Groundwater Condition

REPORT | SANTA CLARA COUNTY

May 2022

SUMMARY

This report summarizes April 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.

Due to Valley Water securing emergency imported water, groundwater conditions remain relatively good despite the ongoing drought. However, seasonal water level decline has begun, with greater than average declines expected this year as the drought continues. Current water levels in most wells are equal to or lower than those of April 2021 and are expected to end this year lower than last year. Groundwater storage at the end of 2022 is projected to be in Stage 2 (Alert) of the Water Shortage Contingency Plan, and Valley Water continues to plan for dry and rapidly evolving conditions.

- April managed recharge is 96% to 144% of the five-year average.
- March pumping is 101% to 111% of the five-year average.
- Groundwater levels in index wells for April 2022 range from 11 feet higher to 3 feet lower than the April levels of 2021.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
April 2022 managed recharge estimate	1,300	700	2,100
YTD managed recharge estimate	13,700	3,500	6,900
YTD managed recharge as % of five-year average	96%	74%	144%
March 2022 pumping estimate	5,800	800	2,200
YTD pumping estimate	14,600	2,300	5,600
March 2022 pumping as % of five-year average	111%	101%	107%
Current index well groundwater levels compared to April of 2021	11 feet higher	Same Level	3 feet lower

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

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

Valley Water
Clean Water • Healthy Environment • Flood Protection

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 April, managed recharge was higher in the Llagas Subbasin, but lower in the Santa Clara Plain and 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

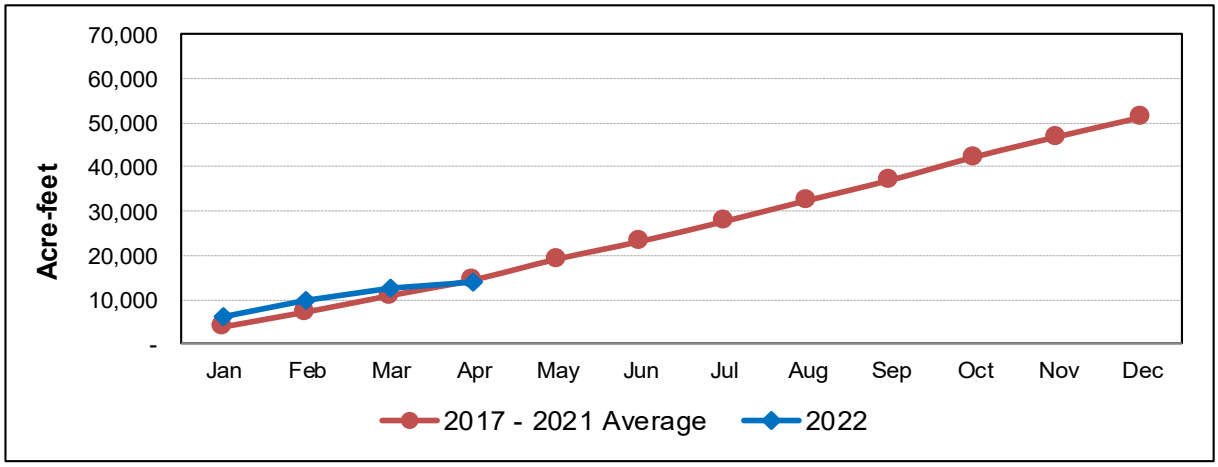


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

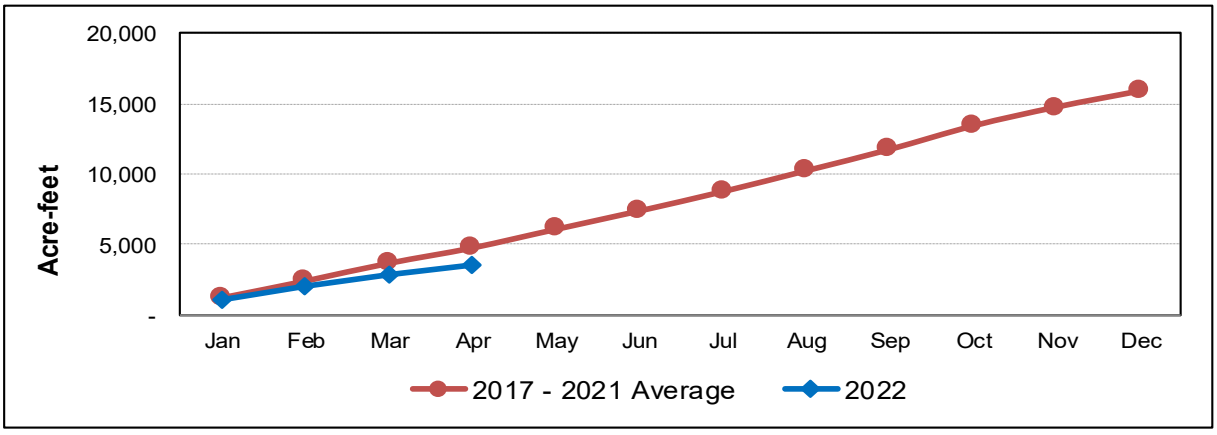
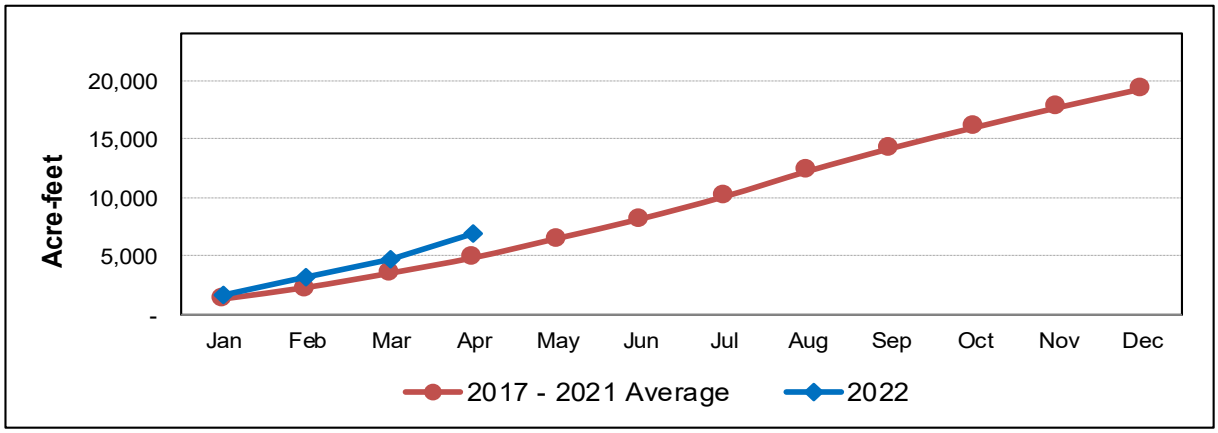


