Groundwater Condition

REPORT | SANTA CLARA COUNTY

February 2024

SUMMARY

This report summarizes January 2024 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 about half of the regional monitoring wells are higher than last month. All water levels except one are higher relative to January 2023 and all except two are higher than the prior five-year average for January. The end of 2024 groundwater storage is projected to be in Stage 1 (Normal) of the Water Shortage Contingency Plan.

- January managed recharge is 83% to 128% of the five-year average.
- December pumping is 81% to 118% of the five-year average.
- Groundwater levels in index wells for January 2024 range from 2 feet lower to 22 feet higher than the January levels of 2023.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
January 2024 managed recharge estimate	6,500	900	1,200
January 2024 managed recharge as % of 5-year average	128%	96%	83%
December 2023 pumping estimate	6,100	1,200	2,800
January to December 2023 pumping estimate	56,600	14,200	42,000
January to December 2023 pumping as % of five-year average	81%	118%	100%
Current index well groundwater levels compared to January of 2023	10 feet higher	2 feet lower	22 feet higher

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 2024 compared to the average of the previous five years (2019 – 2023).
- Compared to the average of the previous five years, managed recharge for January 2024 was higher in the Santa Clara Plain, slightly lower in Coyote Valley, and lower 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

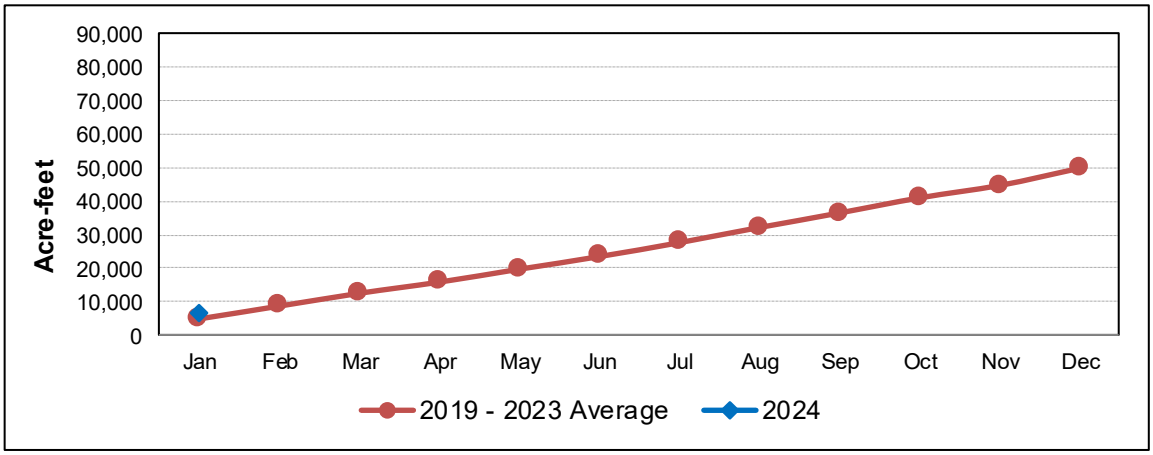


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

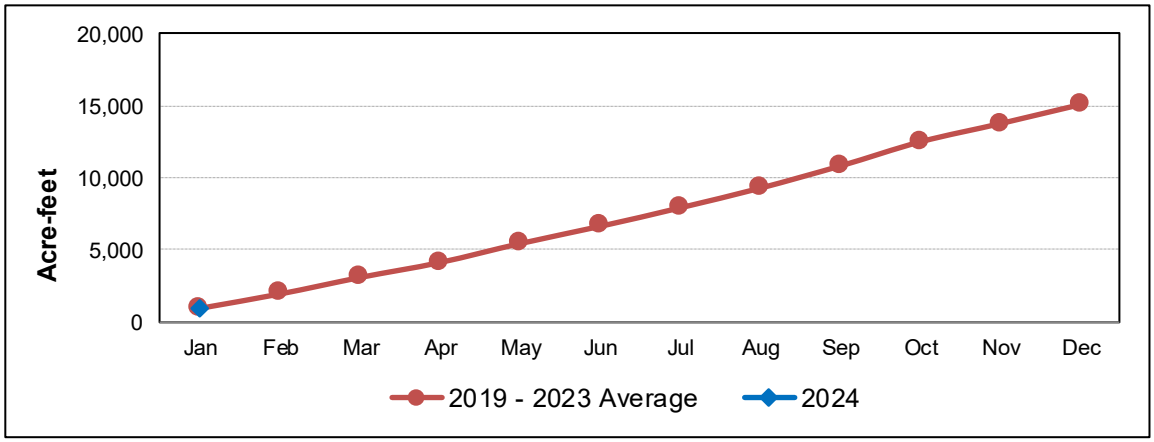
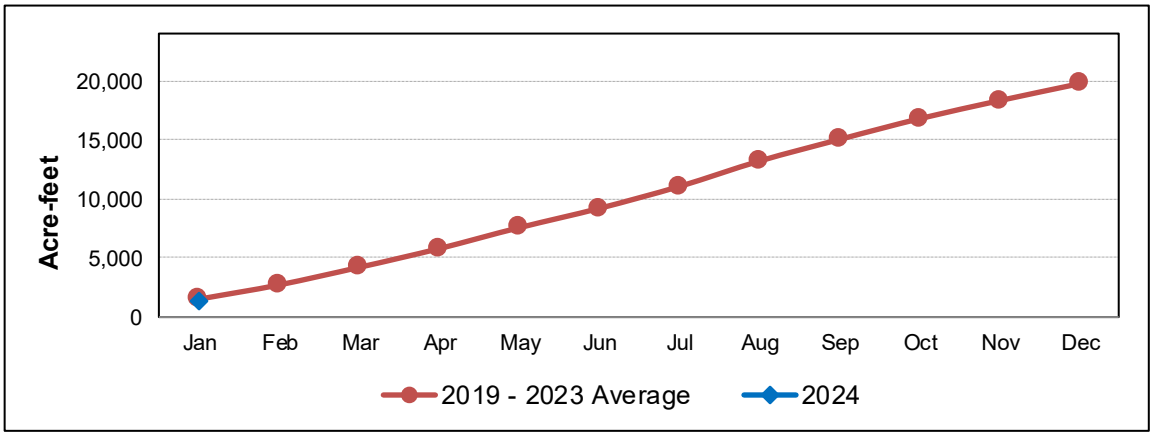


