

Groundwater Condition

REPORT | SANTA CLARA COUNTY

November 2023

SUMMARY

This report summarizes October 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. All water levels are higher relative to October 2022 and all are higher relative to the prior five-year average for October. The end of 2023 groundwater storage is projected to be in Stage 1 (Normal) of the Water Shortage Contingency Plan.

- October managed recharge is 92% to 175% of the five-year average.
- September pumping is 68% to 114% of the five-year average.
- Groundwater levels in index wells for October 2023 range from 7 feet to 38 feet higher than the October levels of 2022.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
October 2023 managed recharge estimate	8,700	1,400	3,200
YTD managed recharge estimate	71,800	11,600	18,800
YTD managed recharge as % of five-year average	175%	92%	113%
September 2023 pumping estimate	6,400	1,400	5,600
YTD pumping estimate	36,200	10,200	31,600
YTD pumping as % of five-year average	68%	114%	101%
Current index well groundwater levels compared to October of 2022	23 feet higher	7 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
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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 October 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

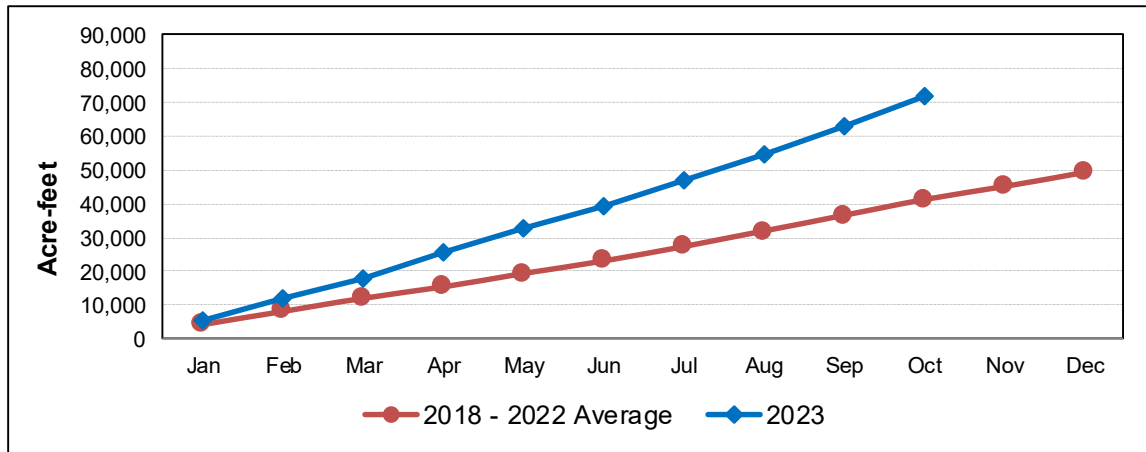


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

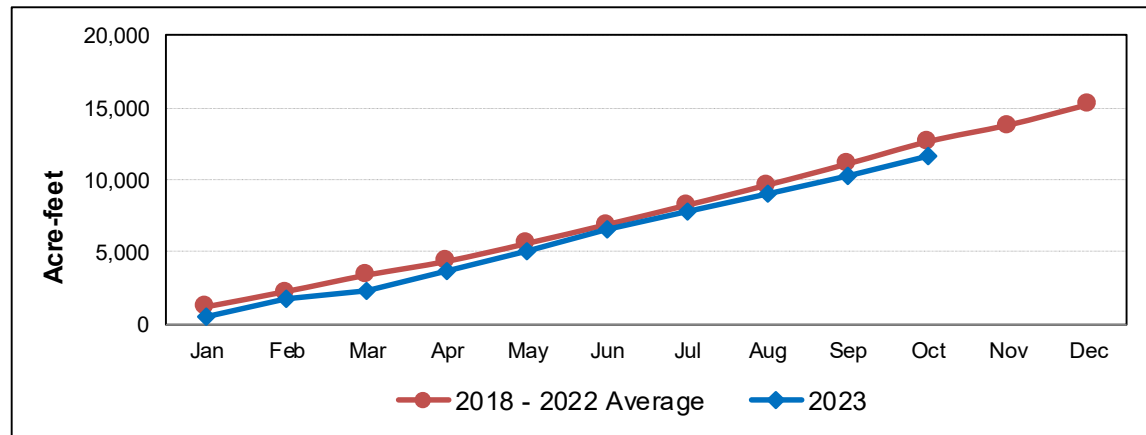
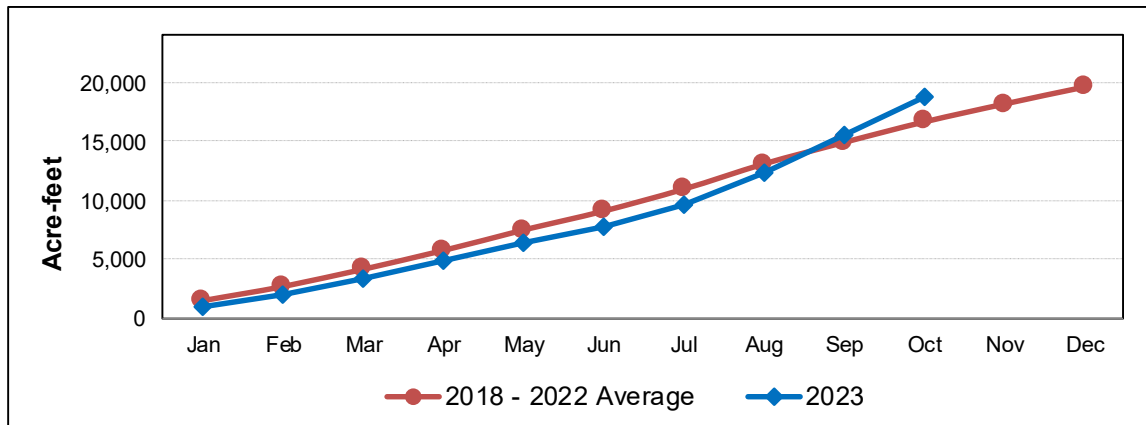


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



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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 September 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 September 2023 was higher in Coyote Valley, lower in the Santa Clara Plain, and slightly higher in the Llagas Subbasin.