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



Groundwater Pumping

- Figures 4, 5, and 6 show the cumulative groundwater pumping for 2022 compared to the average of the previous five years (2017 – 2021).
- Pumping estimates for March 2022 are based on monthly reporting pumping data and pumping data from water retailers. March is most recent available pumping.
- Compared to the average of the previous five years, pumping for March 2022 was essentially the same in the Coyote Valley and higher in the Santa Clara Plain and the Llagas Subbasin.

Figure 4. Estimated Cumulative Santa Clara Plain Pumping

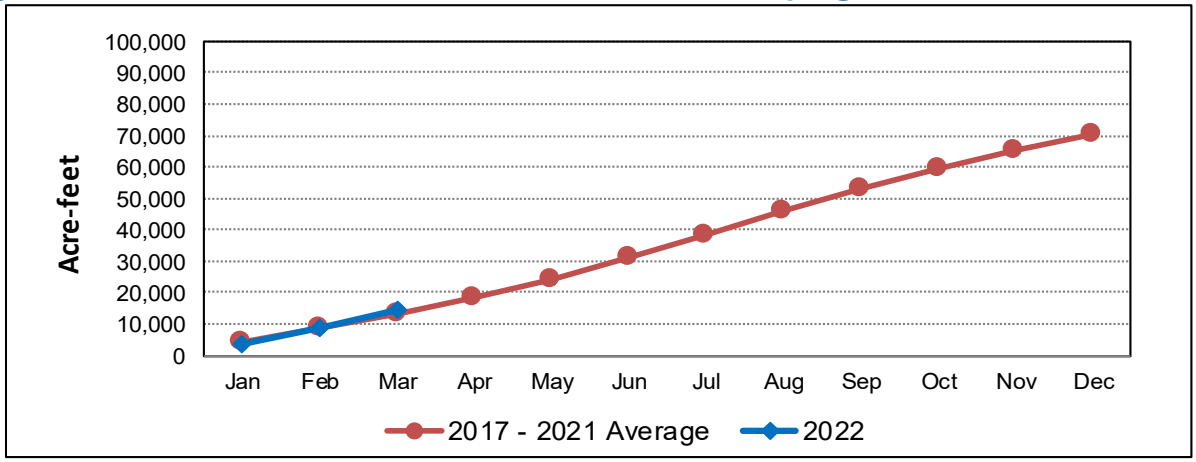


Figure 5. Estimated Cumulative Coyote Valley Pumping

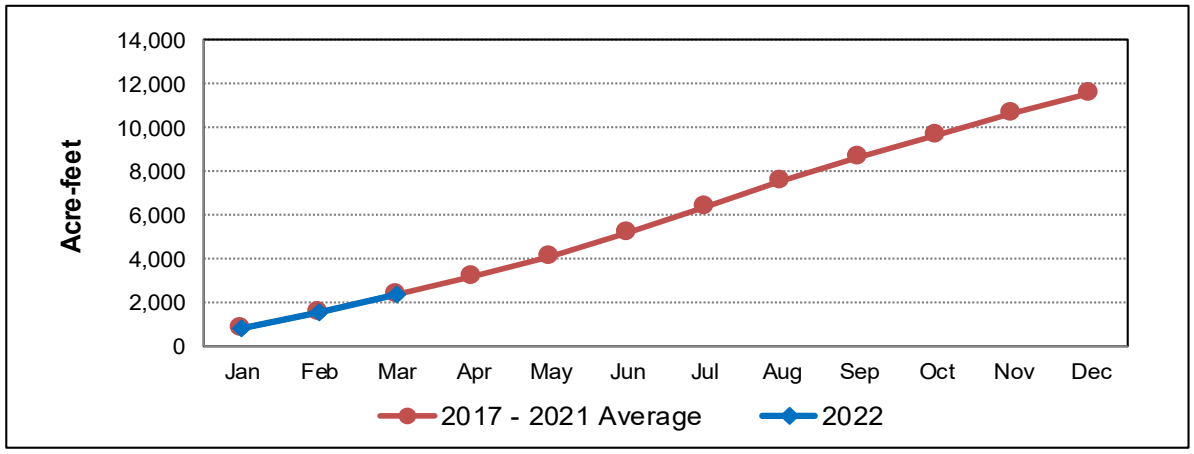
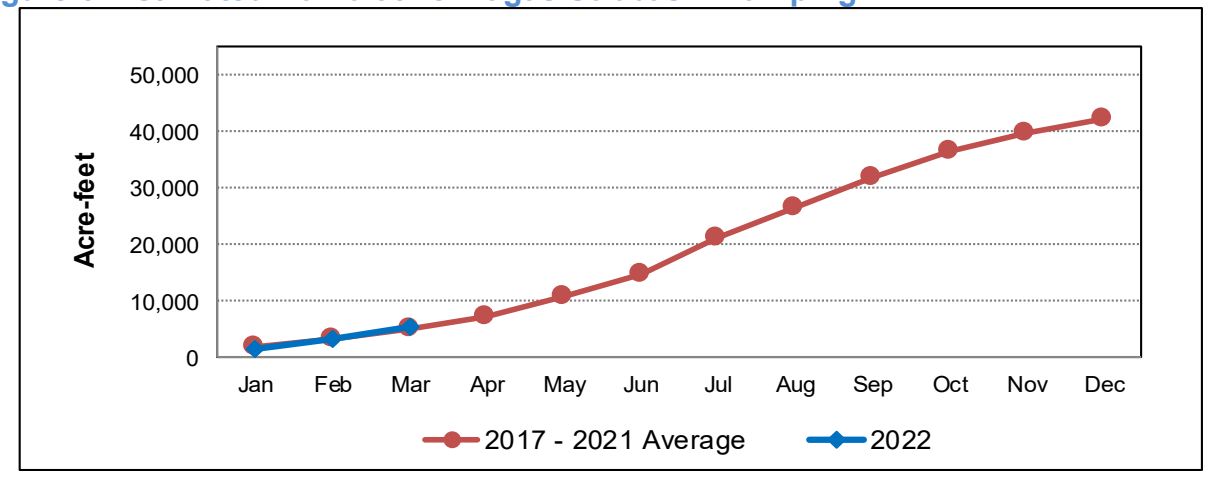


Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Groundwater levels in regional monitoring wells throughout the county have begun their seasonal declines. Most current water levels are at or below the levels at this time last year and all are lower than the average of April for the previous 5 years. However, 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

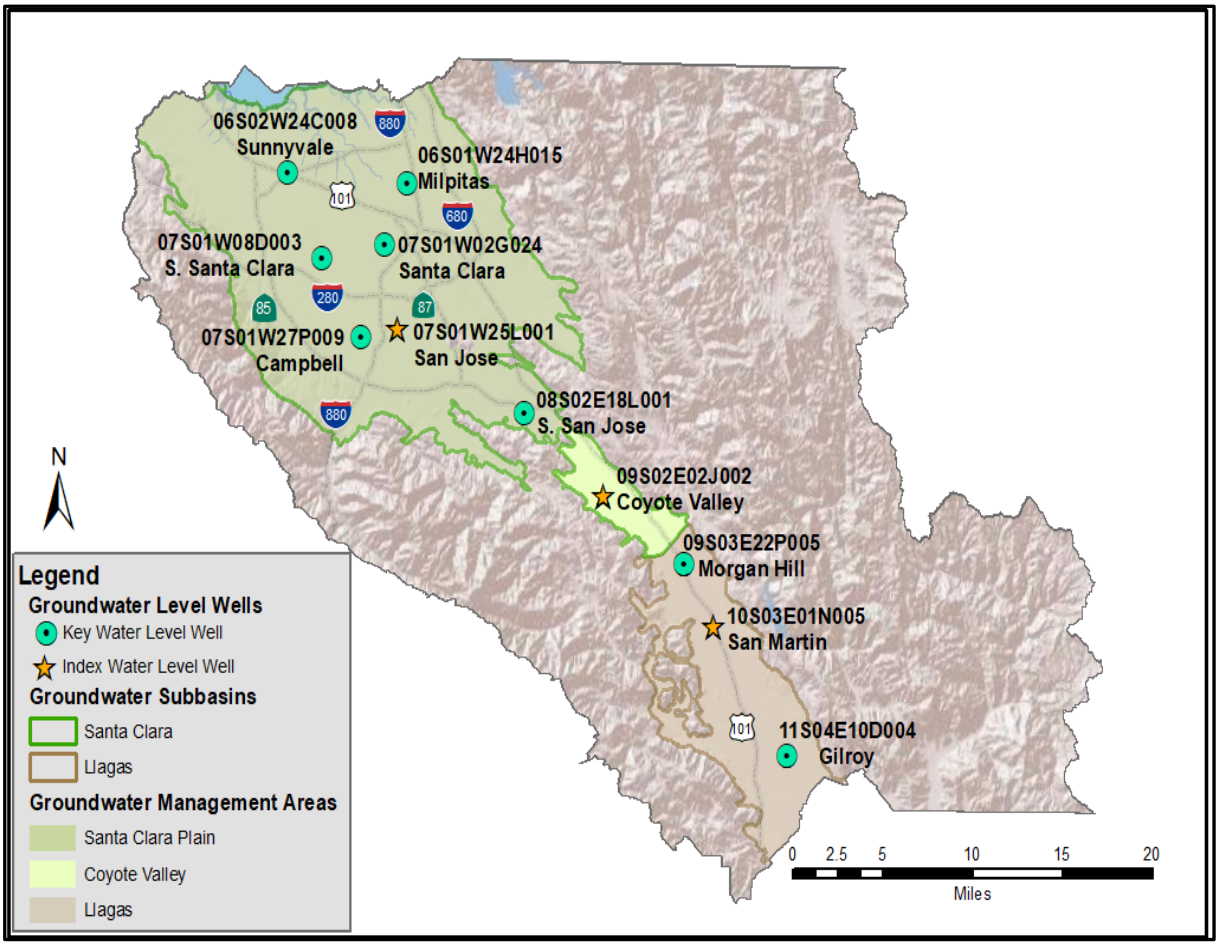


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Table 2. Comparisons to April 2022 Depth to Water (DTW) in Regional Wells

Location	State Well ID	April 2022 DTW (feet)	Difference in April 2022 DTW (feet) Compared to:			
			March 2022	April 2021	Prior 5-year Average for April	Maximum DTW during 2012–2016 drought
Milpitas	06S01W24H015	-11 (artesian)	0	0	-16	32
Sunnyvale	06S02W24C008	-26 (artesian)	-1	-7	-13	5
San Jose	07S01W25L001	94	0	11	-11	44
Santa Clara	07S01W02G024	27	-2	4	-18	64
S. Santa Clara	07S01W08D003	86	-1	-2	-25	59
Campbell	07S01W27P009	130	-3	21	-11	68
S. San Jose	08S02E18L001	32	-1	-9	-14	38
Coyote Valley	09S02E02J002	21	-2	0	-8	17
Morgan Hill	09S03E22P005	58	1	-3	-15	37
San Martin	10S03E01N005	50	-2	-3	-23	31
Gilroy	11S04E10D004	23	NA	-3	-11	40

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. Well 11S04E10D004 was pumping in March 2022 so no comparison was possible.

