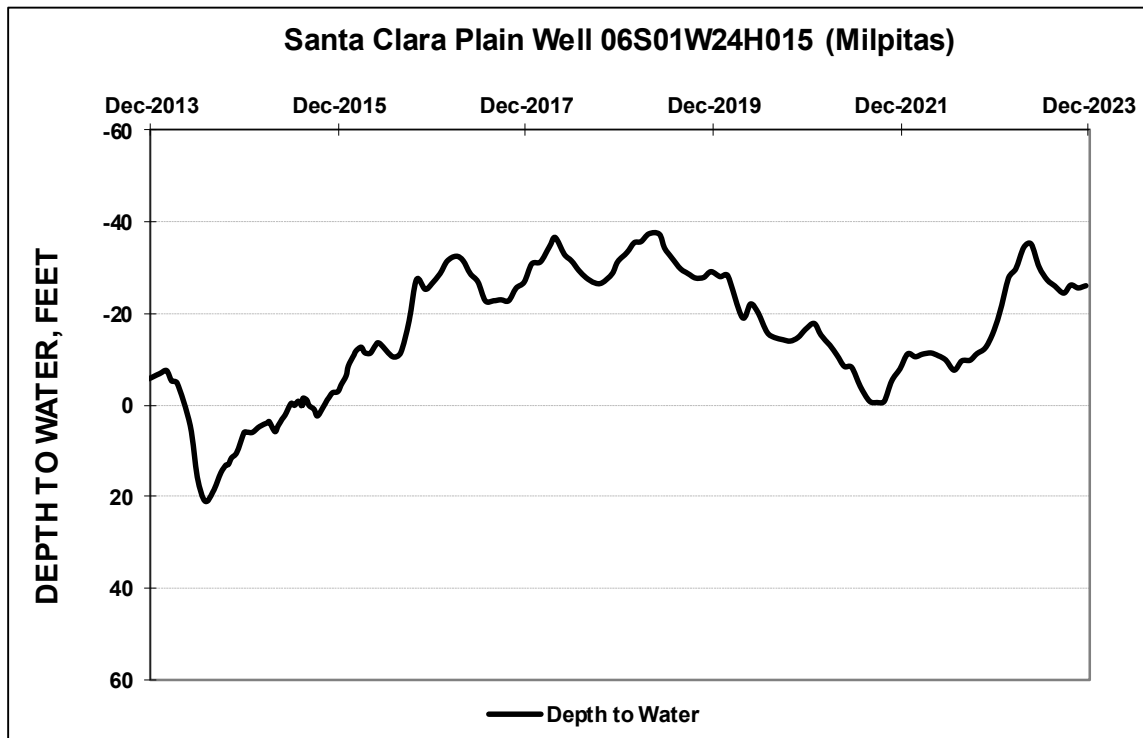


Figure 9. Sunnyvale Well Hydrograph

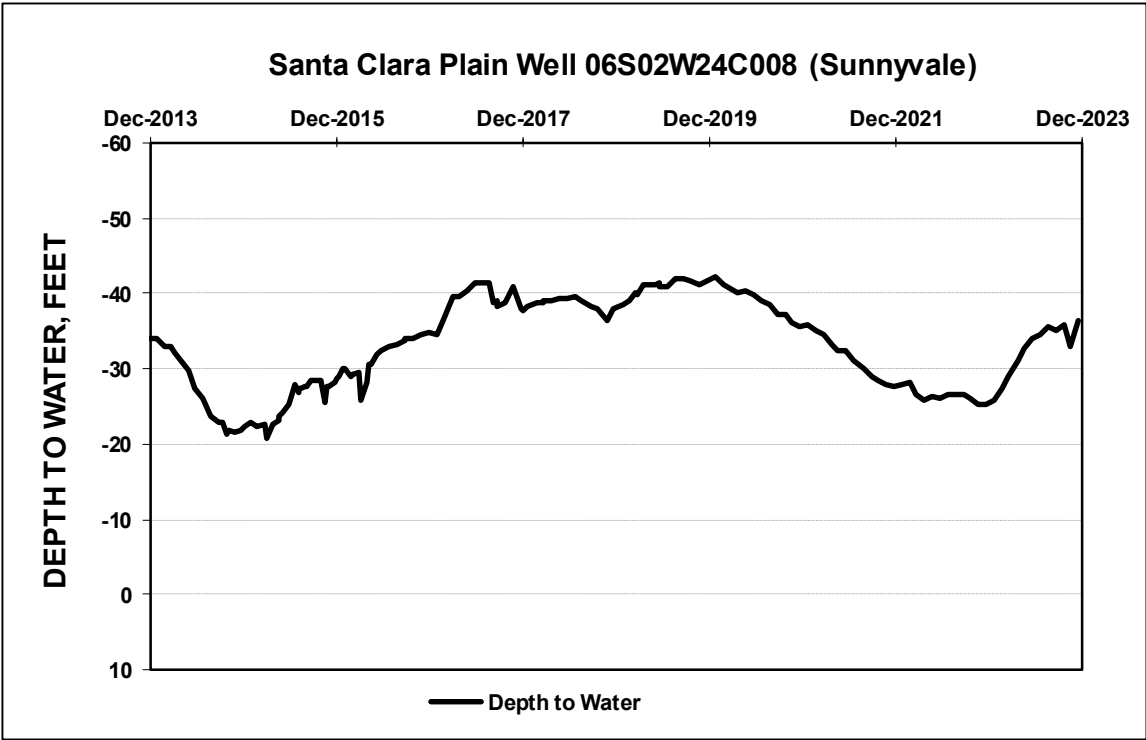


