Groundwater Condition

REPORT | SANTA CLARA COUNTY

February 2022

SUMMARY

This report summarizes January 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 conditions have improved recently due to normal seasonal recovery, emergency imported water supplies, and decreased water use. However, groundwater levels in many monitoring wells are still lower compared to this time last year. While current groundwater storage is estimated to be in lower range of Stage 1 (Normal) of the Water Shortage Contingency Plan, groundwater levels and storage are expected to decline with continued dry conditions.

- January managed recharge is 65% to 144% of the five-year average.
- January to December pumping is 97% to 121% of the five-year average.
- Groundwater index well water levels for January 2022 are 1 to 4 feet higher than the January levels of 2021.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
January 2022 managed recharge estimate	5,300	800	1,700
January 2022 managed recharge as % of five-year average	144%	65%	140%
December 2021 pumping estimate	5,100	800	2,600
January to December 2021 pumping estimate	79,200	13,200	40,700
January to December 2021 pumping as % of five-year average	121%	118%	97%
Current index well groundwater levels compared to January of 2021	4 feet higher	2 feet higher	1 foot higher

All volumes are in acre-feet.

Contact Us For questions, contact **Roger Pierno** at **(408) 630-2738**

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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).
- For January, managed recharge was higher in the Santa Clara Plain and the Llagas Subbasin, but lower in the Coyote Valley than the average of the previous five years.
- 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

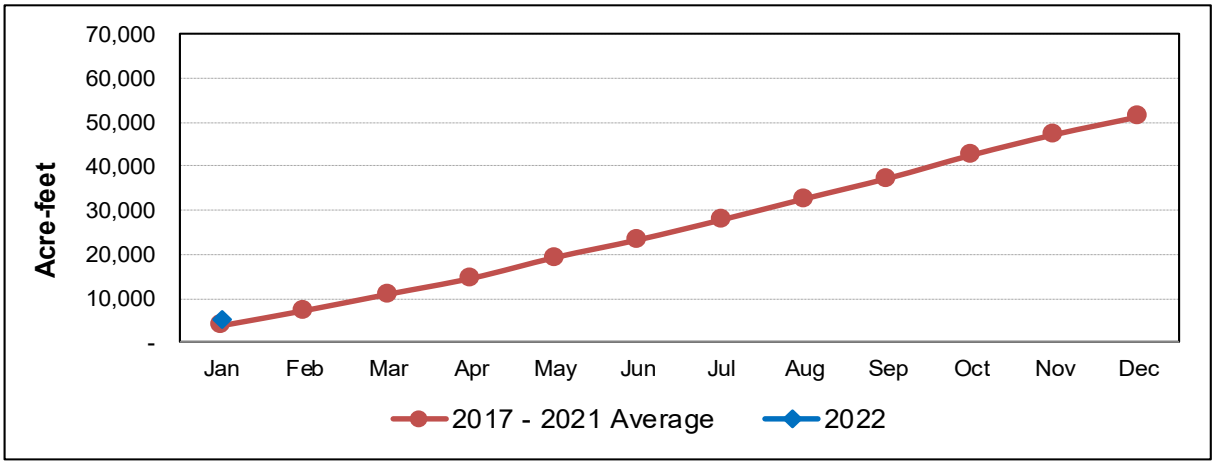


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

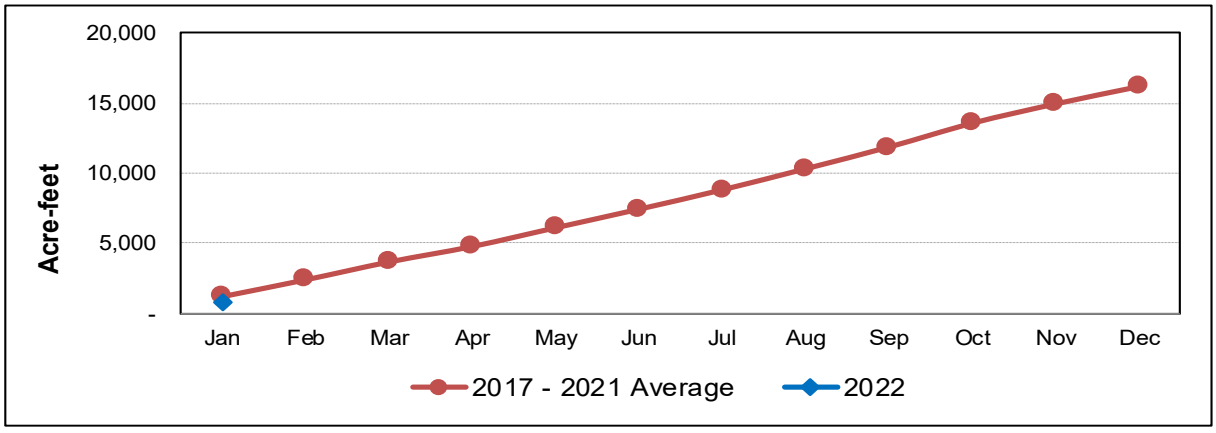
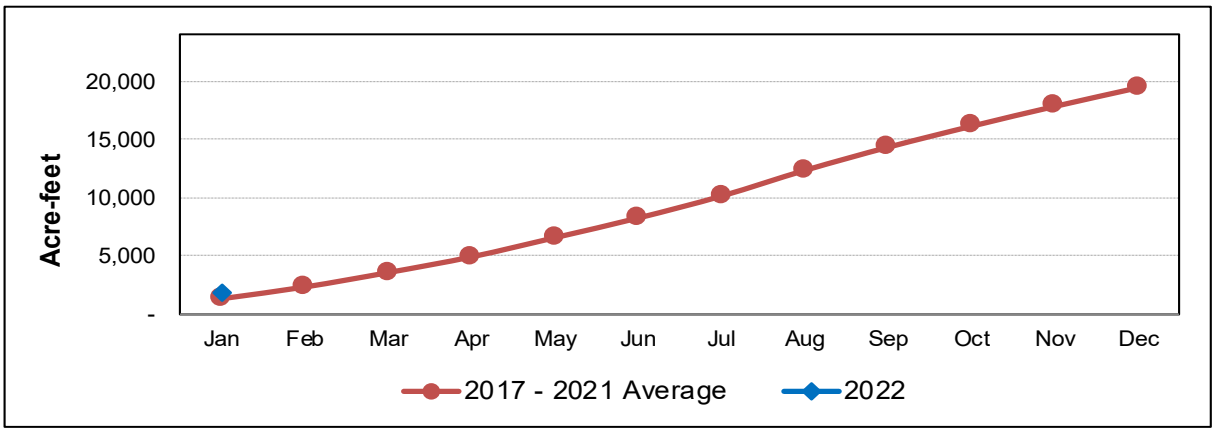