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

Figure 8. Milpitas Well Hydrograph

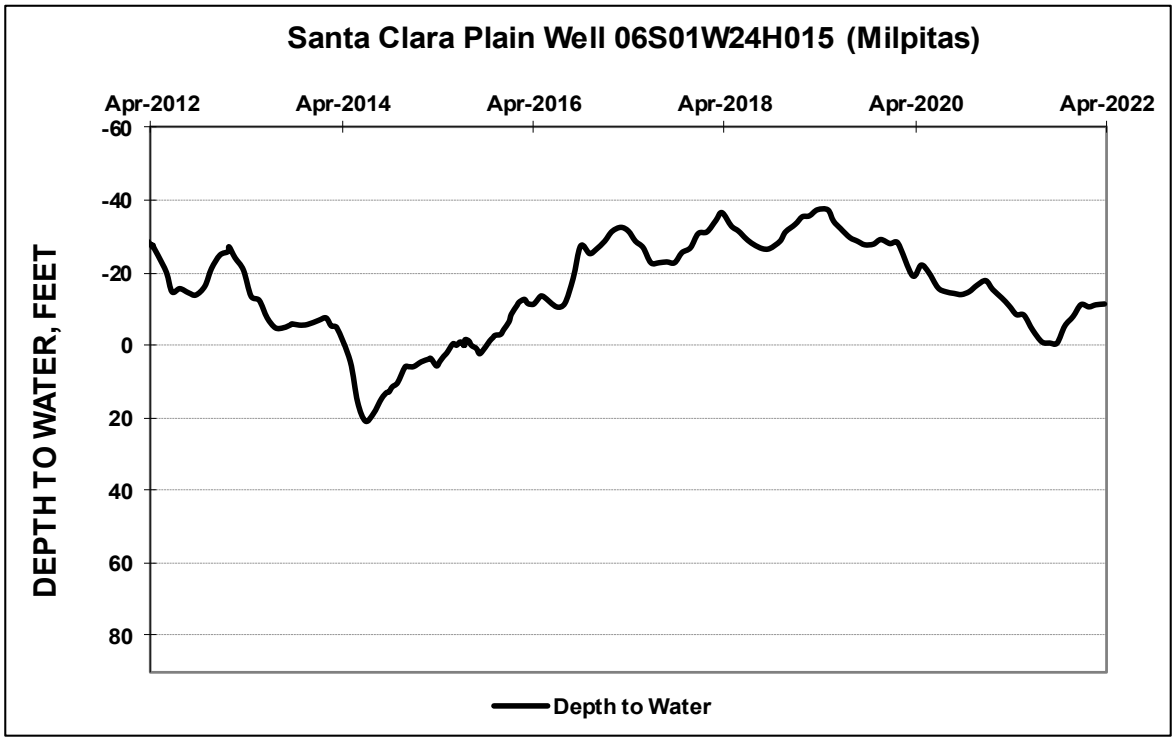


Figure 9. Sunnyvale Well Hydrograph