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



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 December 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 January to December 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

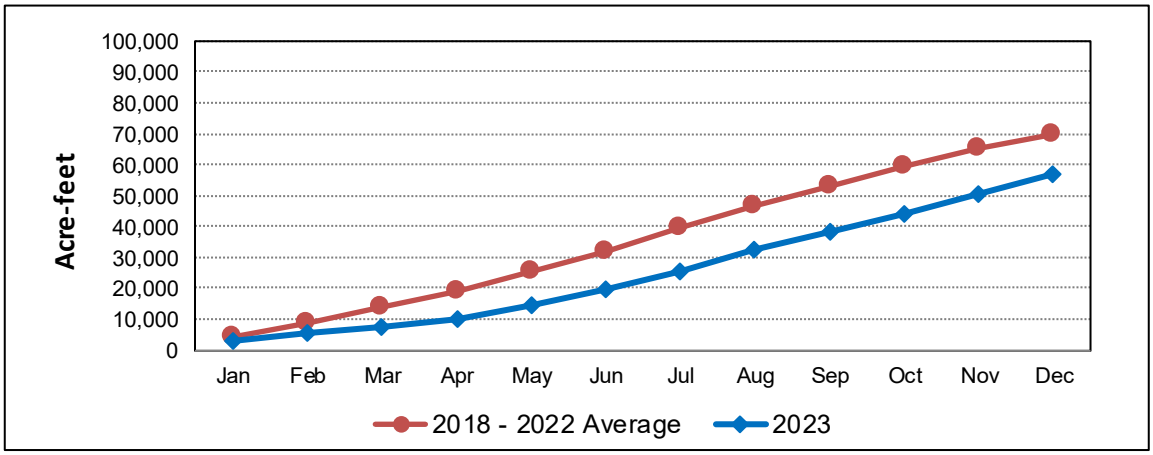


Figure 5. Estimated Cumulative Coyote Valley Pumping

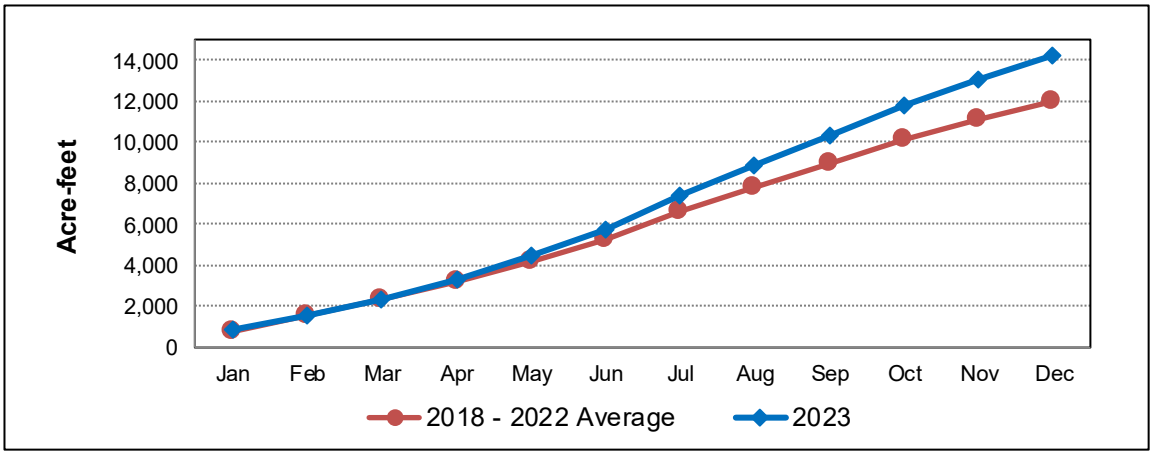
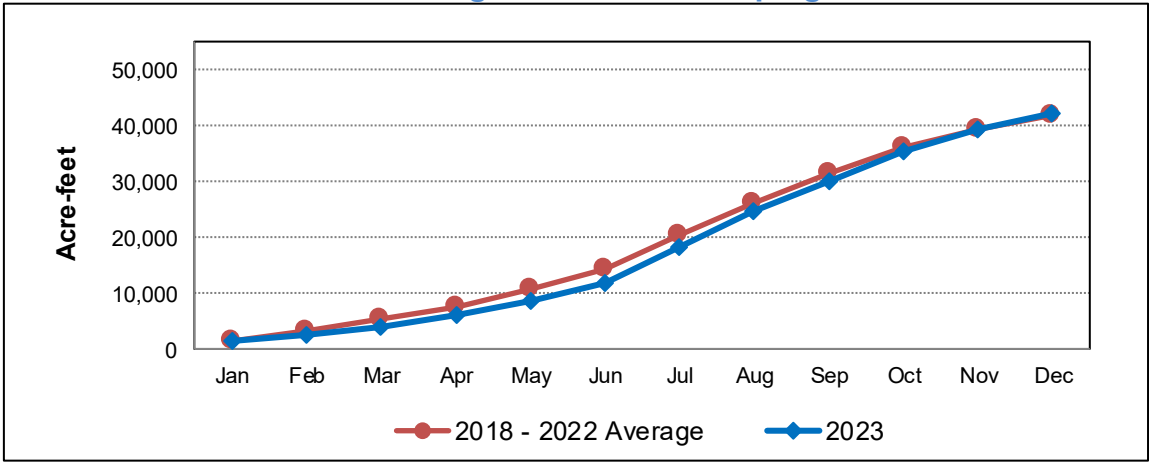