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



Groundwater Pumping

- Figures 4, 5, and 6 show the cumulative groundwater pumping for 2021 compared to the average of the previous five years (2016 – 2020).
- Pumping estimates for January to December 2021 are based on monthly reporting pumping data and pumping data from water retailers. December is most recent available pumping.
- Pumping for 2021 was higher than the average of the previous five years in the Santa Clara Plain and Coyote Valley but slightly lower in the Llagas Subbasin.

Figure 4. Estimated Cumulative Santa Clara Plain Pumping

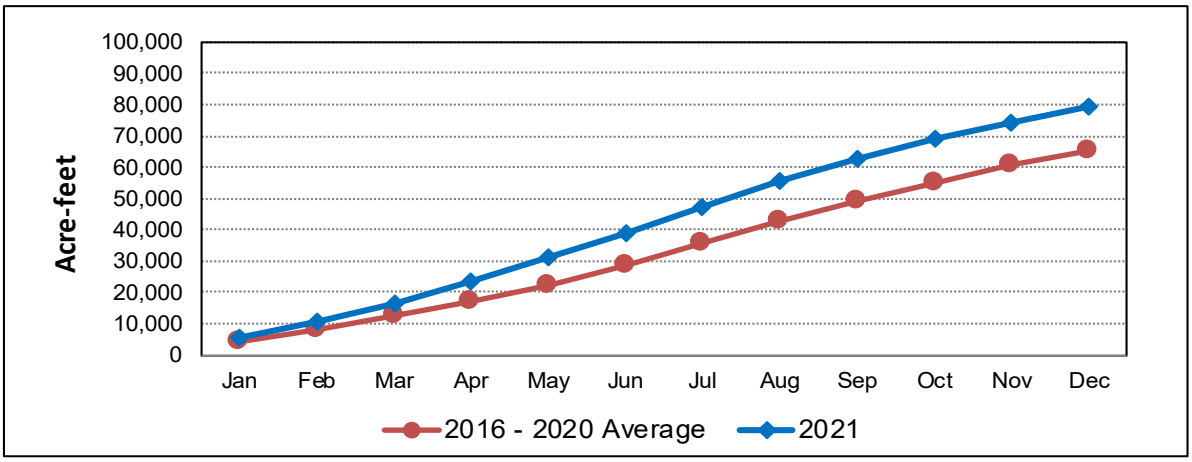


Figure 5. Estimated Cumulative Coyote Valley Pumping

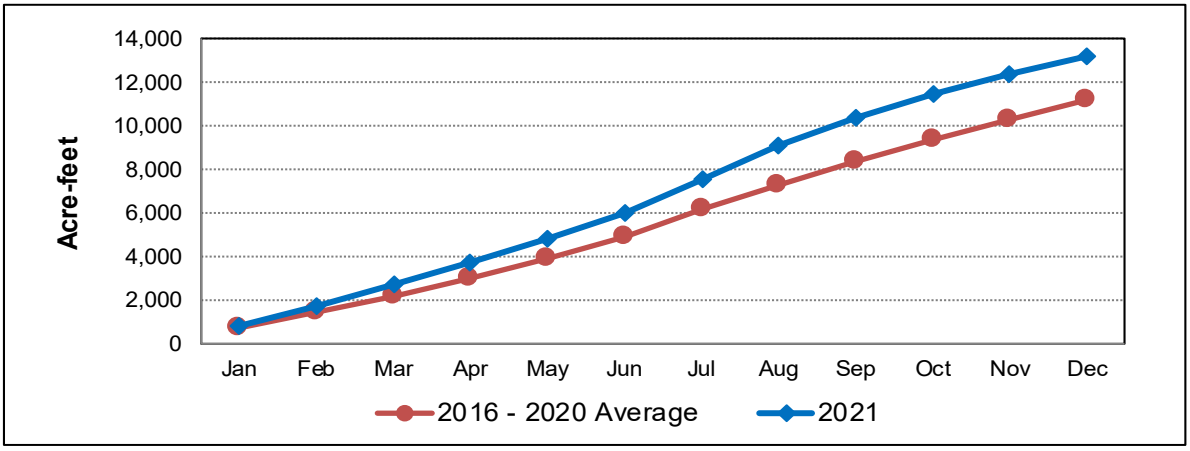
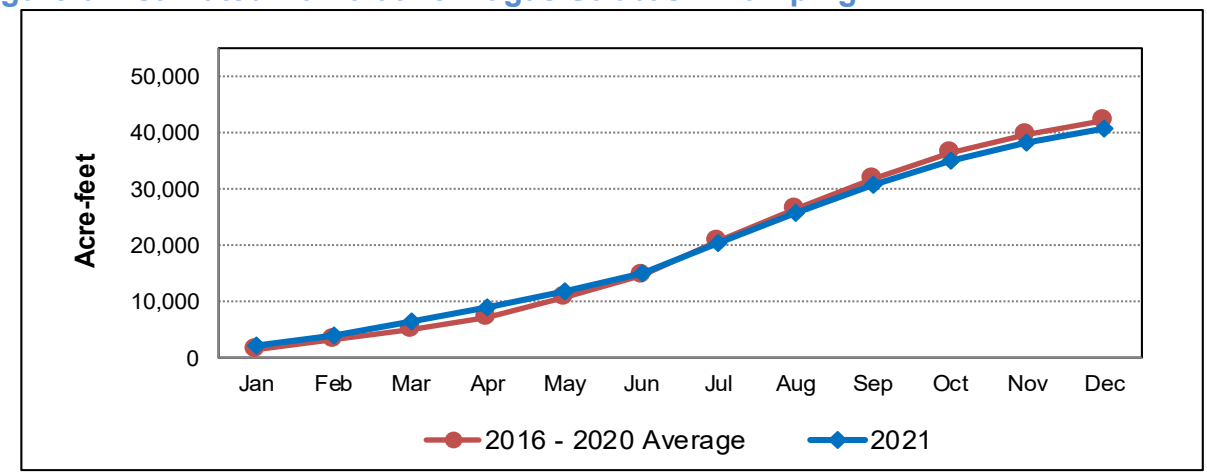


Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels throughout the county have increased over the last several months, though many are lower than this time last year. All current water levels are lower than the January average of the previous 5 years but they are all higher than the lowest levels 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

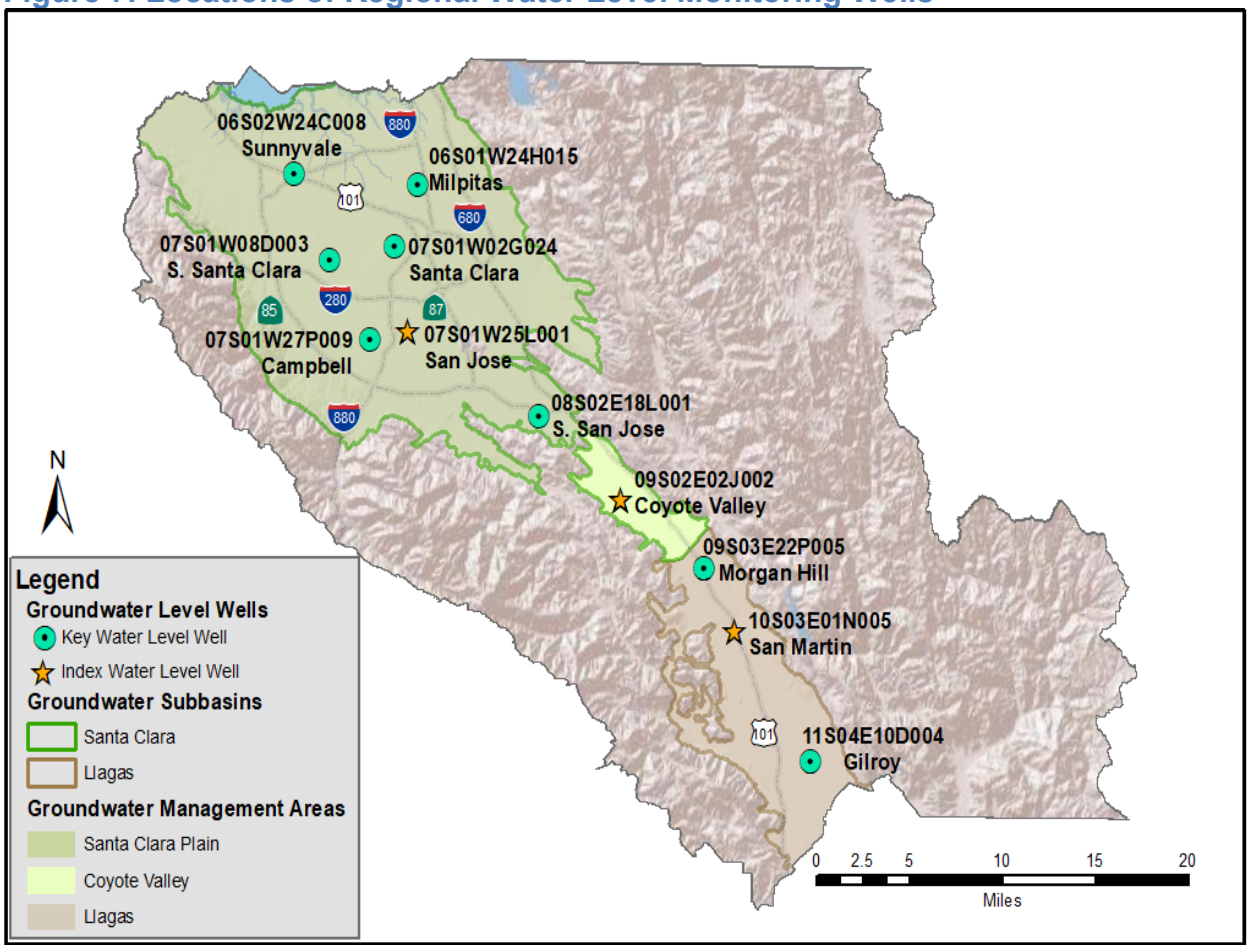


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Table 2. Comparisons to January 2022 Depth to Water (DTW) in Regional Wells

Location	State Well ID	January 2022 DTW (feet)	January 2022 DTW (feet) Compared to:			
			December 2021	January 2021	Prior 5-year Average for January	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-11 (artesian)	3	**-6**	-16	32
Sunnyvale	06S02W24C008	-28 (artesian)	0	**-8**	-10	7
San Jose	07S01W25L001	94	7	4	-10	44
Santa Clara	07S01W02G024	18	16	9	-10	73
S. Santa Clara	07S01W08D003	78	8	**-1**	-16	67
Campbell	07S01W27P009	125	17	13	-6	72
S. San Jose	08S02E18L001	30	3	**-7**	-11	40
Coyote Valley	09S02E02J002	18	3	2	-2	20
Morgan Hill	09S03E22P005	56	7	3	-6	40
San Martin	10S03E01N005	50	14	1	-16	30
Gilroy	11S04E10D004	19	6	**-2**	-6	44

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.