Figure 4. Estimated Cumulative Santa Clara Plain Pumping

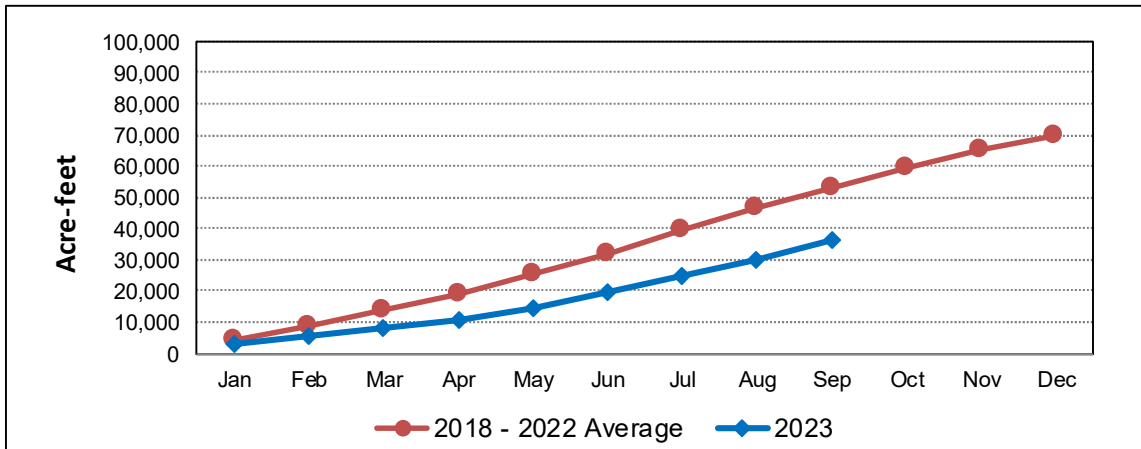


Figure 5. Estimated Cumulative Coyote Valley Pumping

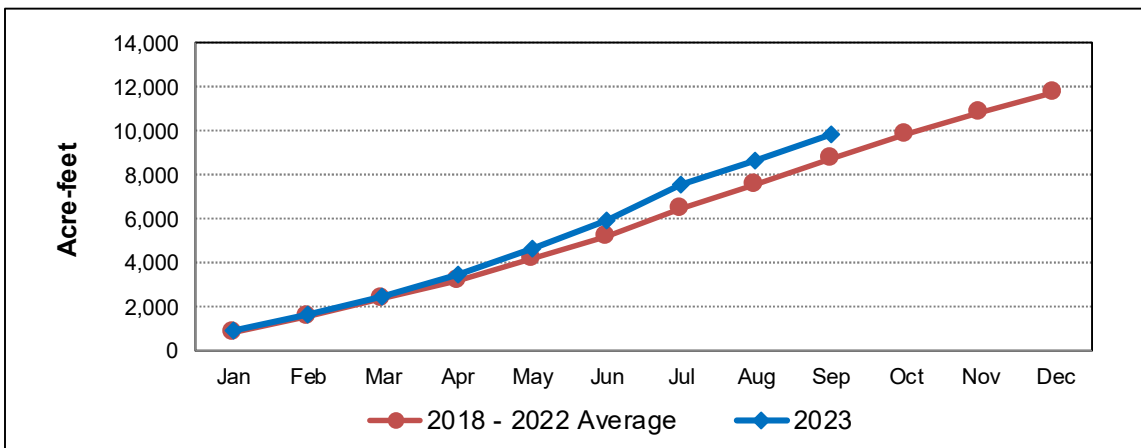
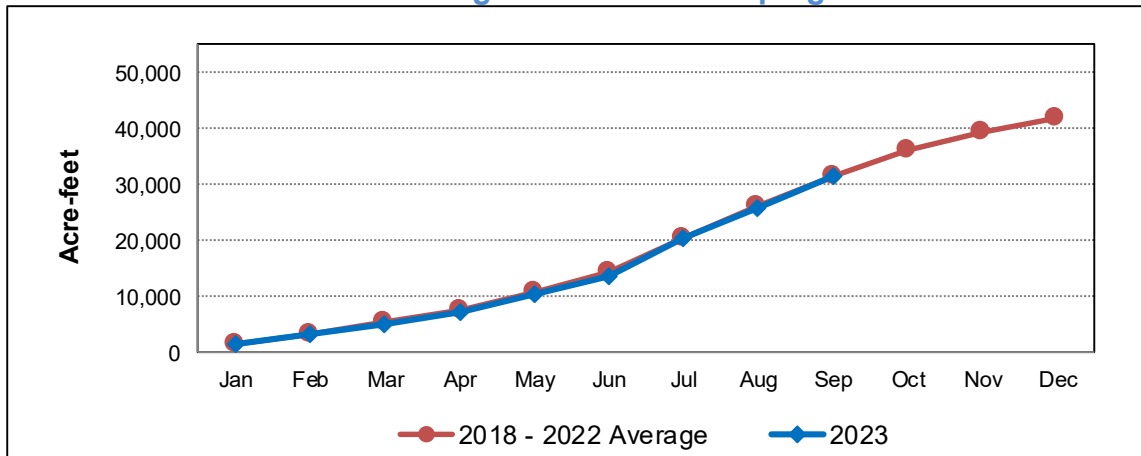