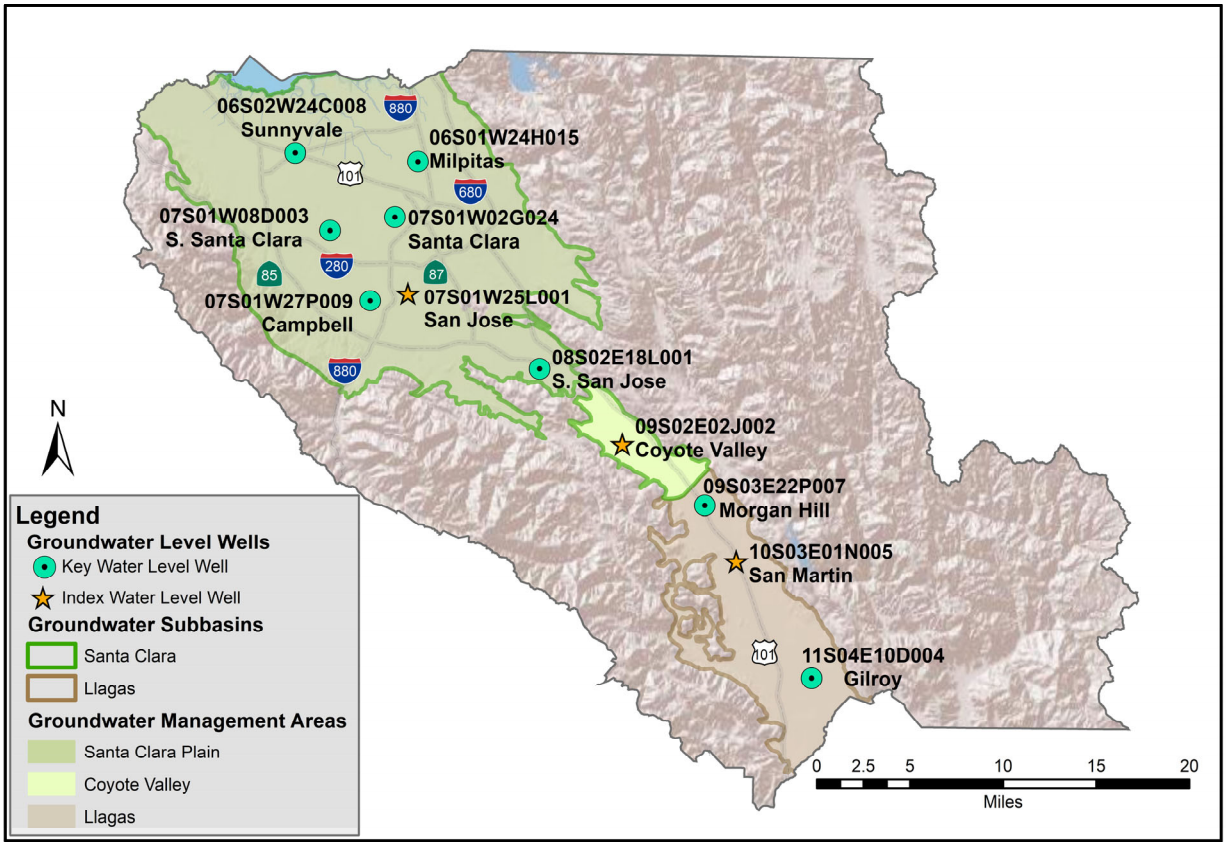
Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels in most regional monitoring wells[1] have increased since last month. All water levels except one are higher than this time last year and most are higher than the January 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.

Table 2. Comparisons to January 2024 Depth to Water (DTW) in Regional Wells

Location	State Well ID	January 2024 DTW (feet)	Difference in January 2023 DTW (feet) Compared to:			
			December 2023	January 2023	Prior 5-year Average for January	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-29 (artesian)	3	9	7	50
Sunnyvale	06S02W24C008	-32 (artesian)	-4	6	-2	11
San Jose	07S01W25L001	71	-1	10	17	67
Santa Clara	07S01W02G024	3	1	1	10	89
S. Santa Clara	07S01W08D003	66	-2	6	2	80
Campbell	07S01W27P009	107	-7	1	15	90
S. San Jose	08S02E18L001	24	1	13	1	46
Coyote Valley	09S02E02J002	22	1	-2	-4	15
Morgan Hill	09S03E22P007	51	-2	17	3	44
San Martin	10S03E01N005	30	3	22	15	51
Gilroy	11S04E10D004	12	4	3	3	51

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. The (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