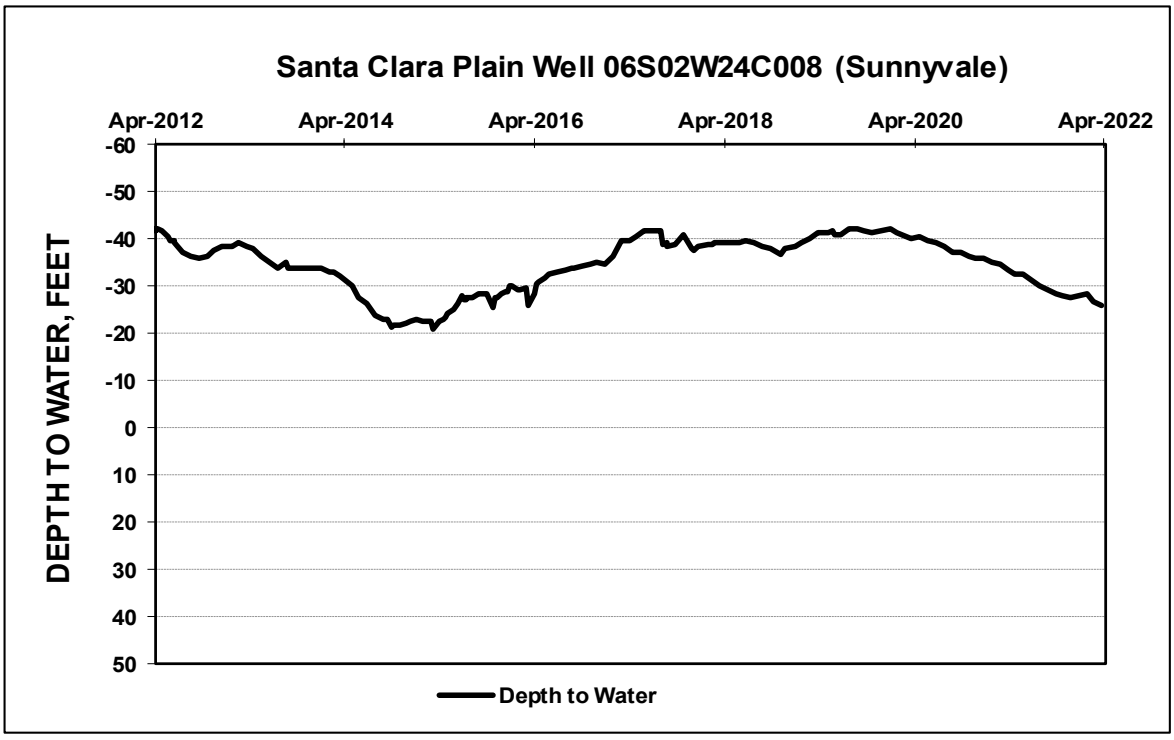


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

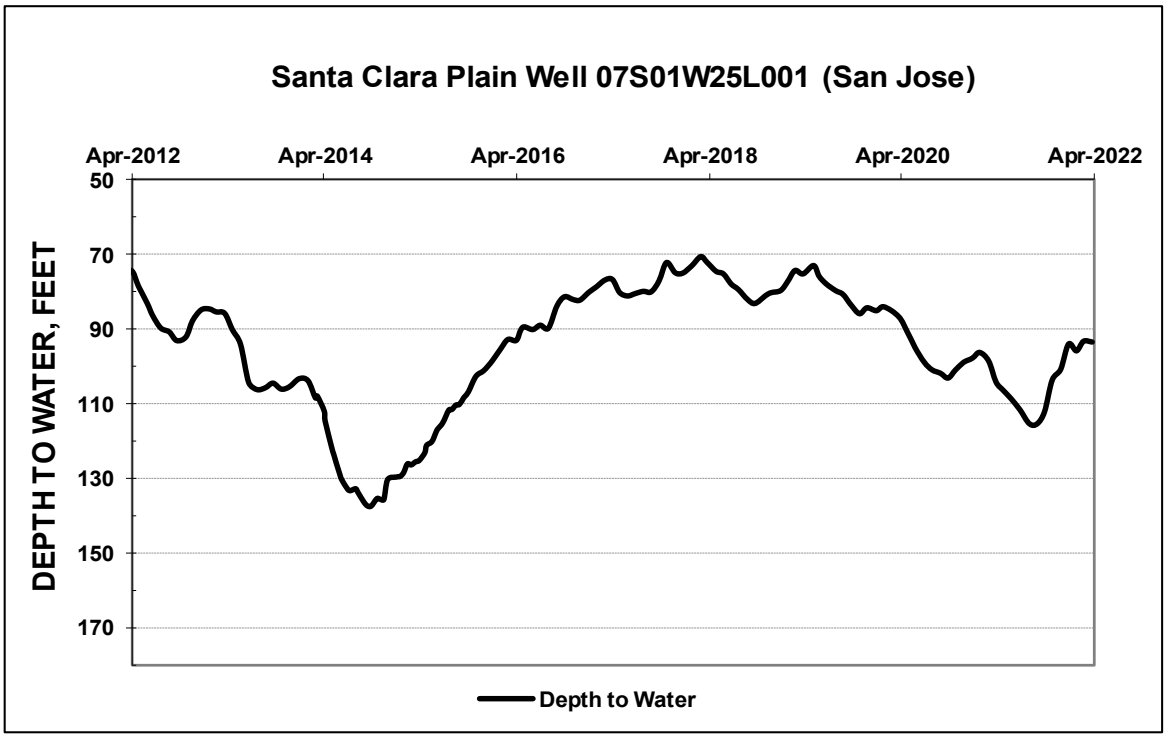


Figure 11. Santa Clara Well Hydrograph