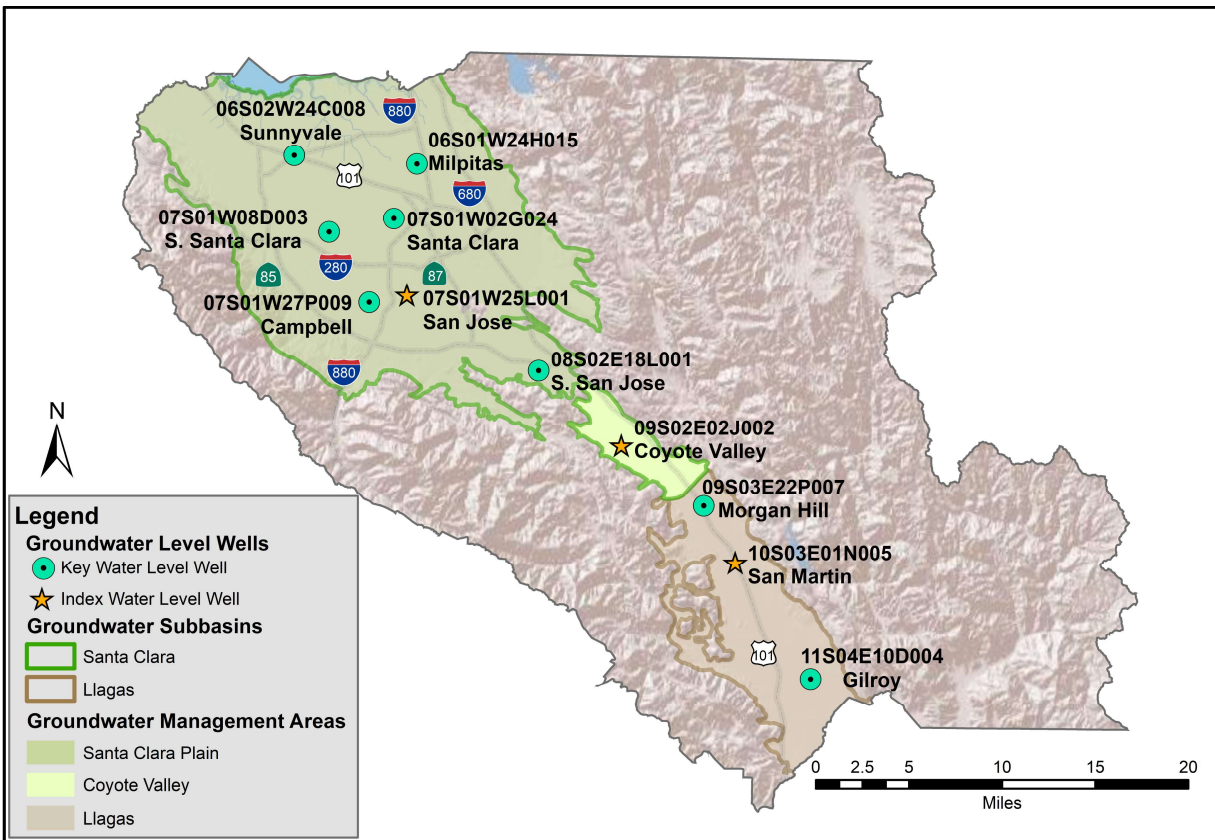
Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels in most regional monitoring wells¹ have increased since last month and all are higher than this time last year. All wells are higher than the October 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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¹ **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 October 2023 Depth to Water (DTW) in Regional Wells

Location	State Well ID	October 2023 DTW (feet)	Difference in October 2023 DTW (feet) Compared to:			
			September 2023	October 2022	Prior 5-year Average for October	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-26 (artesian)	2	15	10	47
Sunnyvale	06S02W24C008	-36 (artesian)	1	10	1	15
San Jose	07S01W25L001	69	3	23	26	68
Santa Clara	07S01W02G024	5	2	17	20	87
S. Santa Clara	07S01W08D003	68	2	15	9	77
Campbell	07S01W27P009	101	4	26	34	97
S. San Jose	08S02E18L001	25	-1	18	4	45
Coyote Valley	09S02E02J002	21	-3	7	2	17
Morgan Hill	09S03E22P007	48	9	37	13	47
San Martin	10S03E01N005	36	-1	38	19	44
Gilroy	11S04E10D004	26	7	20	10	36