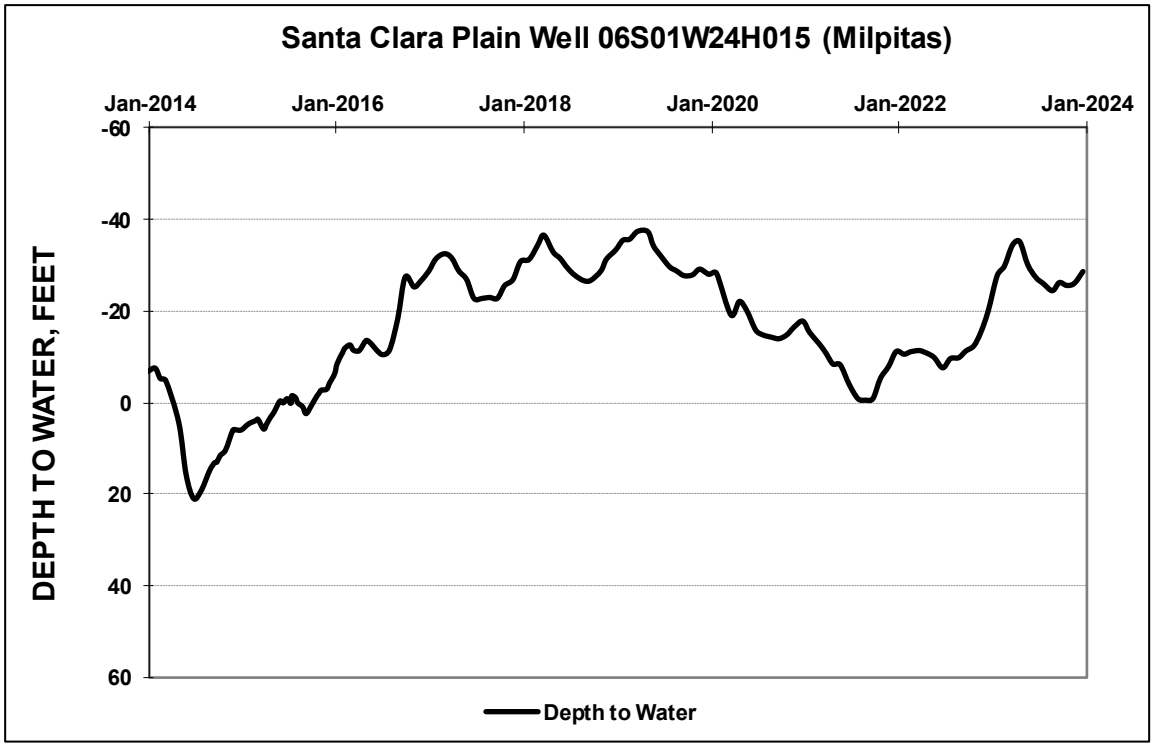


Figure 9. Sunnyvale Well Hydrograph

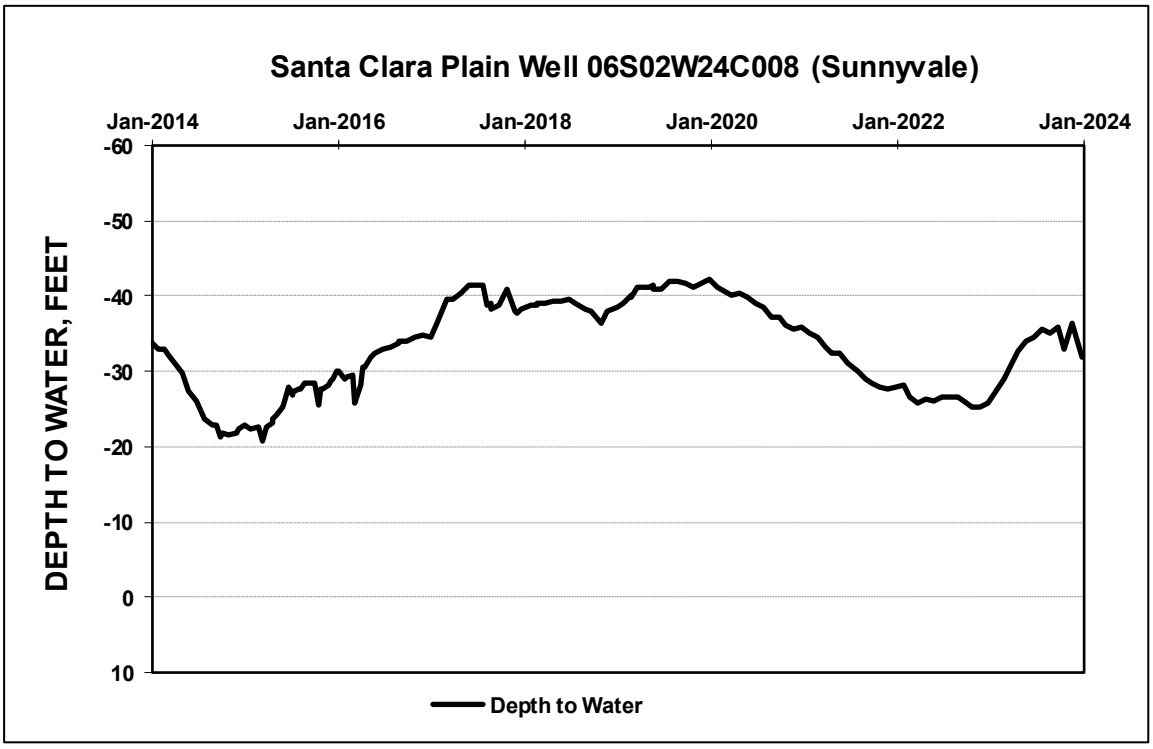


