

SUMMARY

This report summarizes current (October 2020) groundwater storage, recharge, pumping, and level conditions for the Santa Clara Subbasin (which includes the Santa Clara Plain and Coyote Valley groundwater management areas) and the Llagas Subbasin. Overall, countywide groundwater storage and water levels are in good condition. Table 1 summarizes current conditions.

- Estimated groundwater storage is above normal and is projected to remain well within the Stage 1 (Normal) range of Valley Water’s Water Shortage Contingency Plan throughout 2020.
- Year-to-date (YTD) managed recharge is 80% to 95% of the five-year average.
- 2020 pumping through September is 101% to 131% of the five-year average.
- Groundwater index well water levels for October 2020 range from six feet lower to 11 feet higher than the average of the previous five-years of October readings.

Table 1. Summary of Current Groundwater Conditions

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
October managed recharge estimate (AF)	4,300	1,400	2,250
January to October managed recharge est. (AF)	40,100	12,150	16,400
YTD managed recharge, % of 5-year average	80%	95%	91%
September pumping estimate (AF)	7,650	1,300	4,800
January to September pumping estimate (AF)	61,000	9,600	32,400
YTD pumping, % of 5-year average	131%	112%	101%
GW index well level compared to last October 2019	20 feet lower	3 feet lower	7 feet lower*
GW index level compared to October 5-year average	6 feet lower	4 feet higher	11 feet higher*

AF = acre-feet.

YTD = Year-to-date

*The year-to-year comparison of the index groundwater level in the Llagas Subbasin is the average of the Morgan Hill and Gilroy wells in 2019 and 2020 since the replacement San Martin index well does not have a measurement for October 2019.

Groundwater Recharge

Contact Us For questions, contact
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- Figures 1, 2, and 3 show the estimated cumulative managed recharge for 2020 YTD compared to the average of the last five years (2015 – 2019).
- The cumulative managed recharge for 2020 YTD is lower for the Santa Clara Plain, Coyote Valley, and the Llagas Subbasin compared to the averages of cumulative managed recharge of the previous five years.
- The monthly 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