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

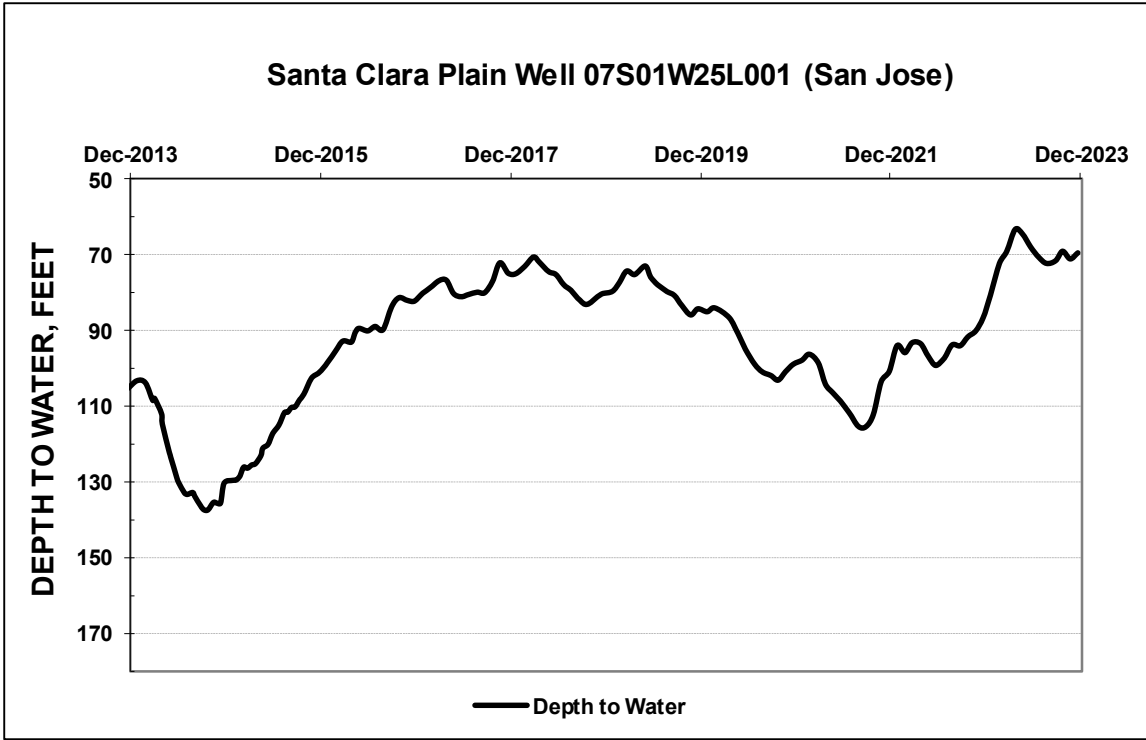