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

Figure 8. Milpitas Well Hydrograph

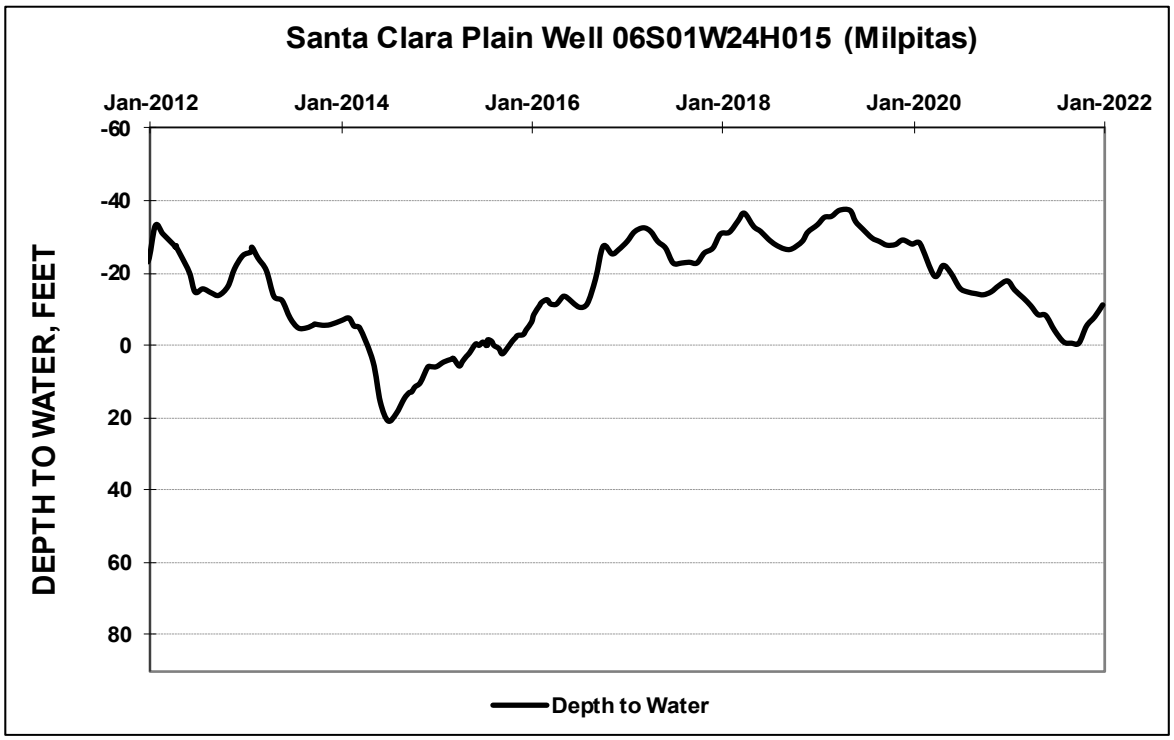


Figure 9. Sunnyvale Well Hydrograph