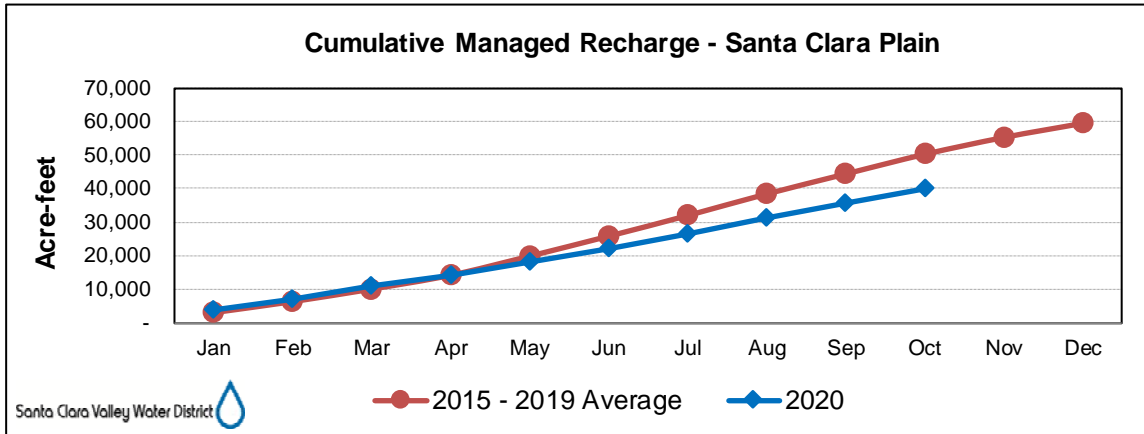


Figure 2. Estimated Cumulative Managed Recharge in the Coyote Valley

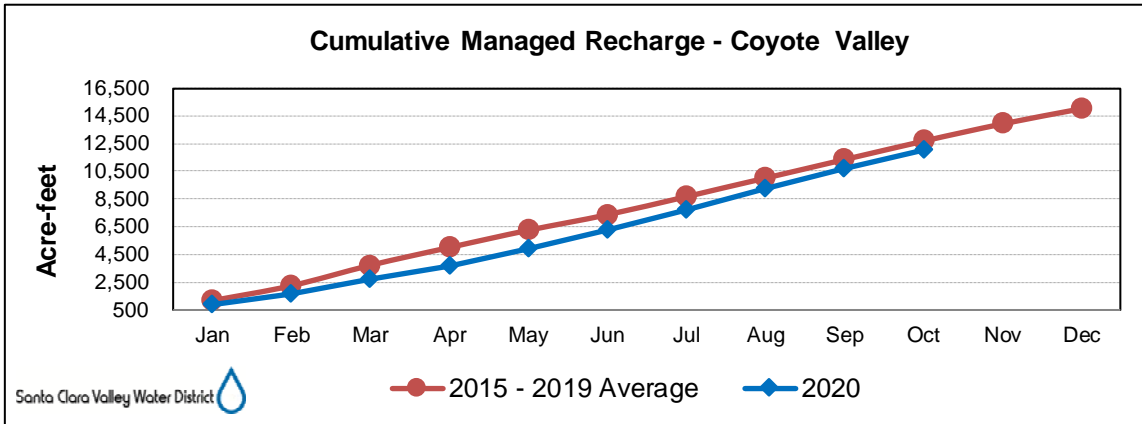
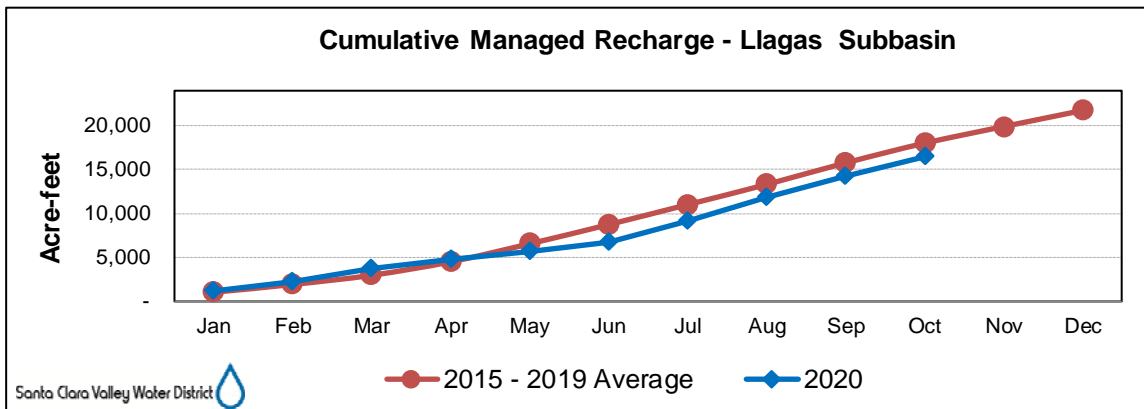


Figure 3. Estimated Cumulative Managed Recharge in the Llagas Subbasin



Groundwater Pumping

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- Figures 4, 5, and 6 show the cumulative groundwater pumping for 2020 compared to the average of the last five years (2015 – 2019).
- Pumping for September 2020 is the most recent retailer provided data.
- Cumulative pumping through September 2020 shows much higher than average pumping in the Santa Clara Plain, higher than average in the Coyote Valley, and average in the Llagas Subbasin.