Figure 11. Santa Clara Well Hydrograph

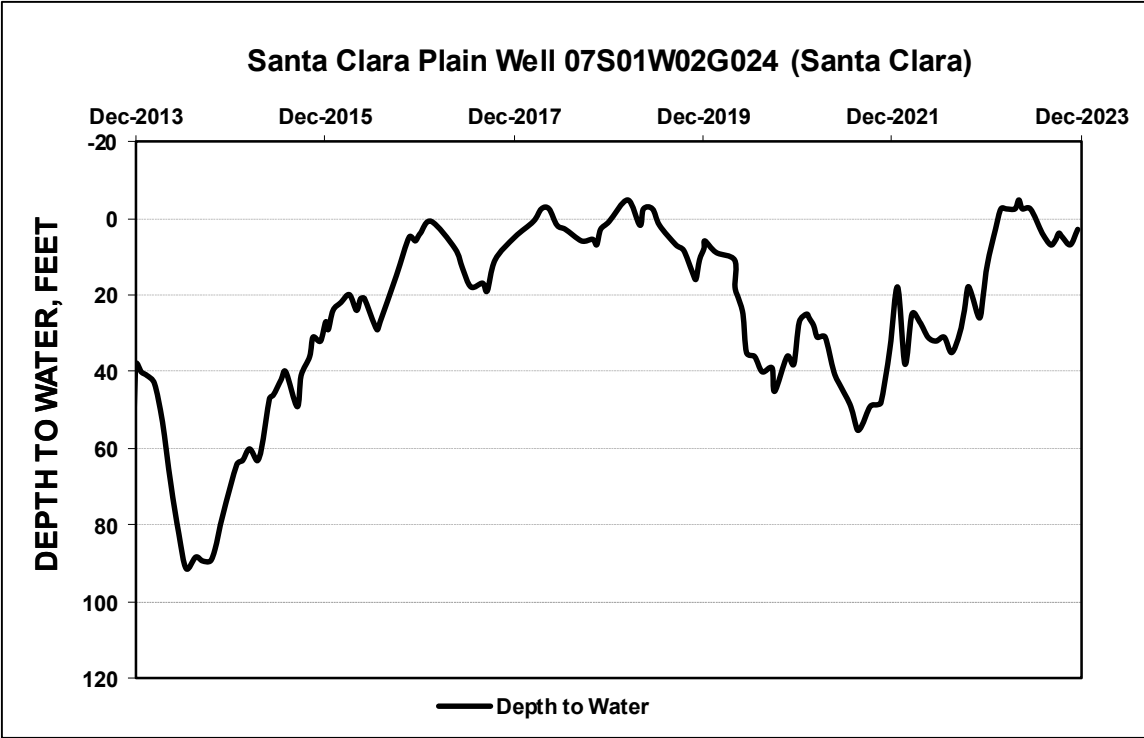


Figure 12. South Santa