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

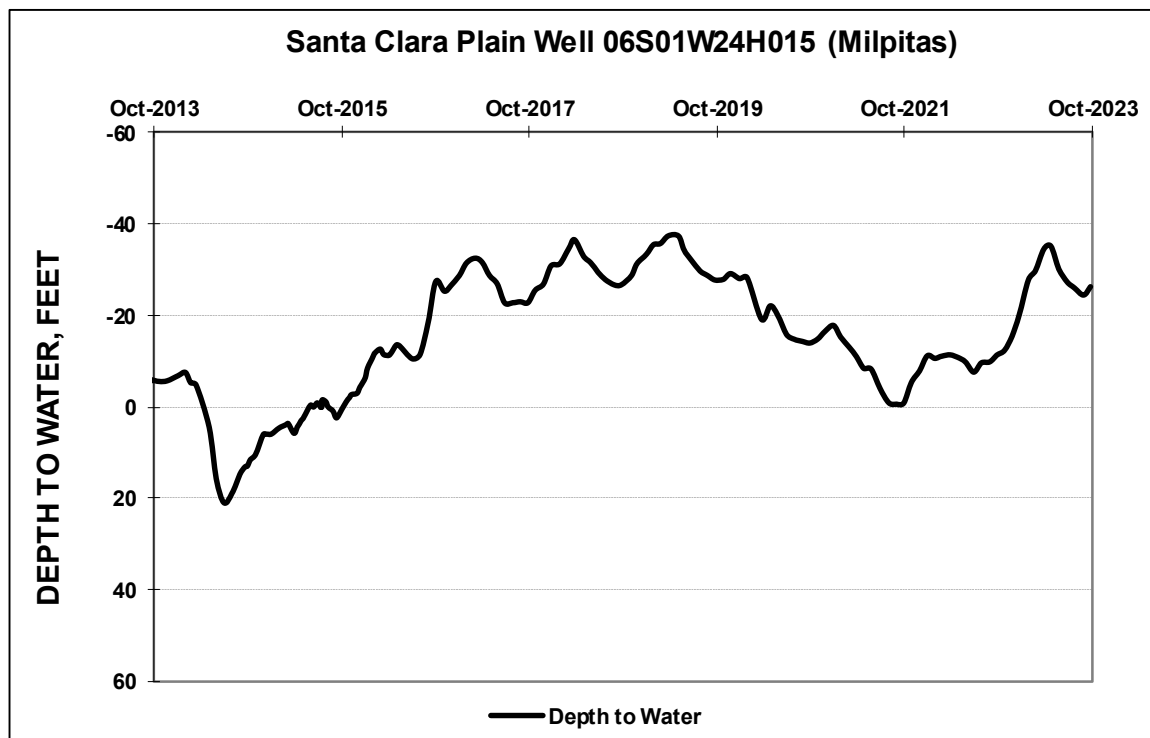


Figure 9. Sunnyvale Well Hydrograph

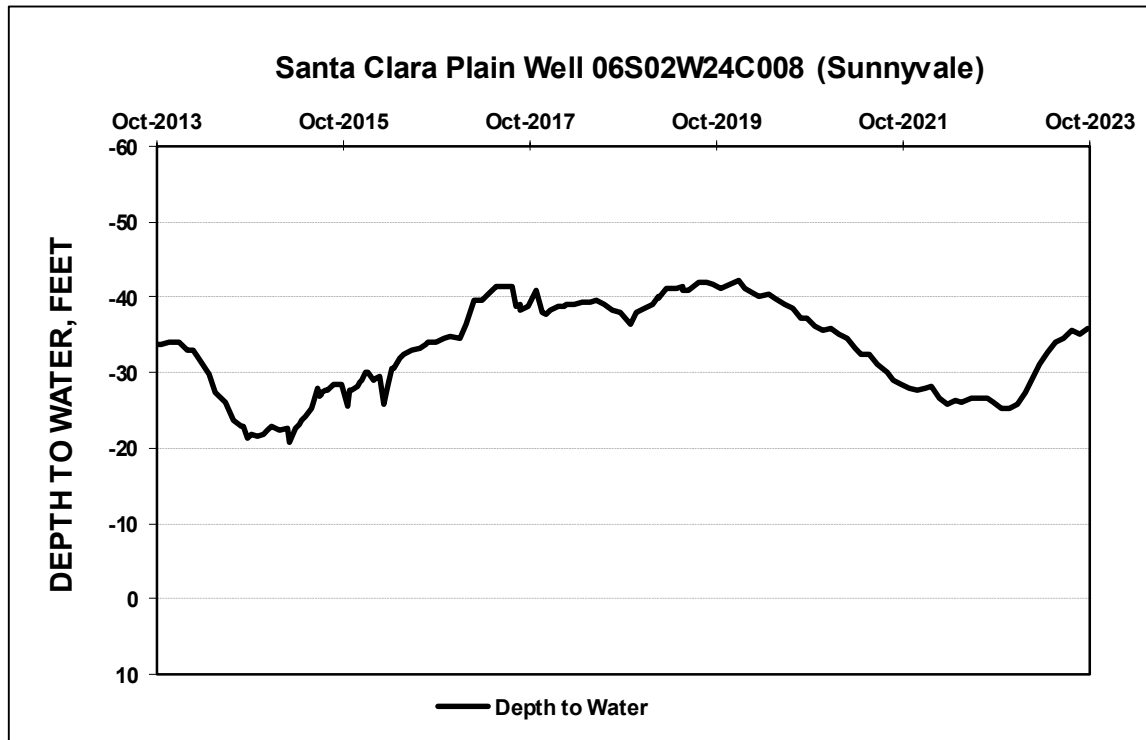