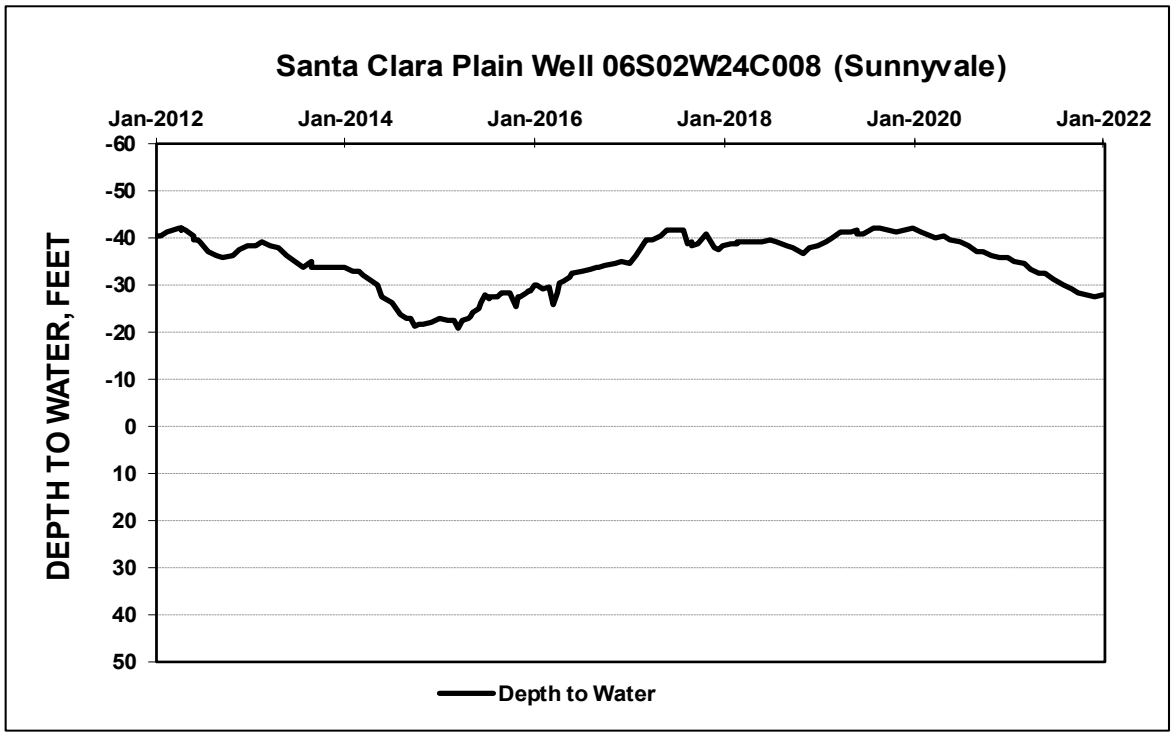


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

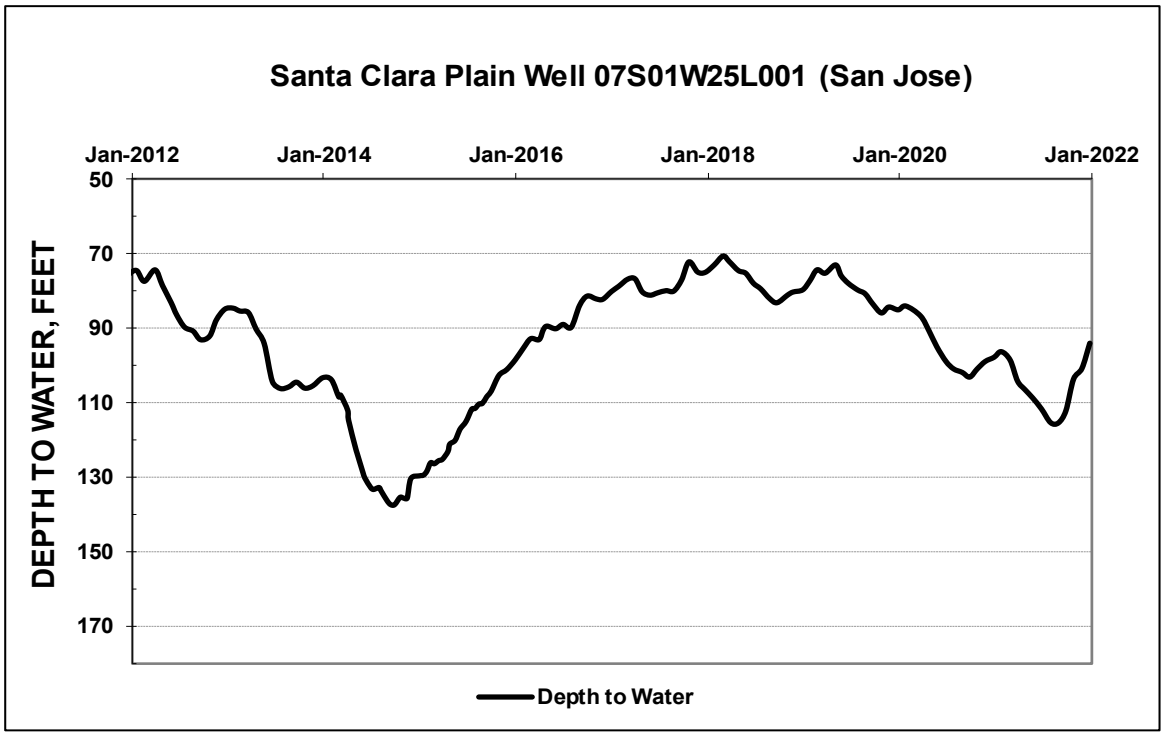


Figure 11. Santa Clara Well Hydrograph