Clara Well Hydrograph

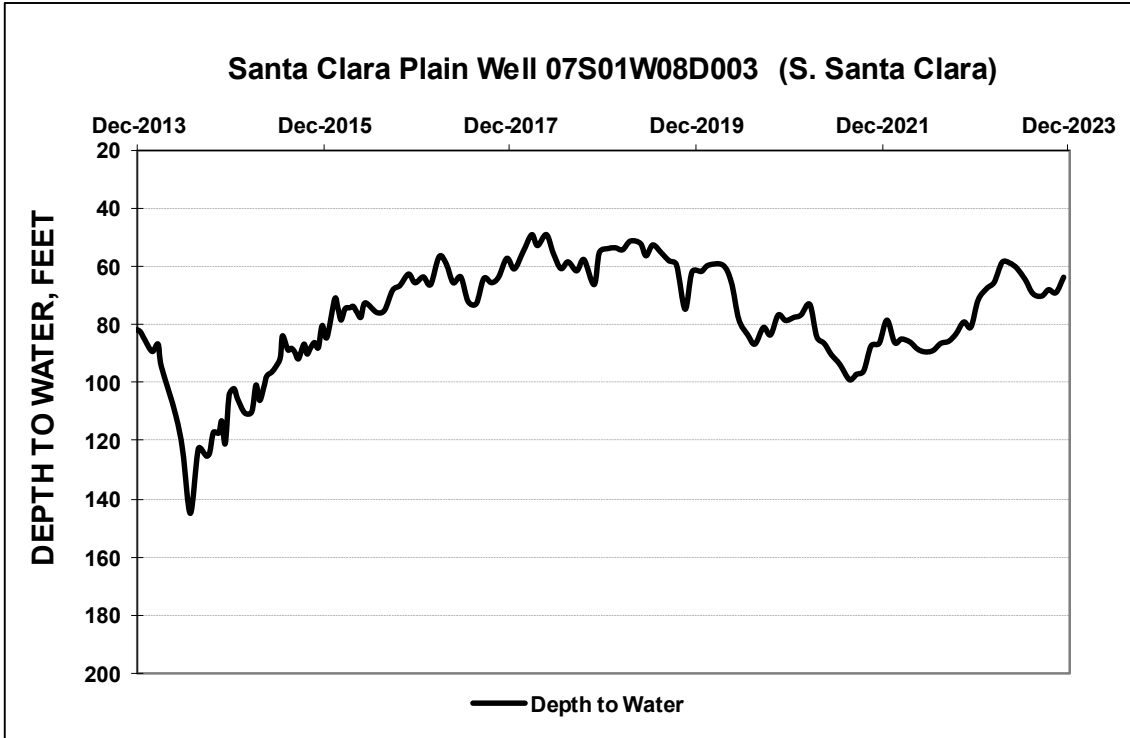
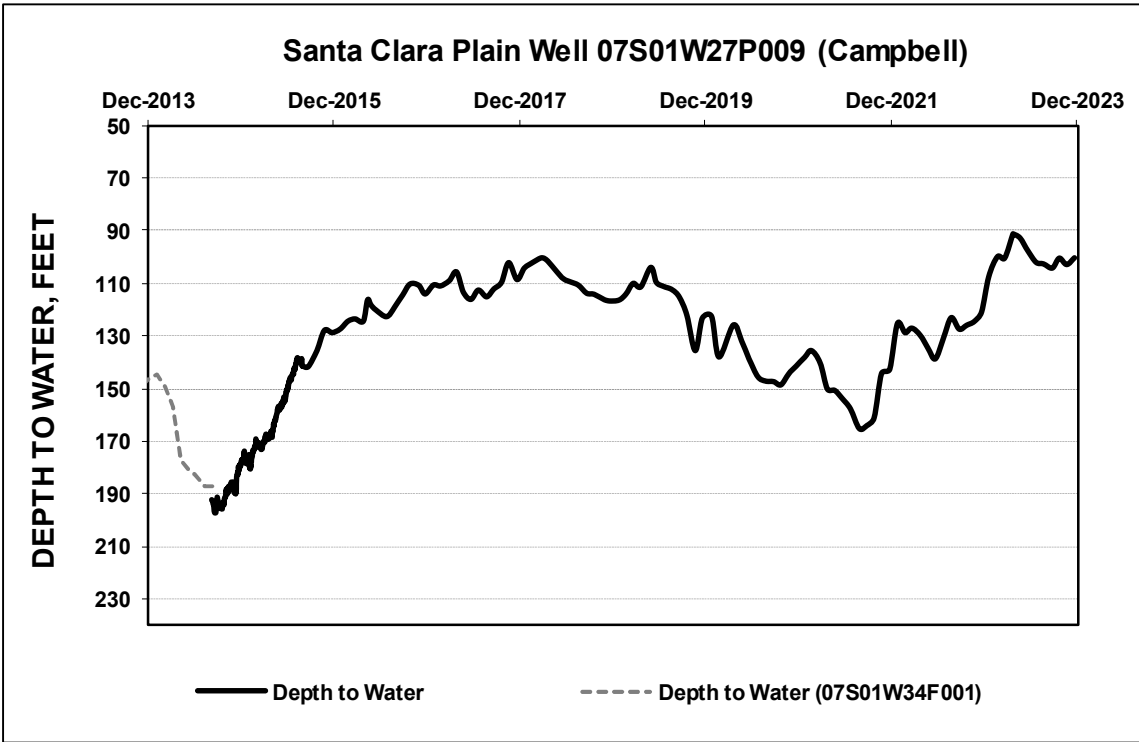