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

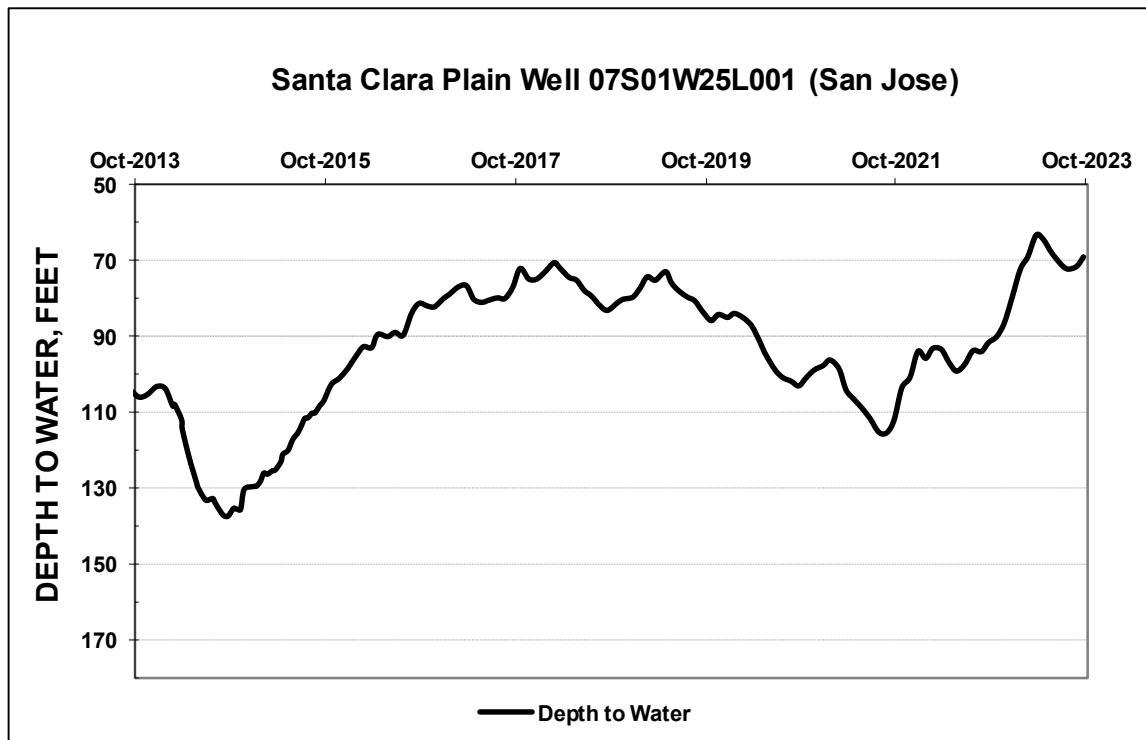


Figure 11. Santa Clara Well Hydrograph