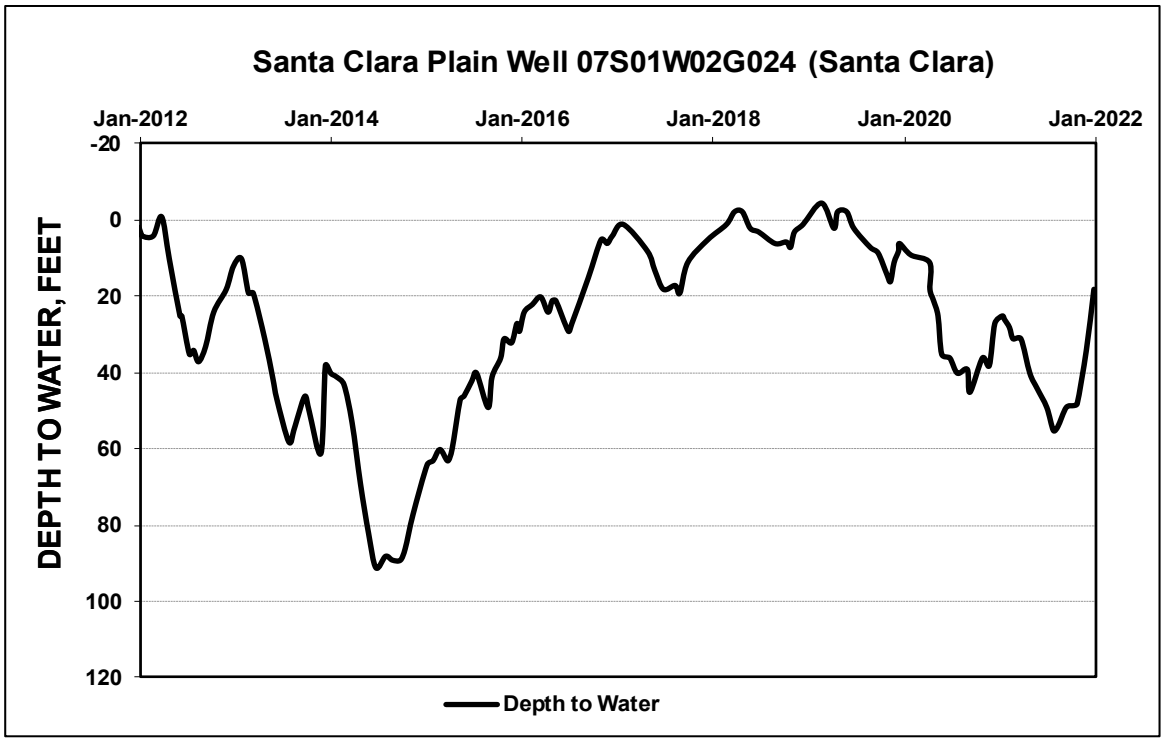


Figure 12. South Santa Clara Well Hydrograph

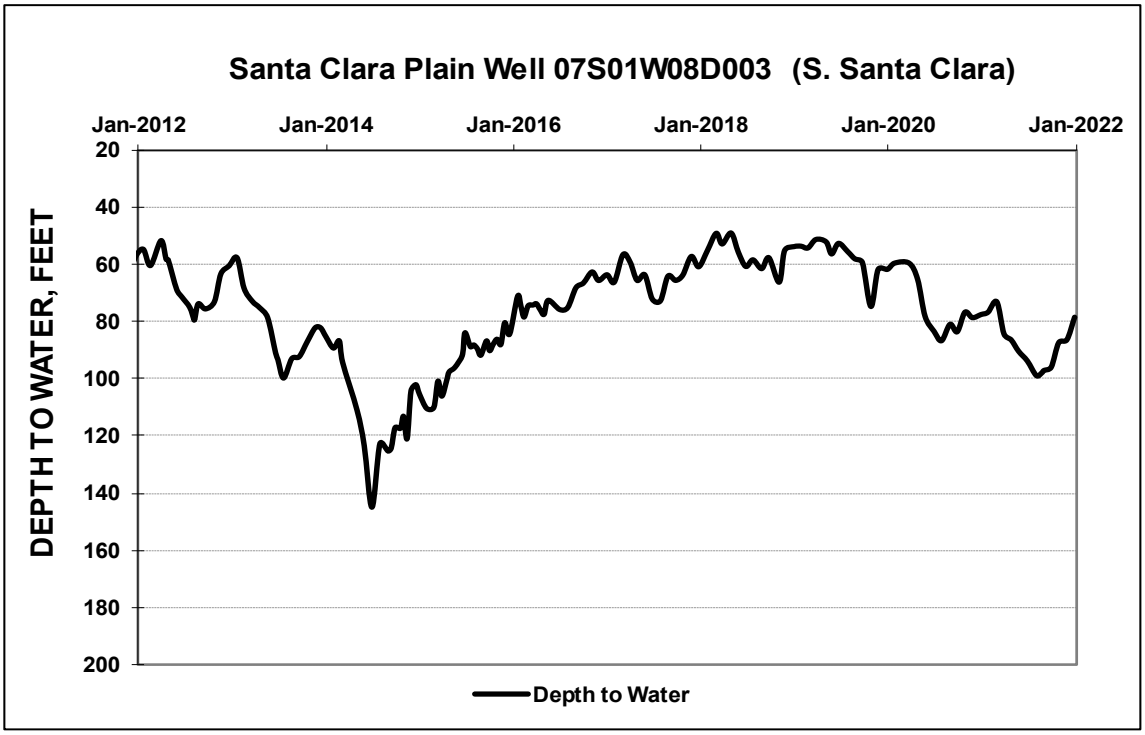
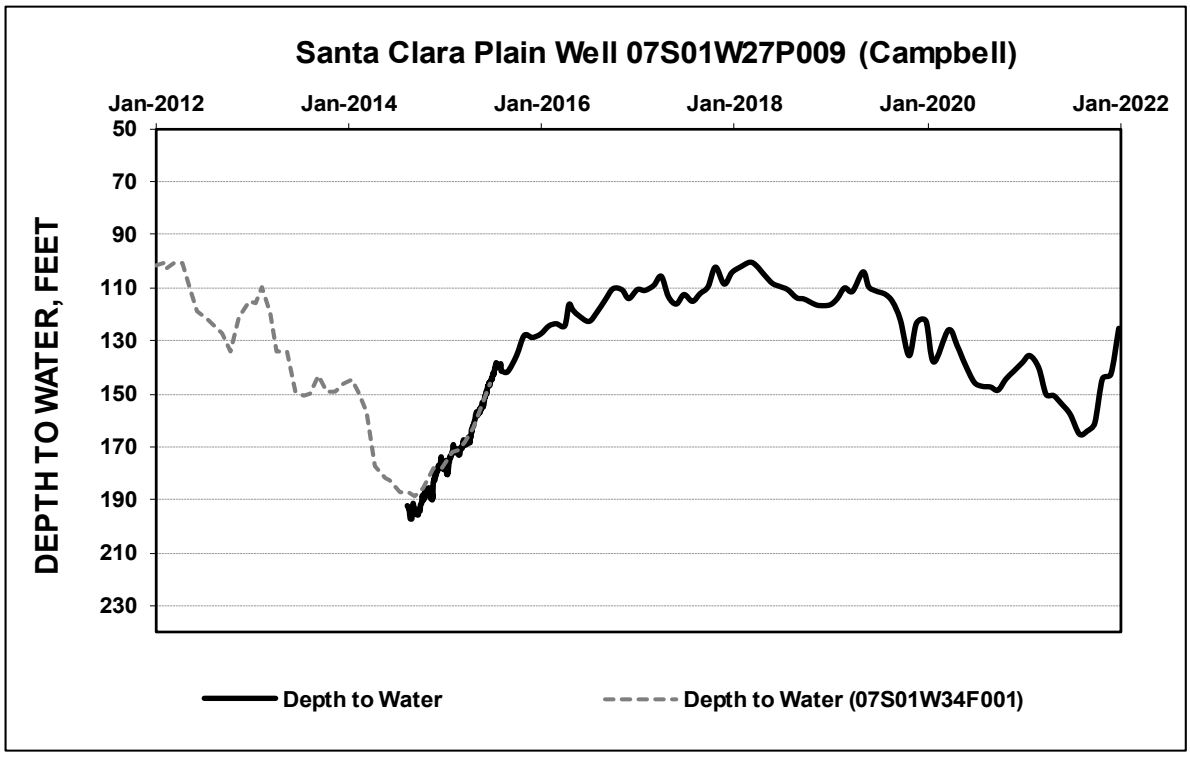