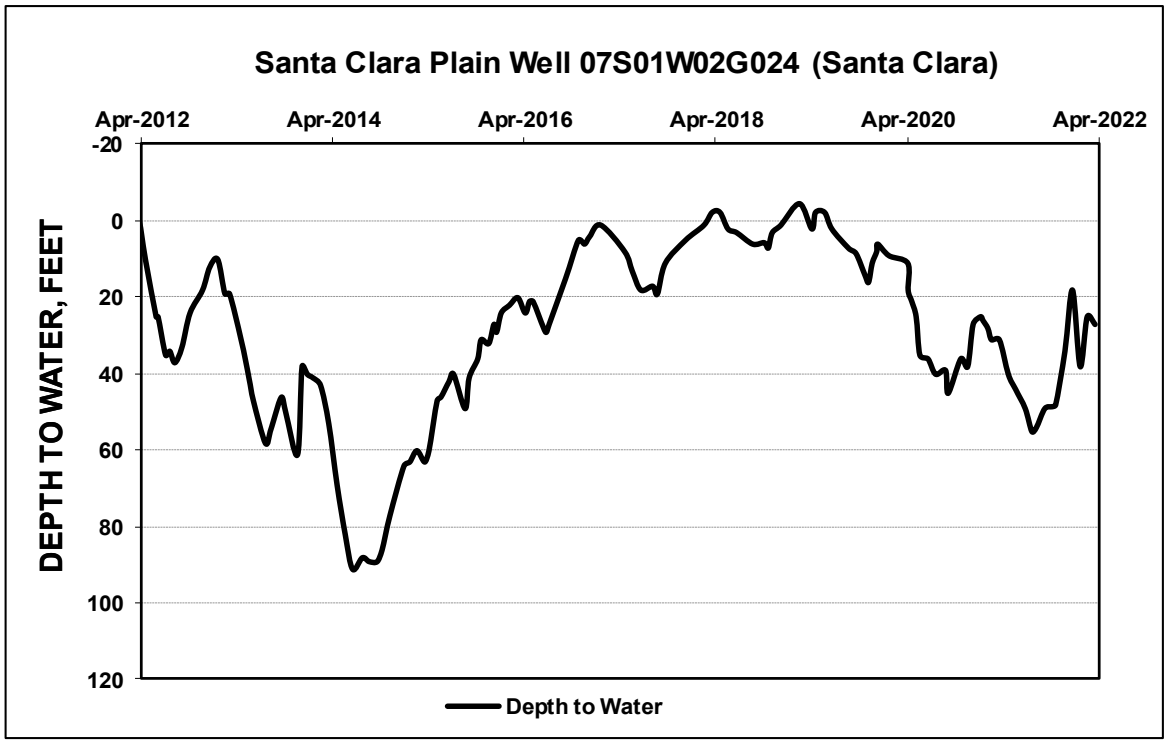


Figure 12. South Santa Clara Well Hydrograph

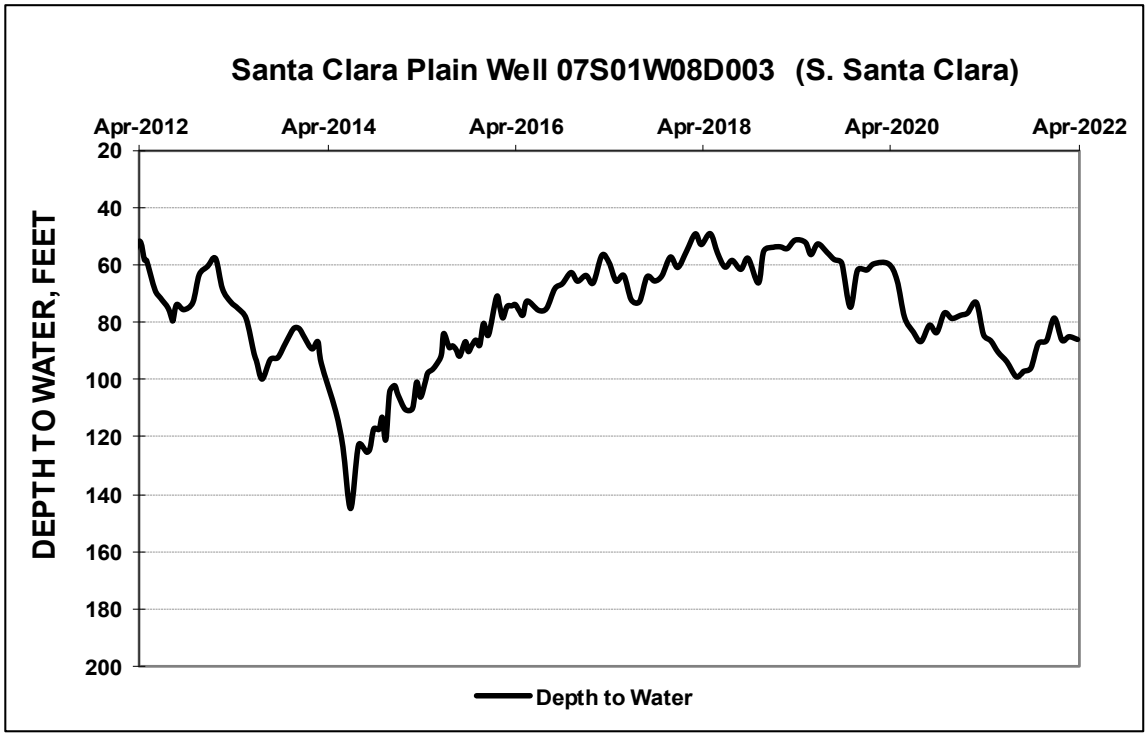
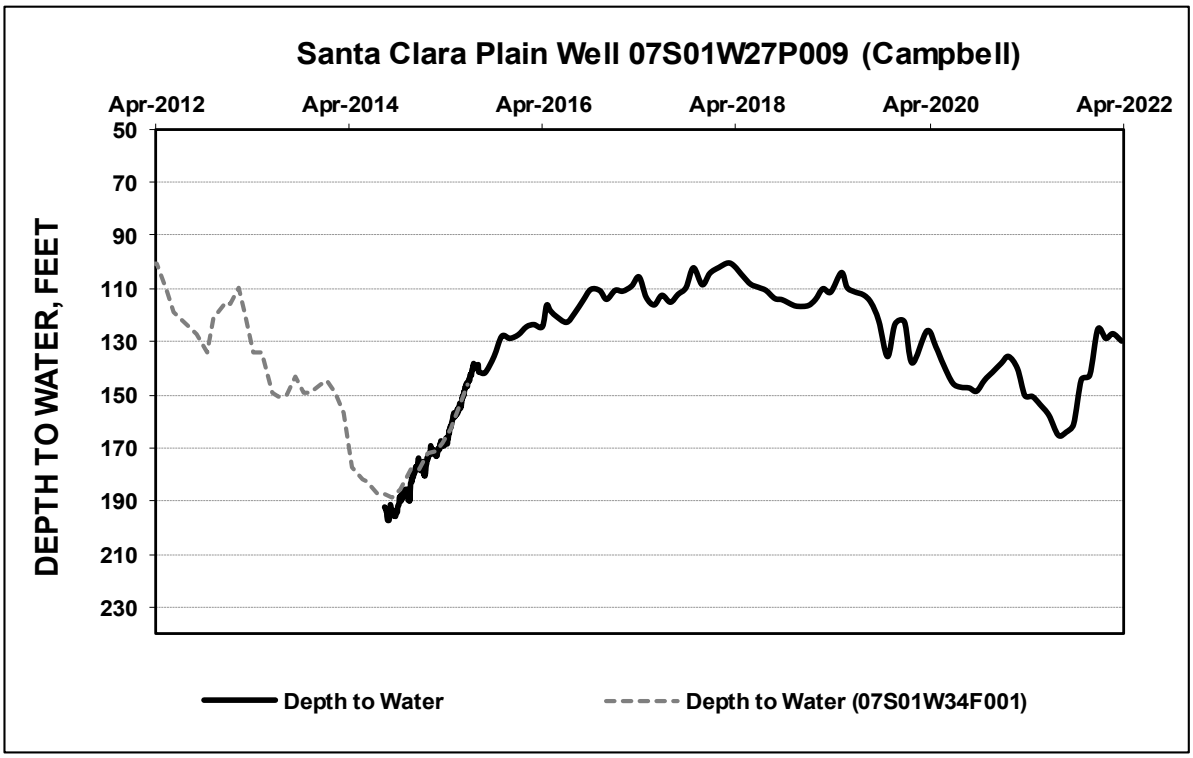