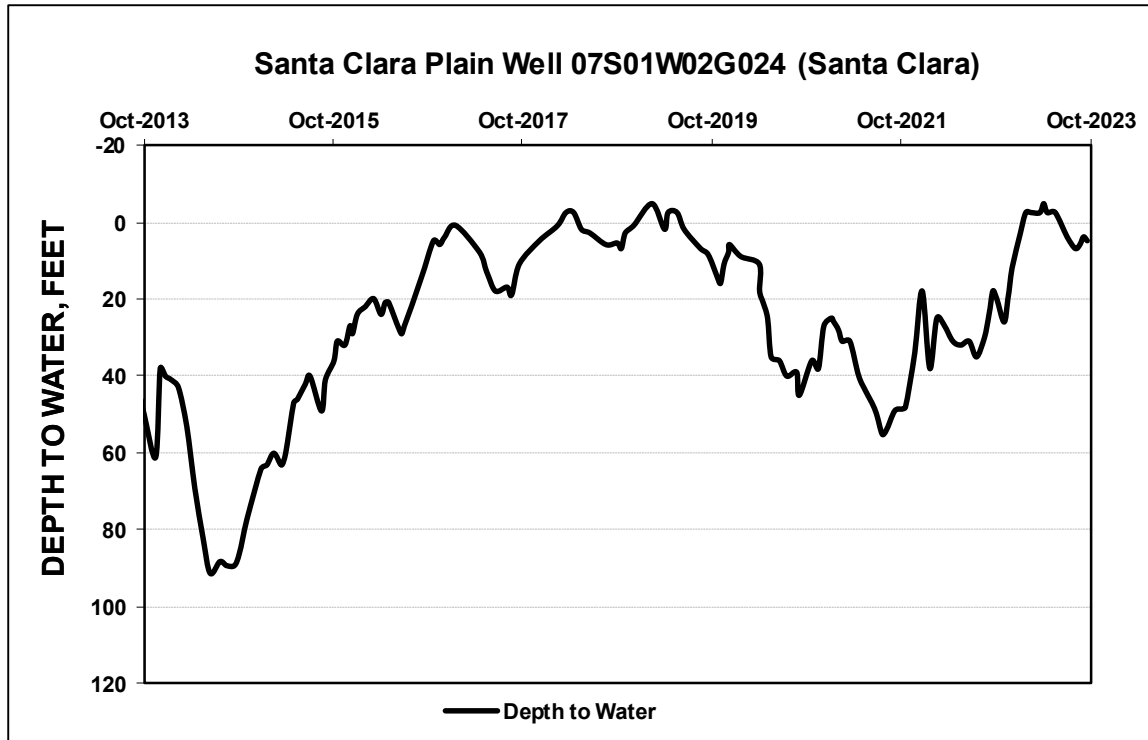


Figure 12. South Santa Clara Well Hydrograph

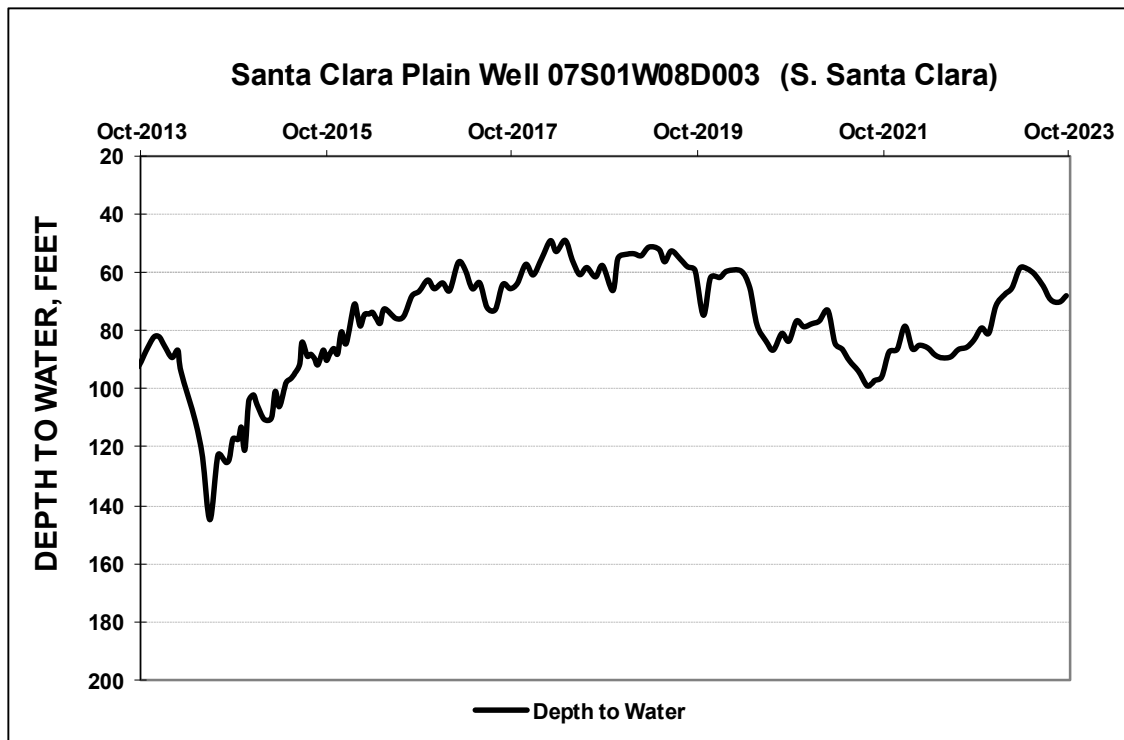
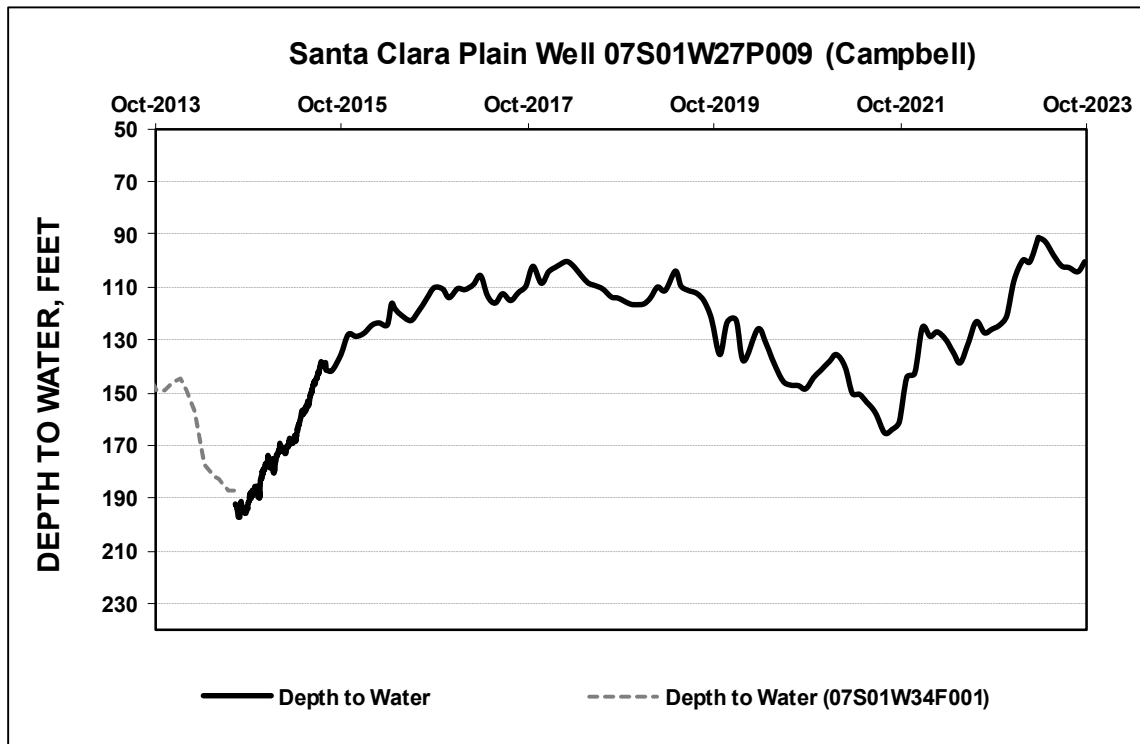