Figure 13. Campbell Well Hydrograph



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

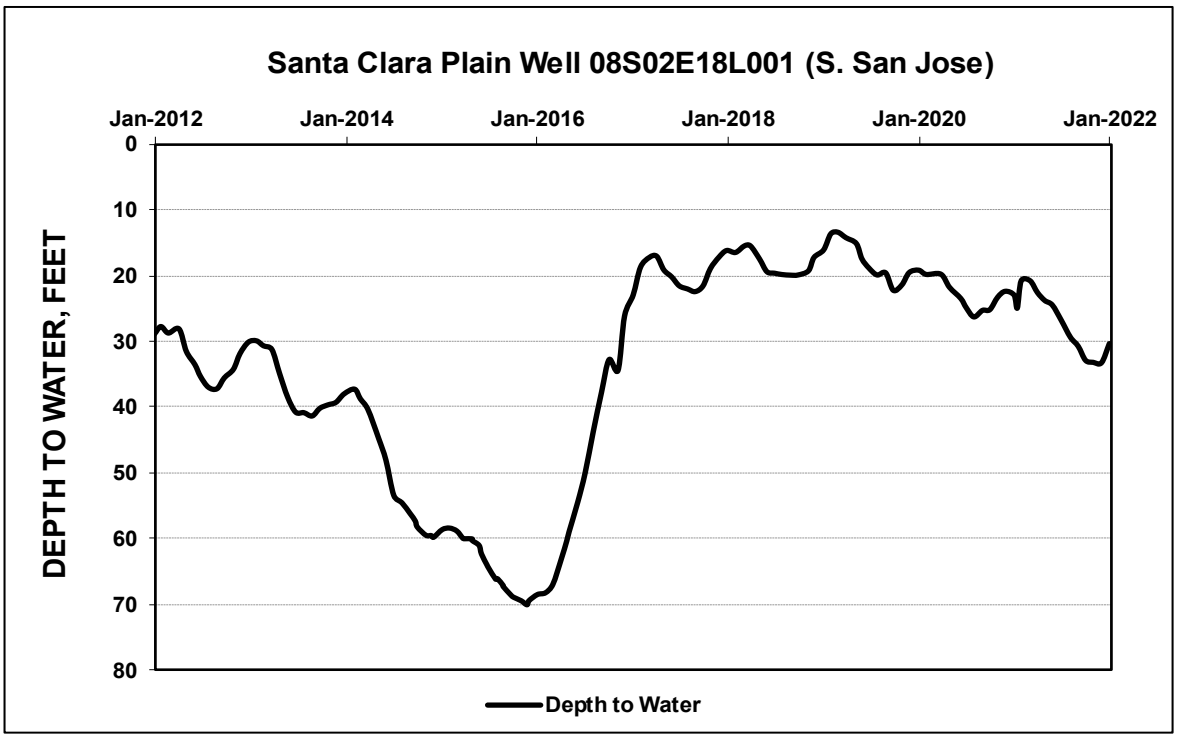


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

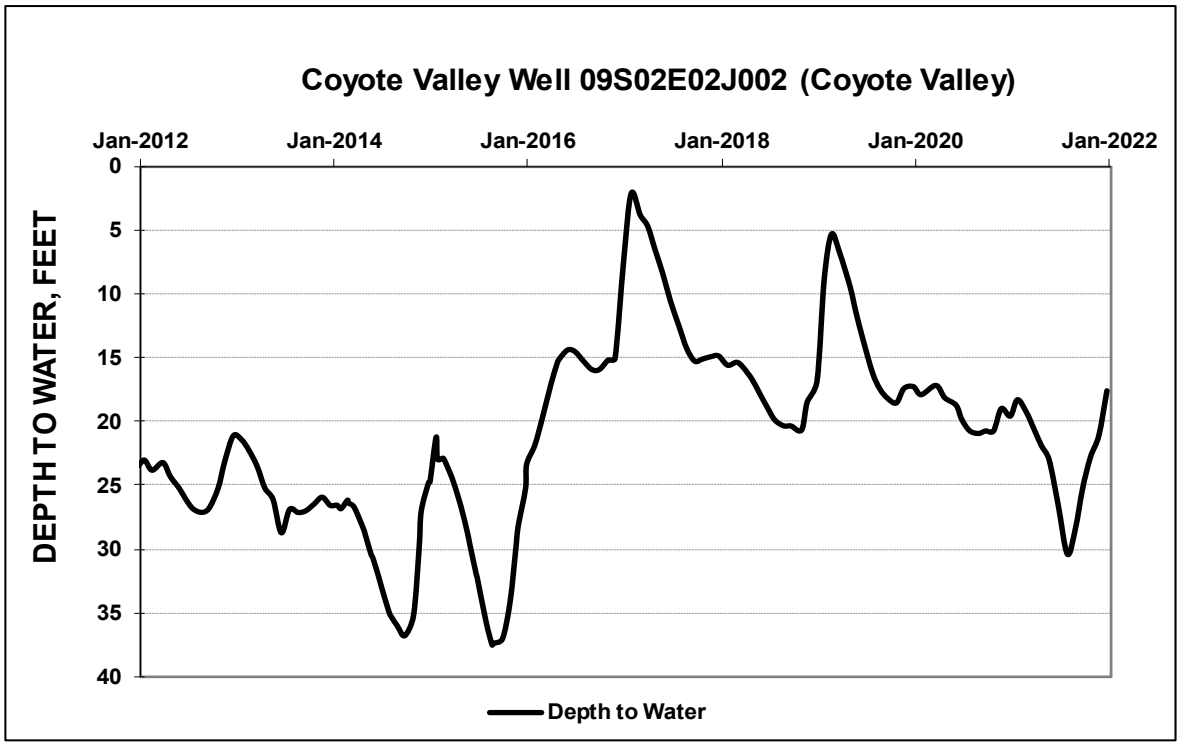