Figure 13. Campbell Well Hydrograph



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

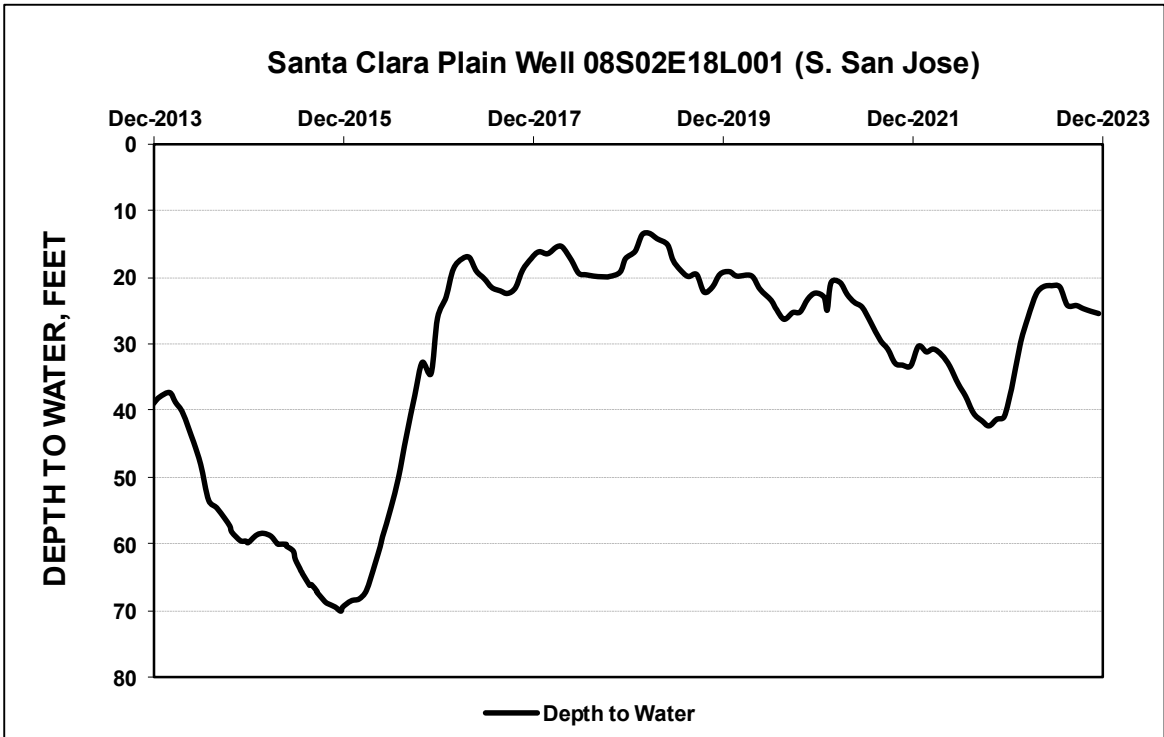




Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

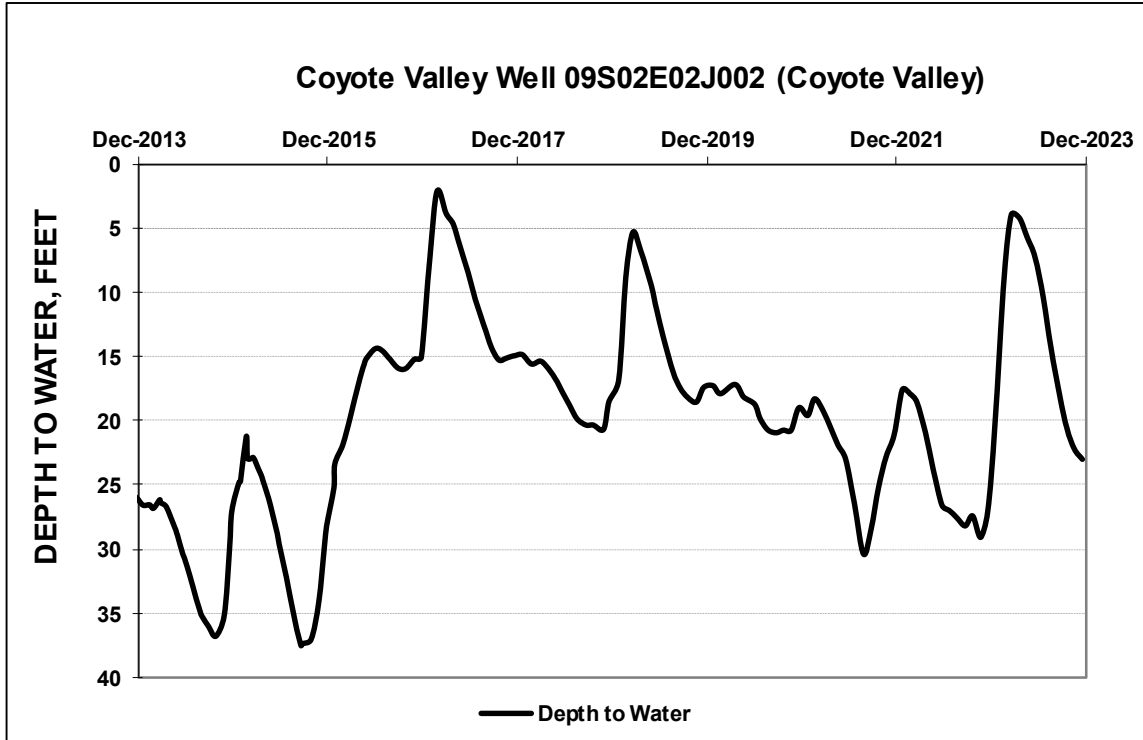
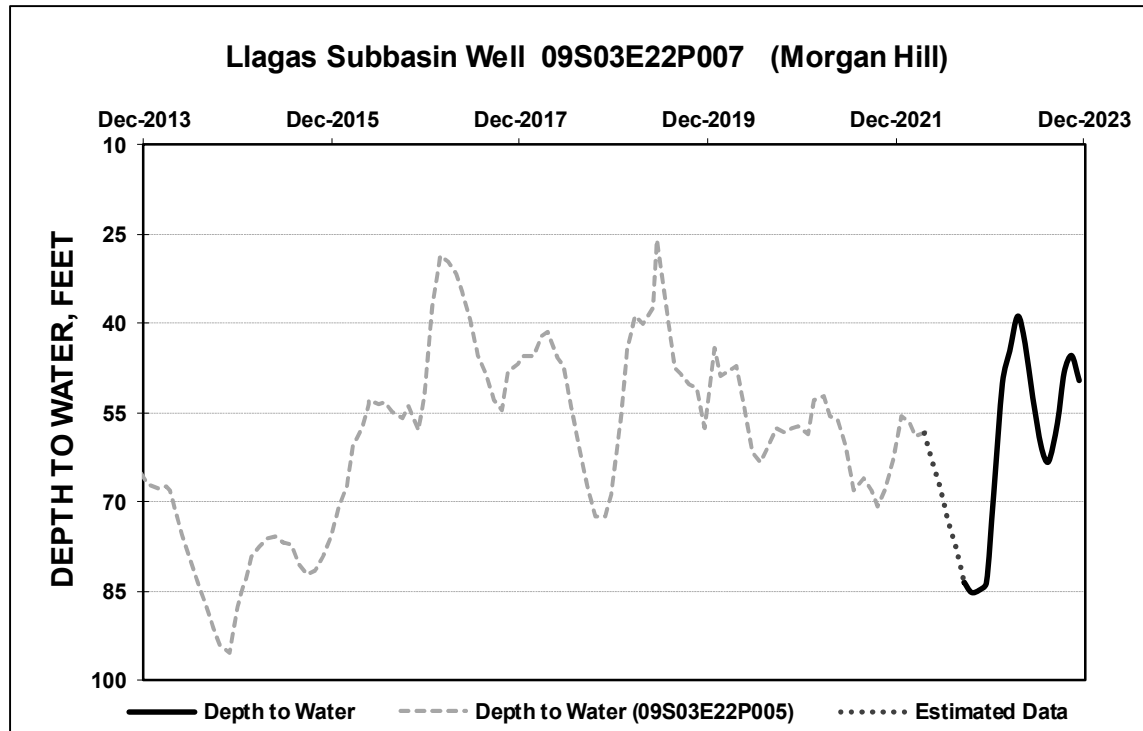