Figure 13. Campbell Well Hydrograph



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

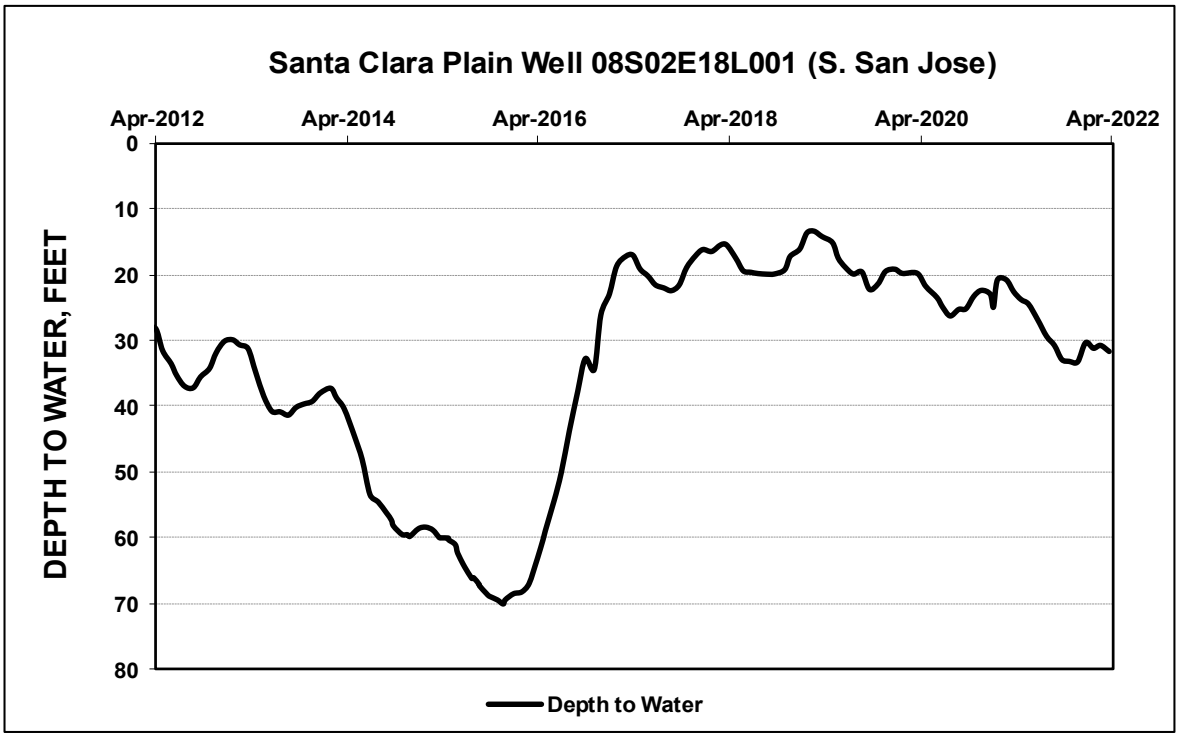


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

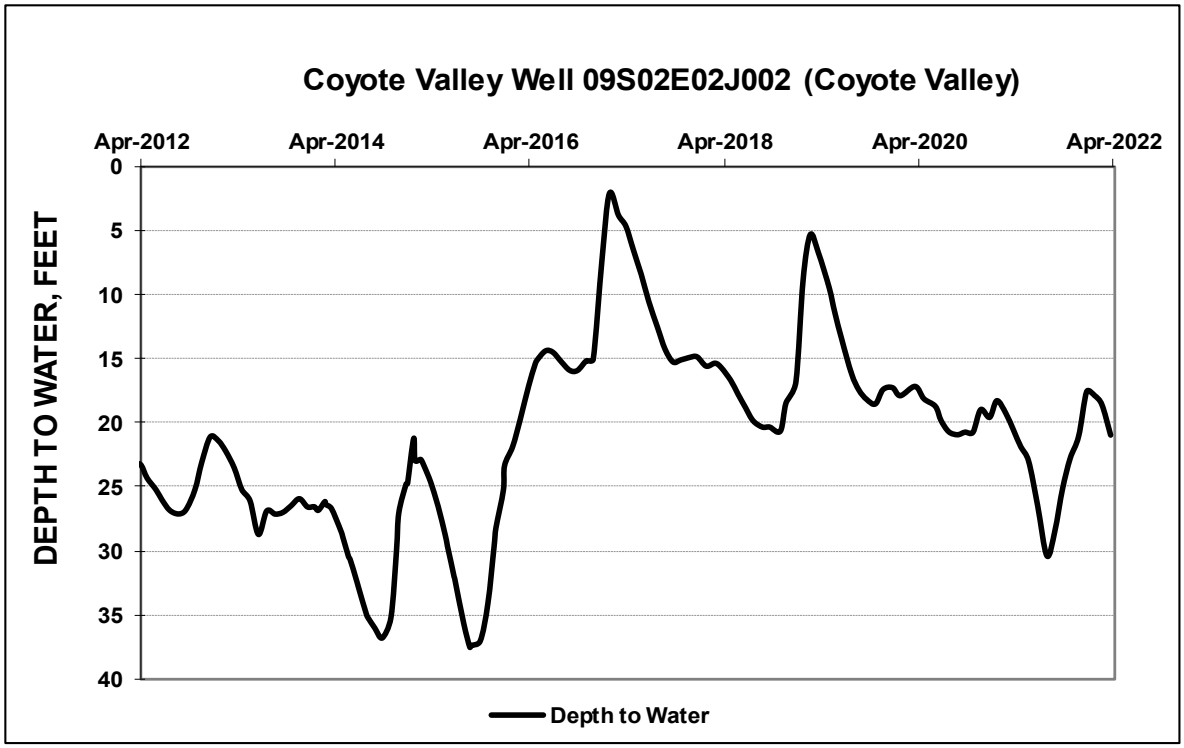