Figure 4. Estimated Cumulative Santa Clara Plain Pumping

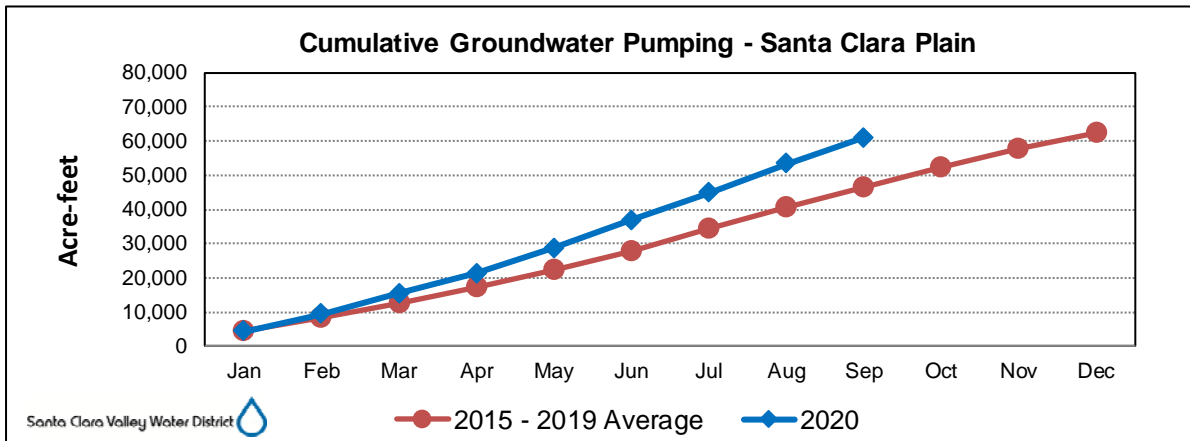


Figure 5. Estimated Cumulative Coyote Valley Pumping

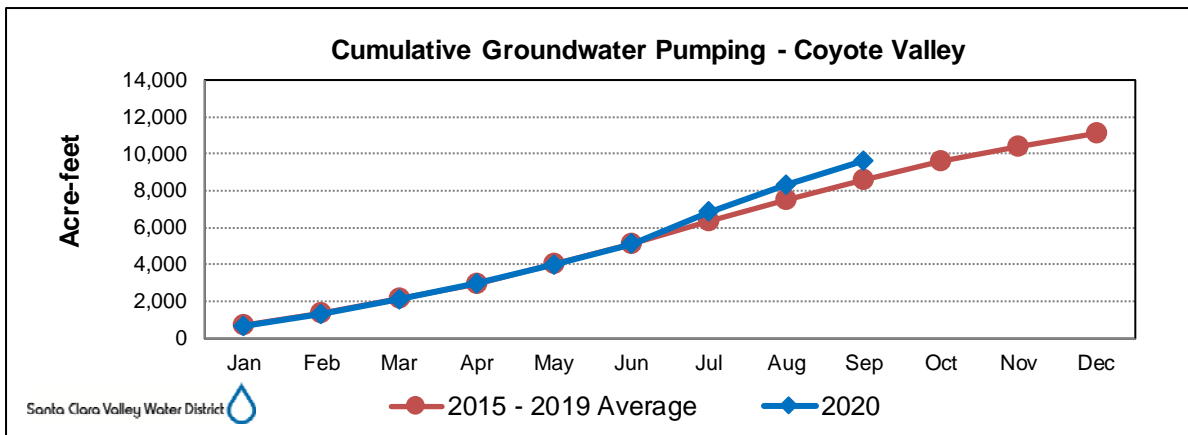
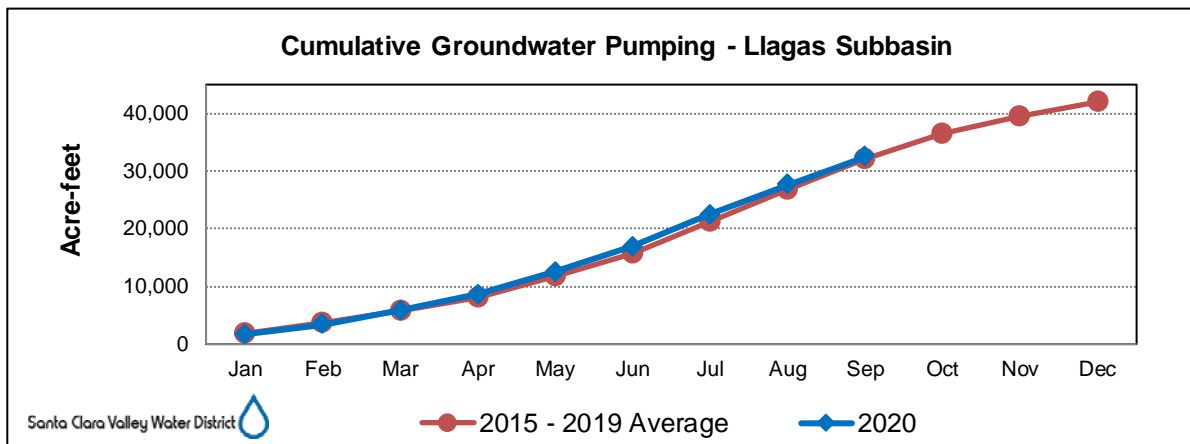