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

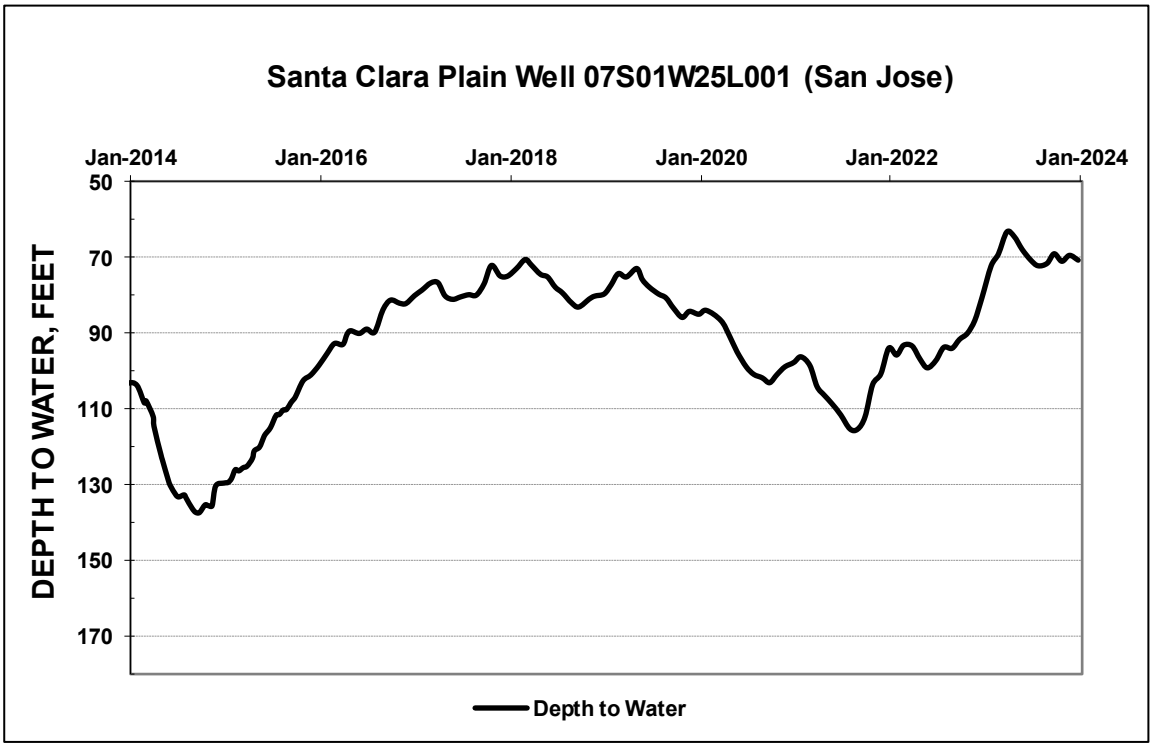


Figure 11. Santa Clara Well Hydrograph

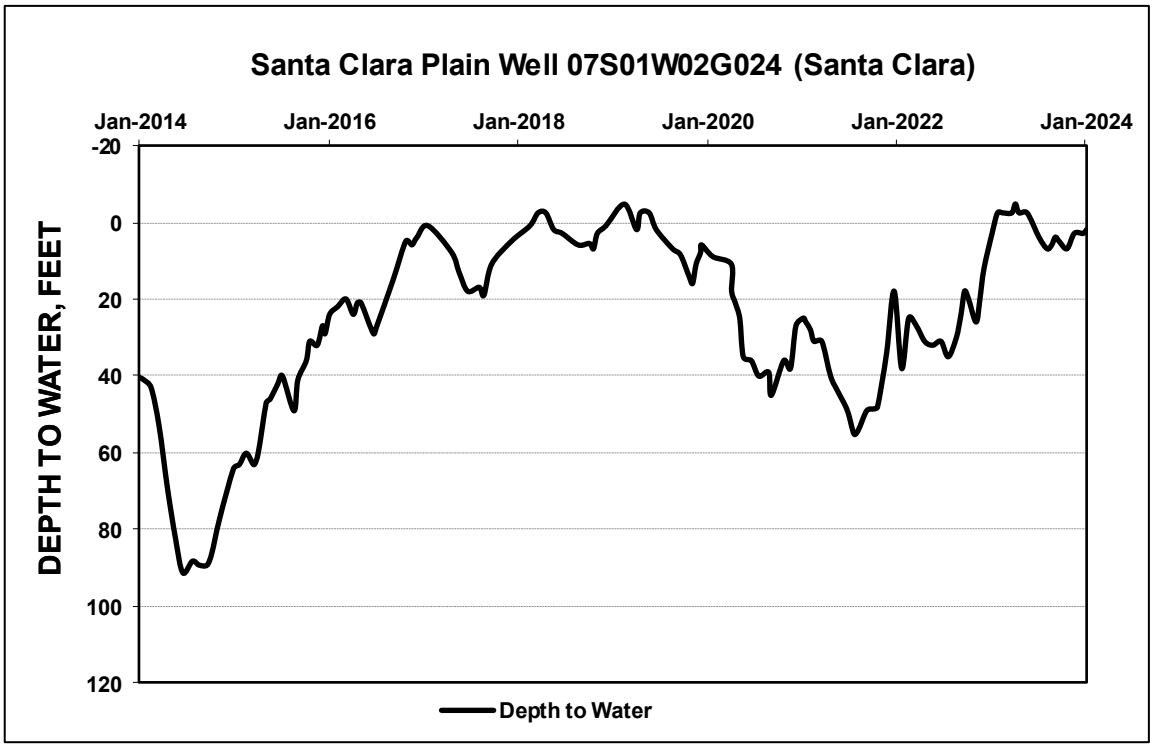