Figure 13. Campbell Well Hydrograph



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

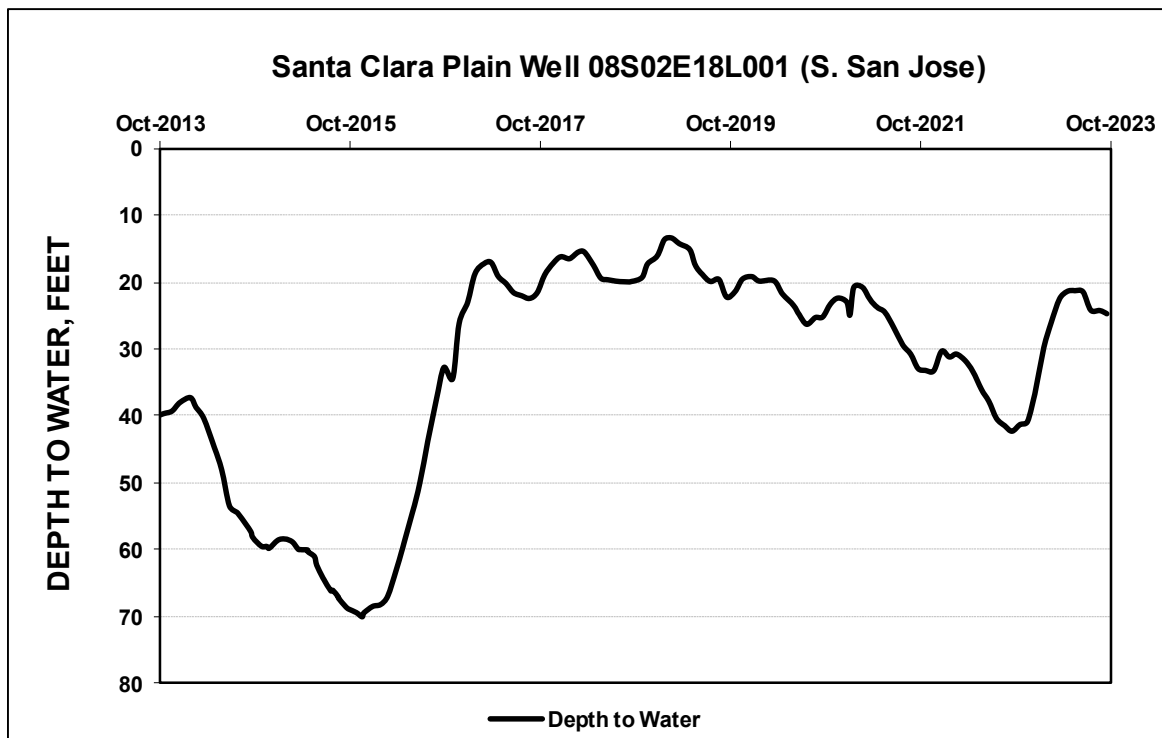


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

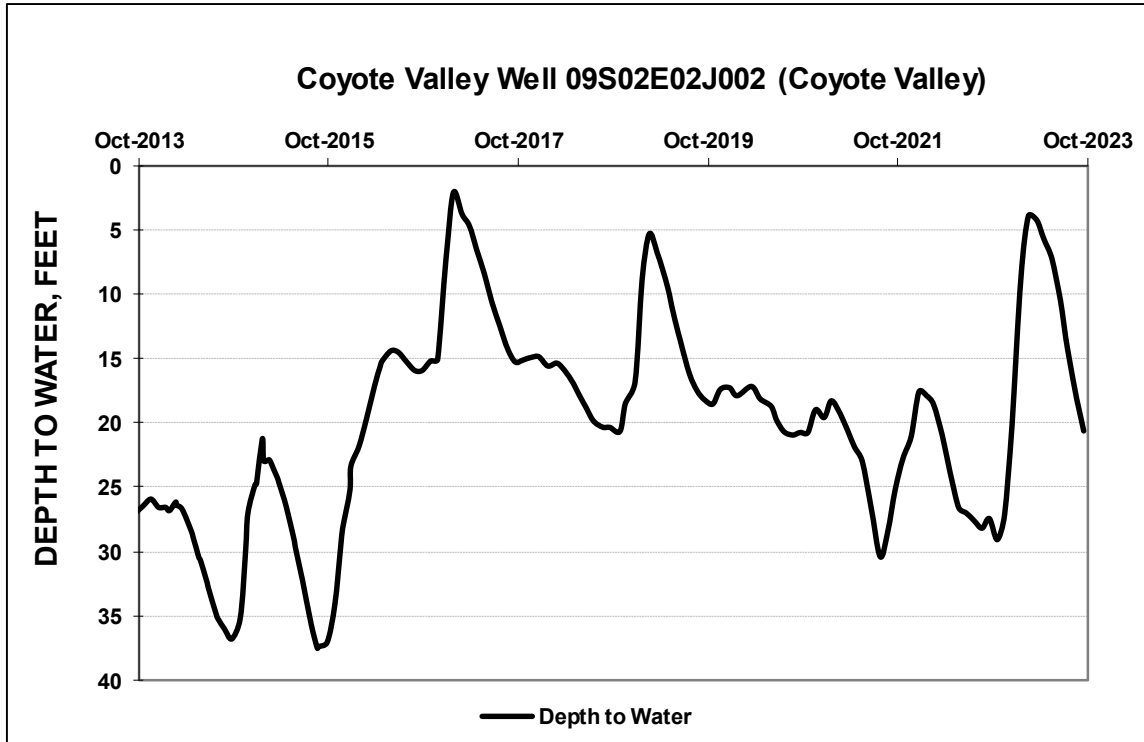
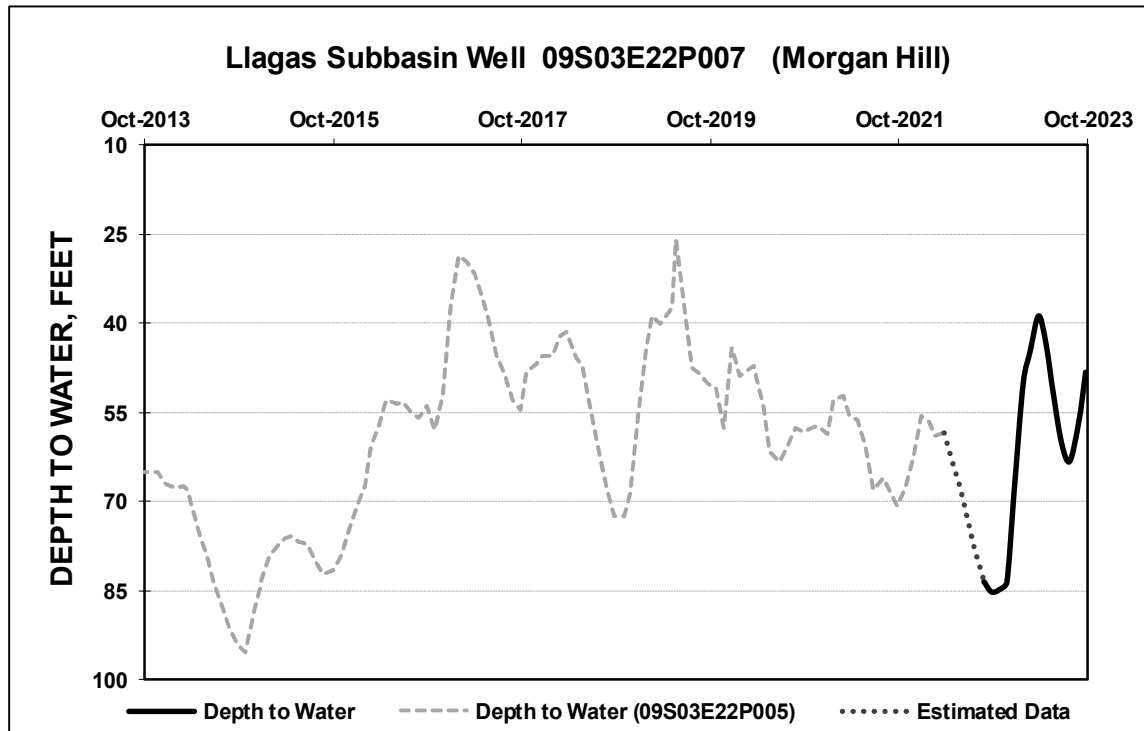