Figure 16. Morgan Hill Well Hydrograph

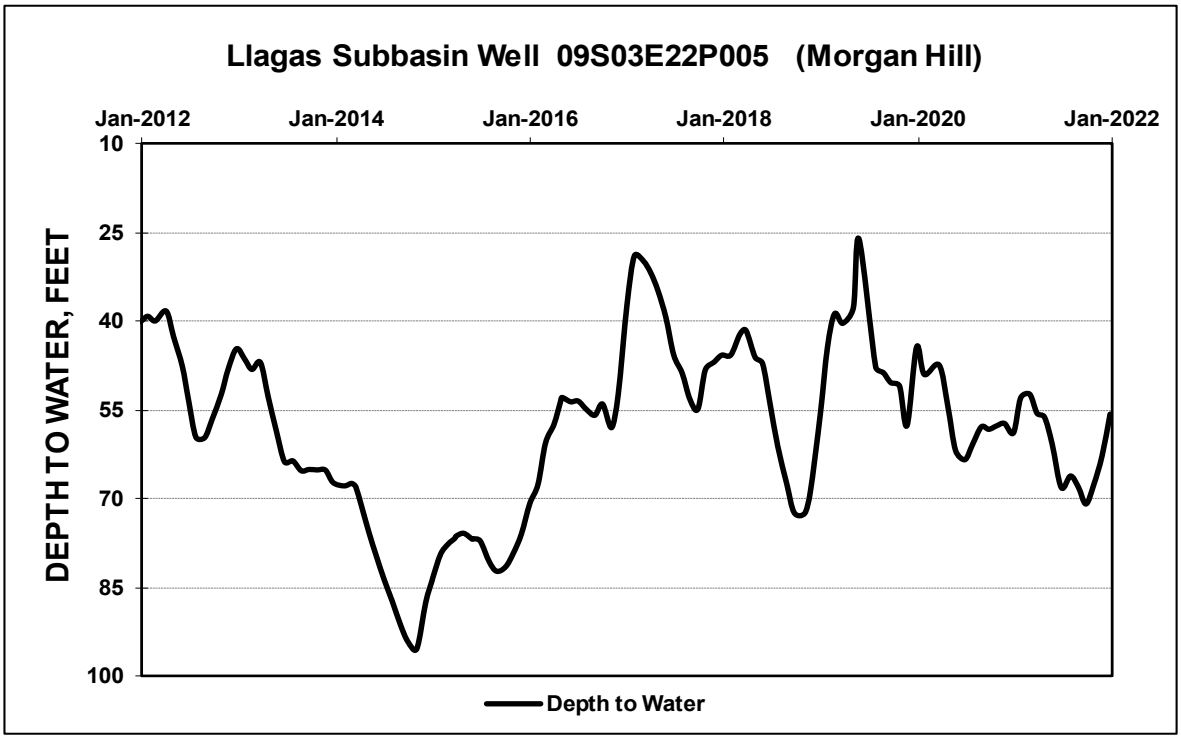


Figure 17. San Martin Well Hydrograph (Index Well for the Llagas Subbasin)

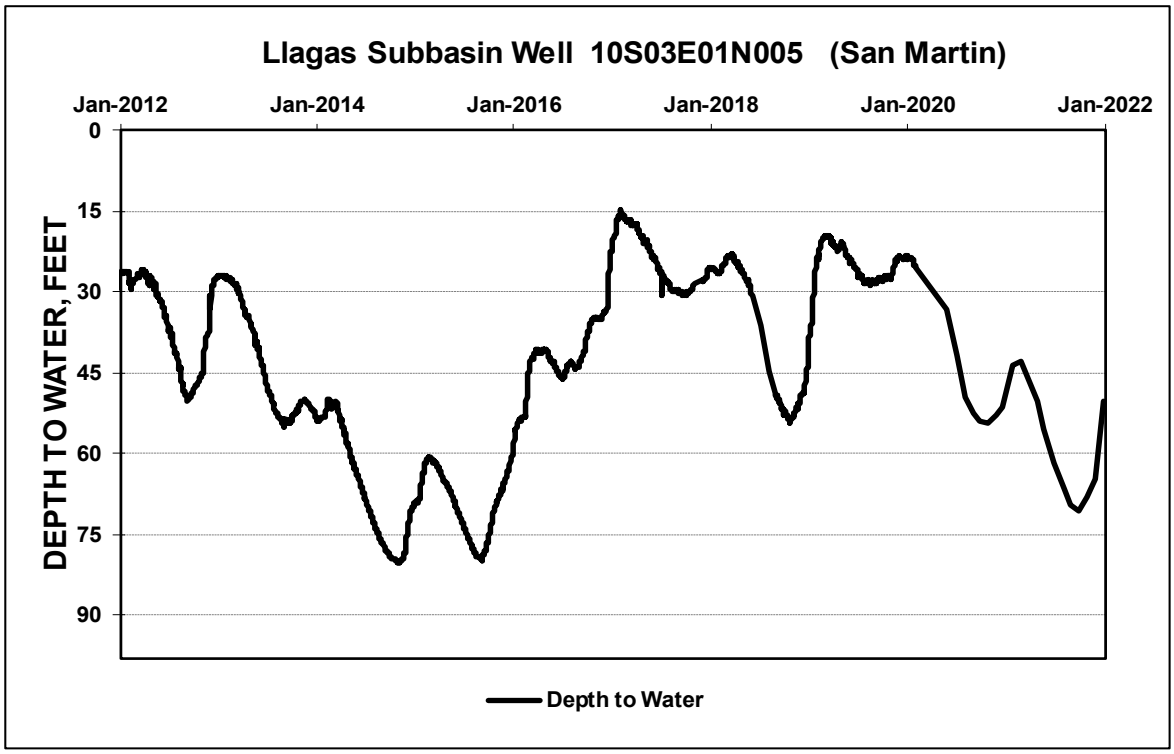


Figure 18. Gilroy Well Hydrograph