Figure 12. South Santa Clara Well Hydrograph

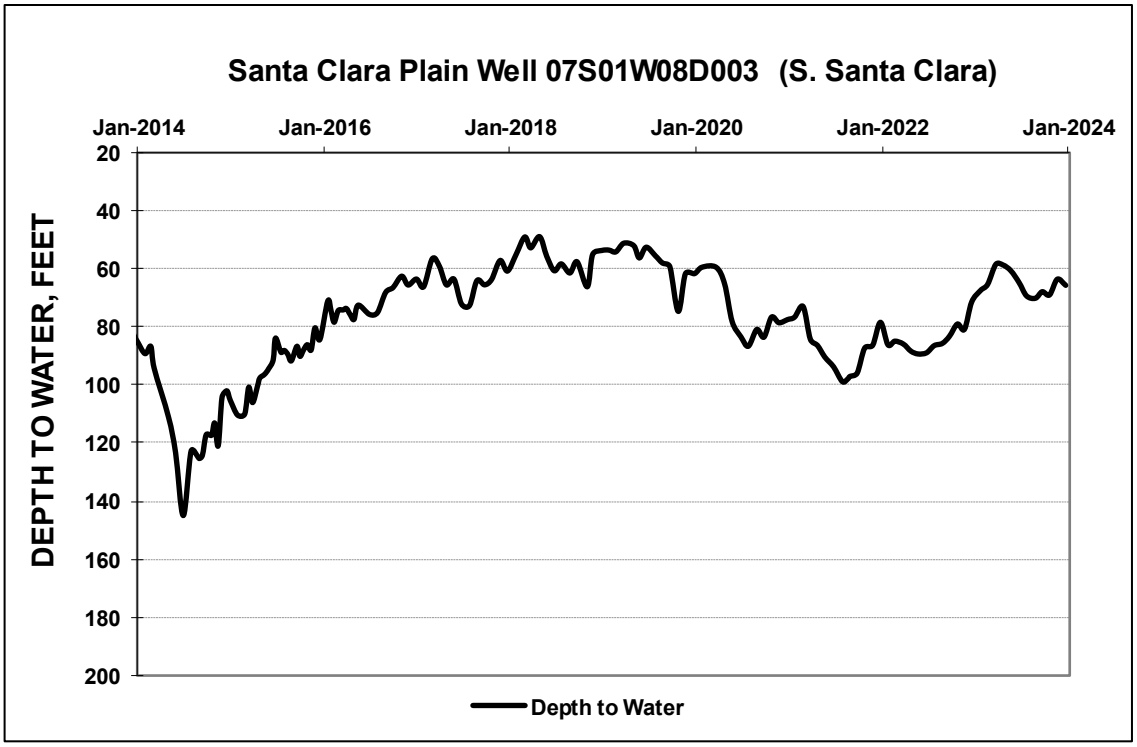
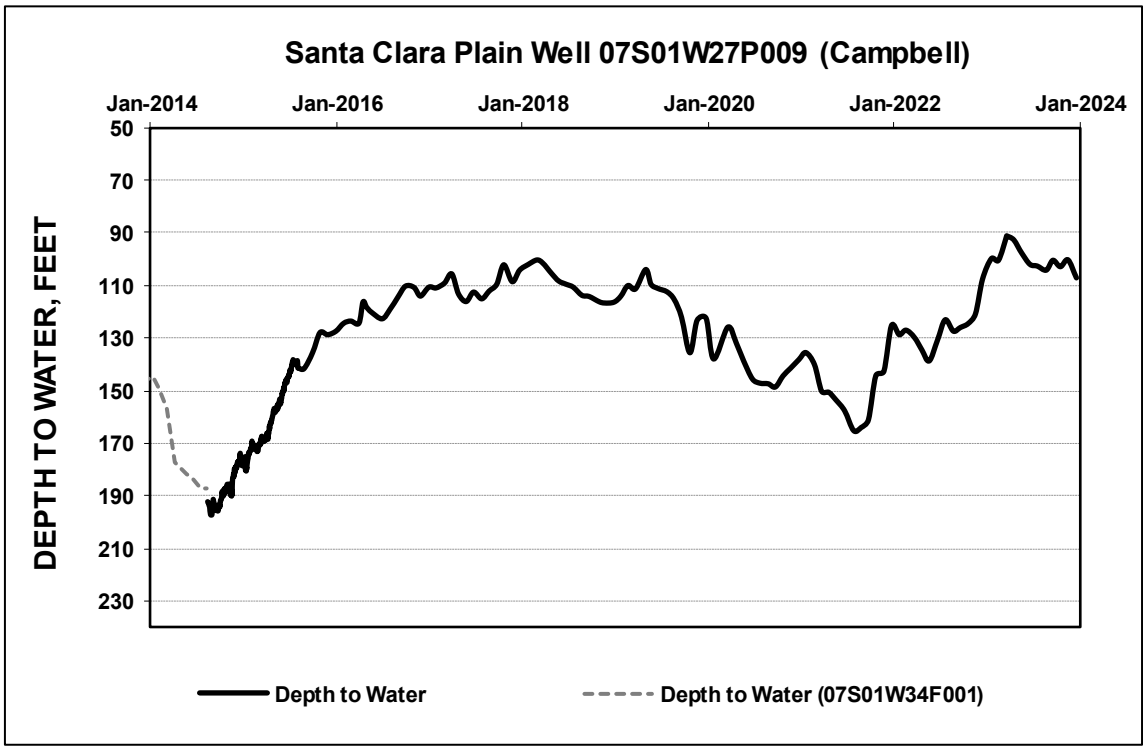