Figure 16. Morgan Hill Well Hydrograph



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)

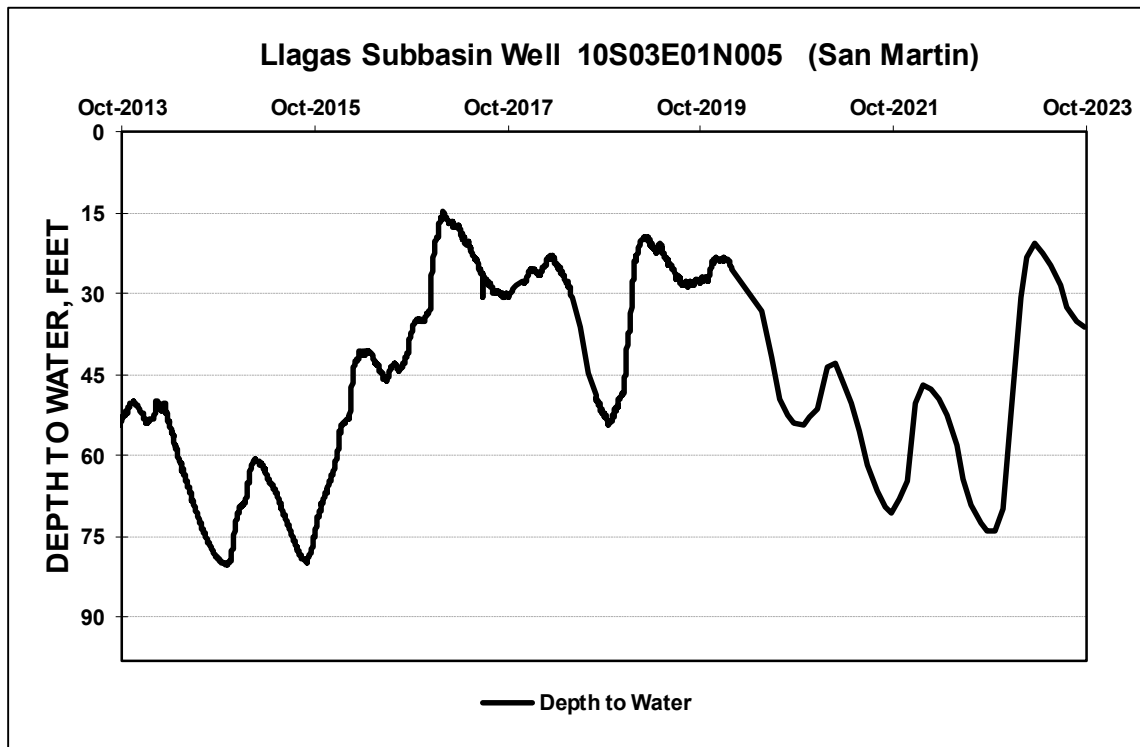


Figure 18. Gilroy Well Hydrograph