Figure 16. Morgan Hill Well Hydrograph

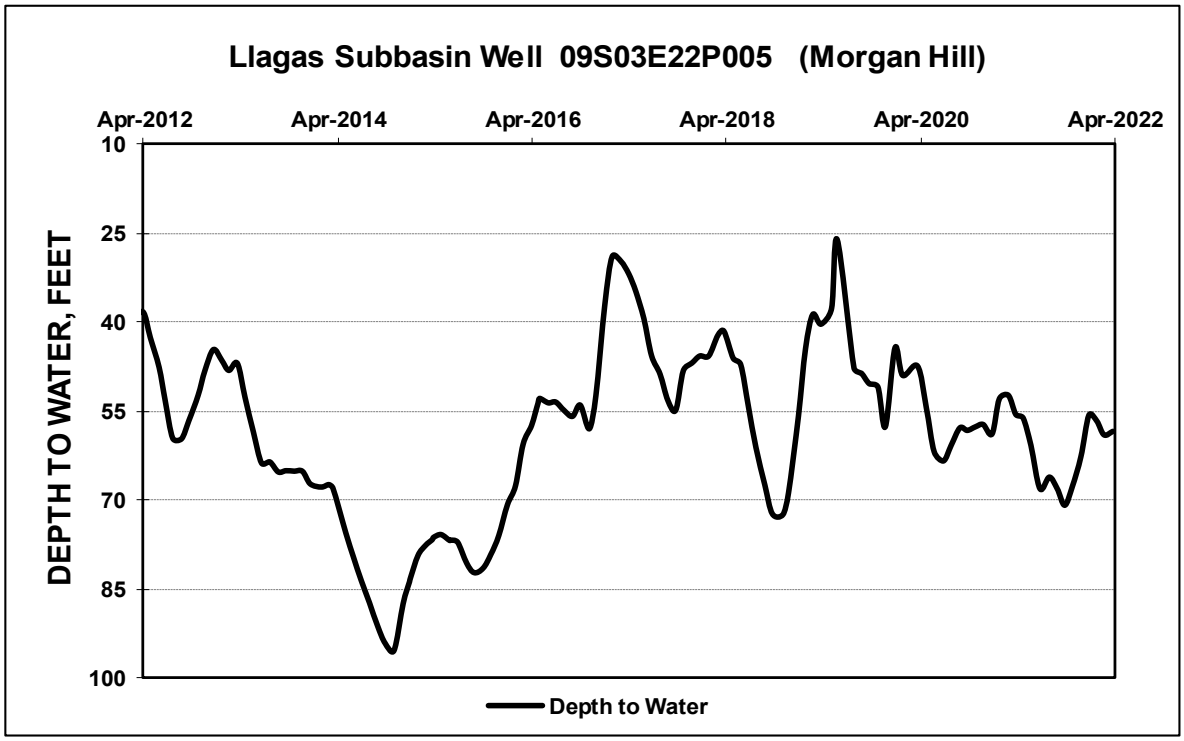


Figure 17. San Martin Well Hydrograph (Index Well for the Llagas Subbasin)

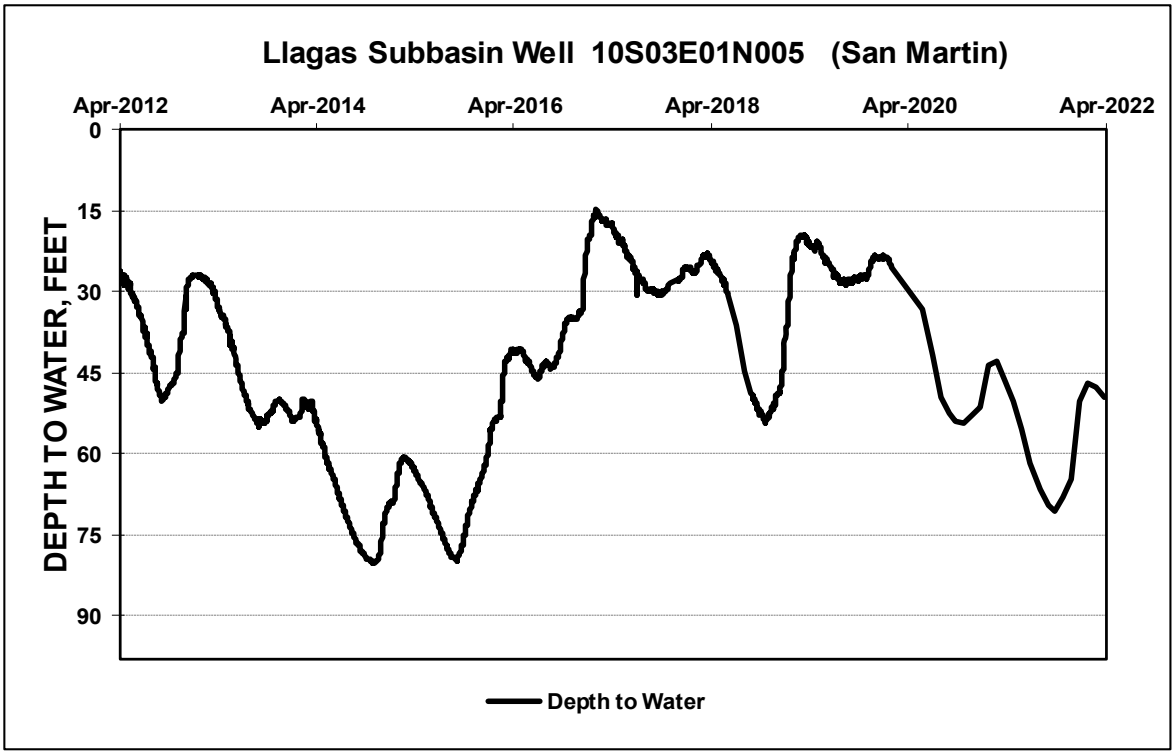


Figure 18. Gilroy Well Hydrograph