Figure 13. Campbell Well Hydrograph



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

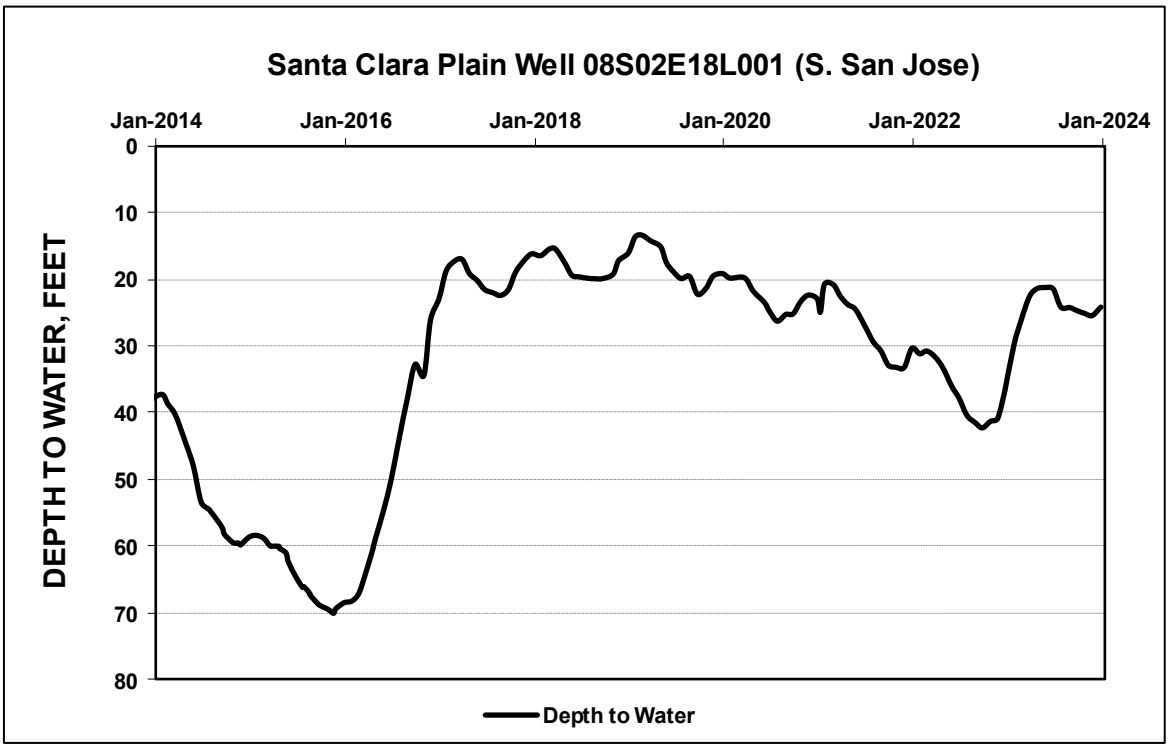


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

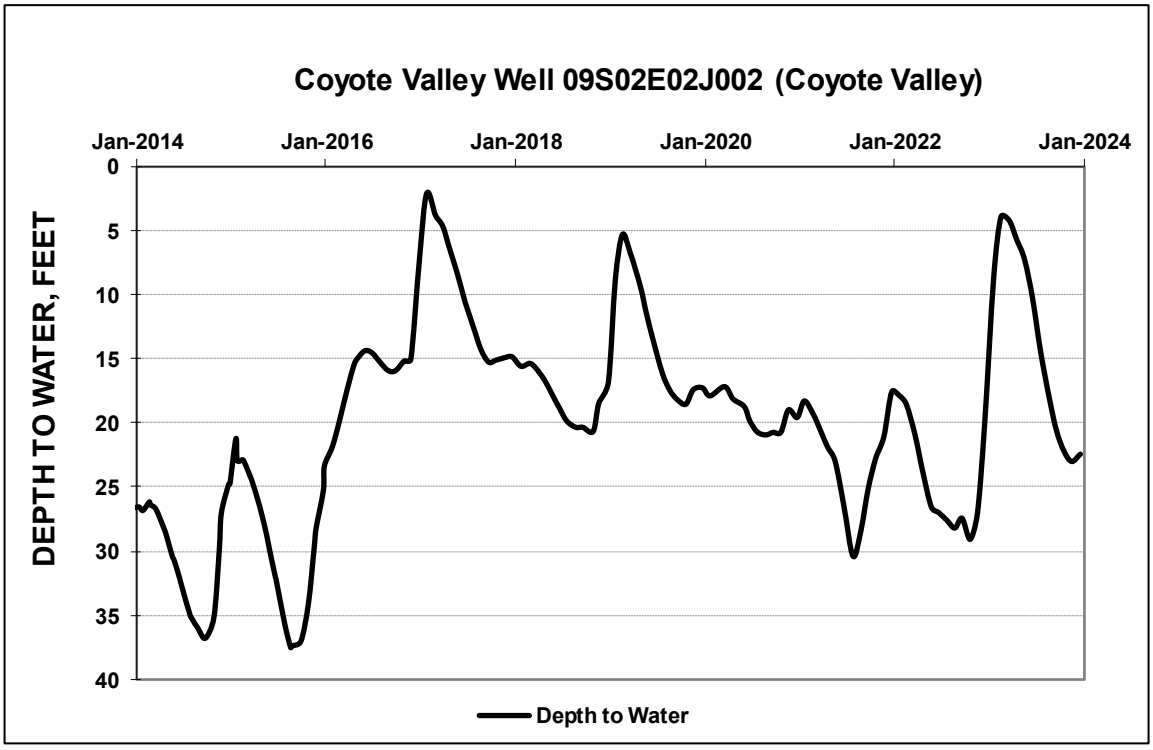
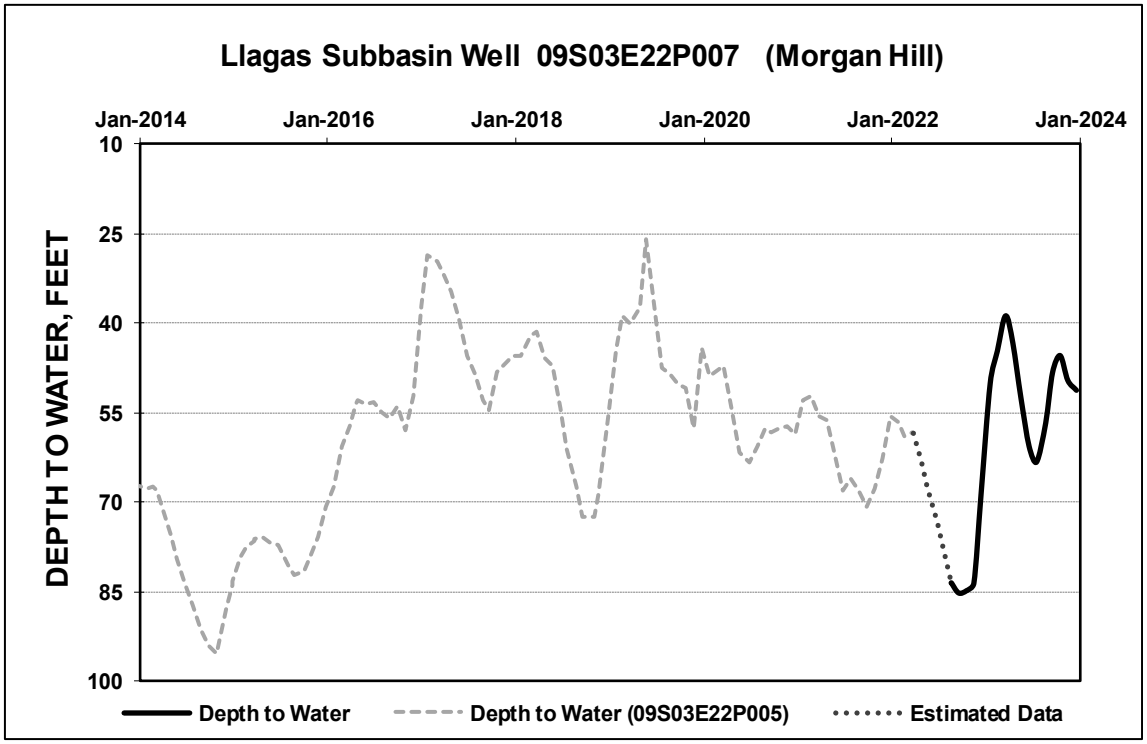