Figure 16. Morgan Hill Well Hydrograph



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)

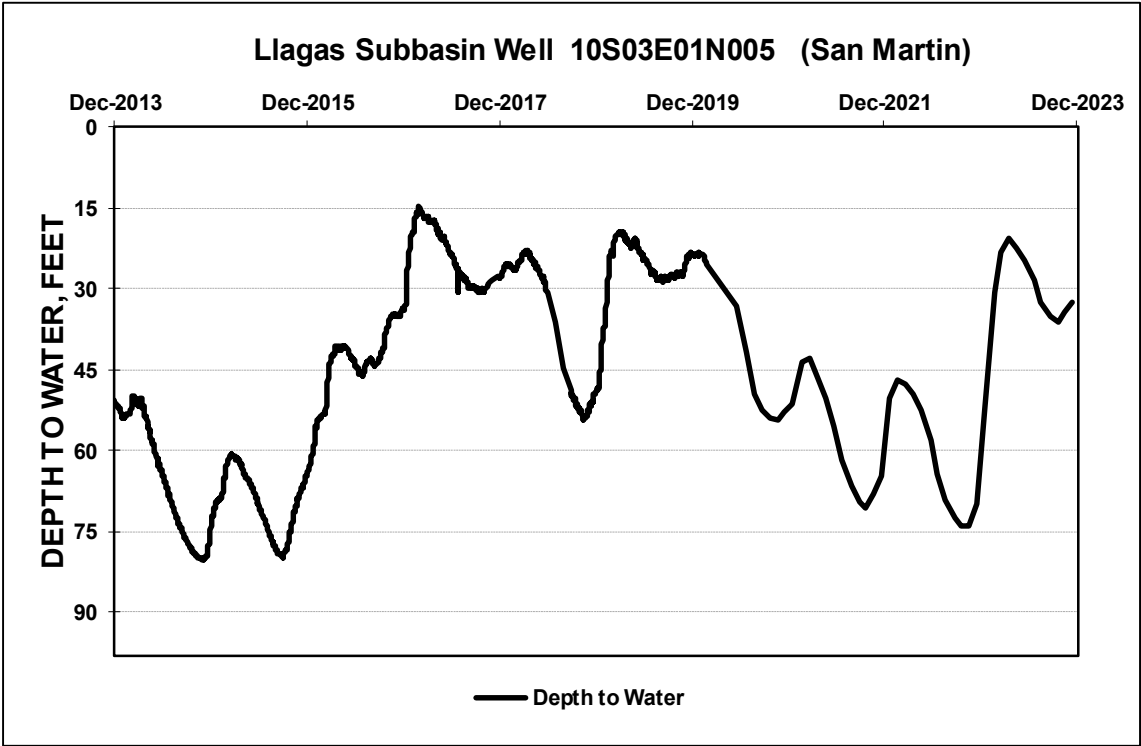


Figure 18. Gilroy Well Hydrograph