Figure 16. Morgan Hill Well Hydrograph



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)

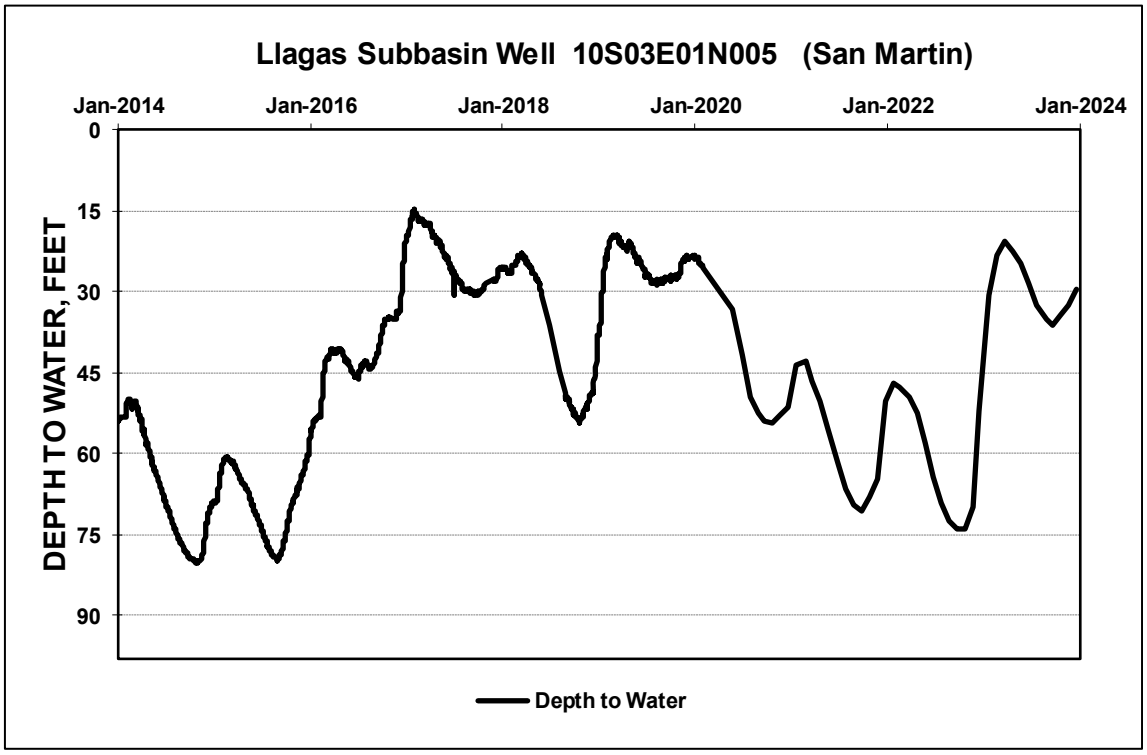


Figure 18. Gilroy Well Hydrograph