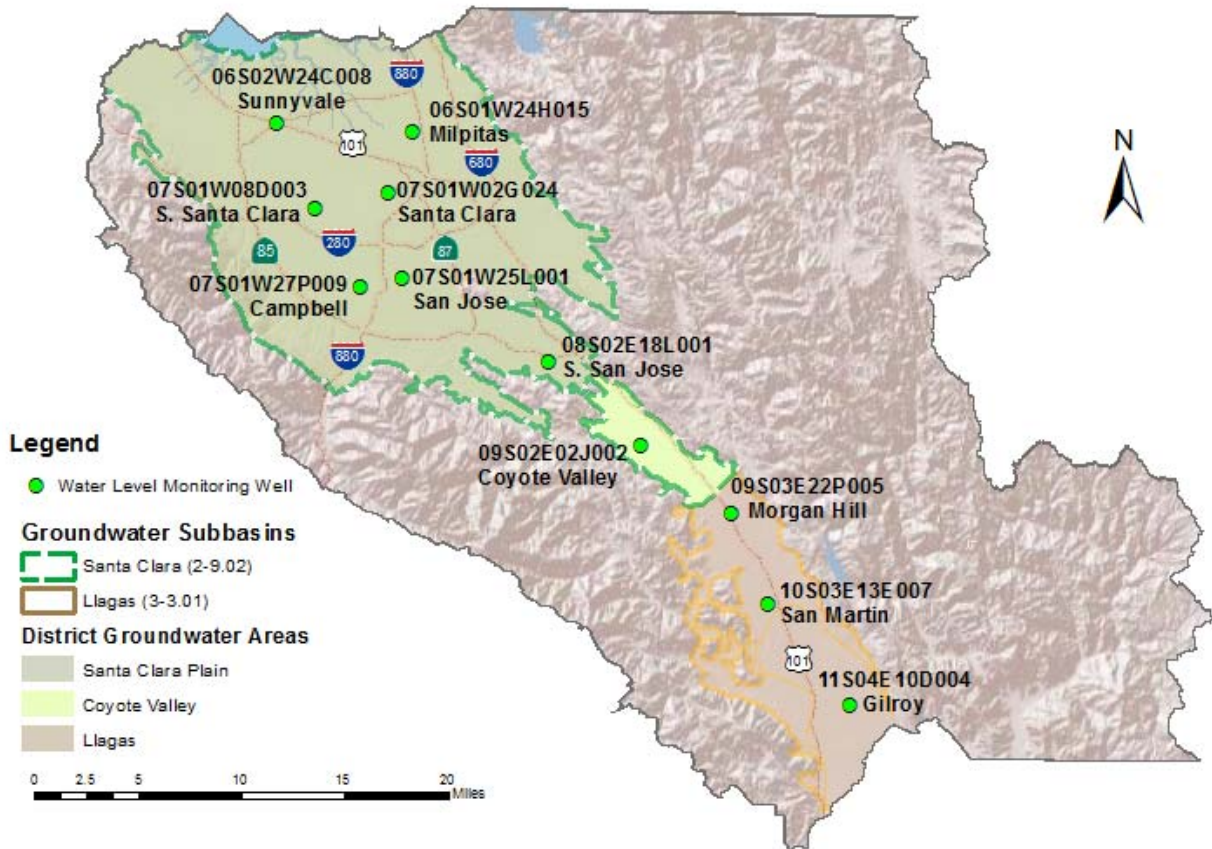
Figure 6. Estimated Cumulative Llagas Subbasin Pumping



Groundwater Levels

Current groundwater level conditions are summarized using eleven monitoring wells distributed across the sub-basins, as shown in Figure 7.

Figure 7. Location of Selected Monitoring Wells

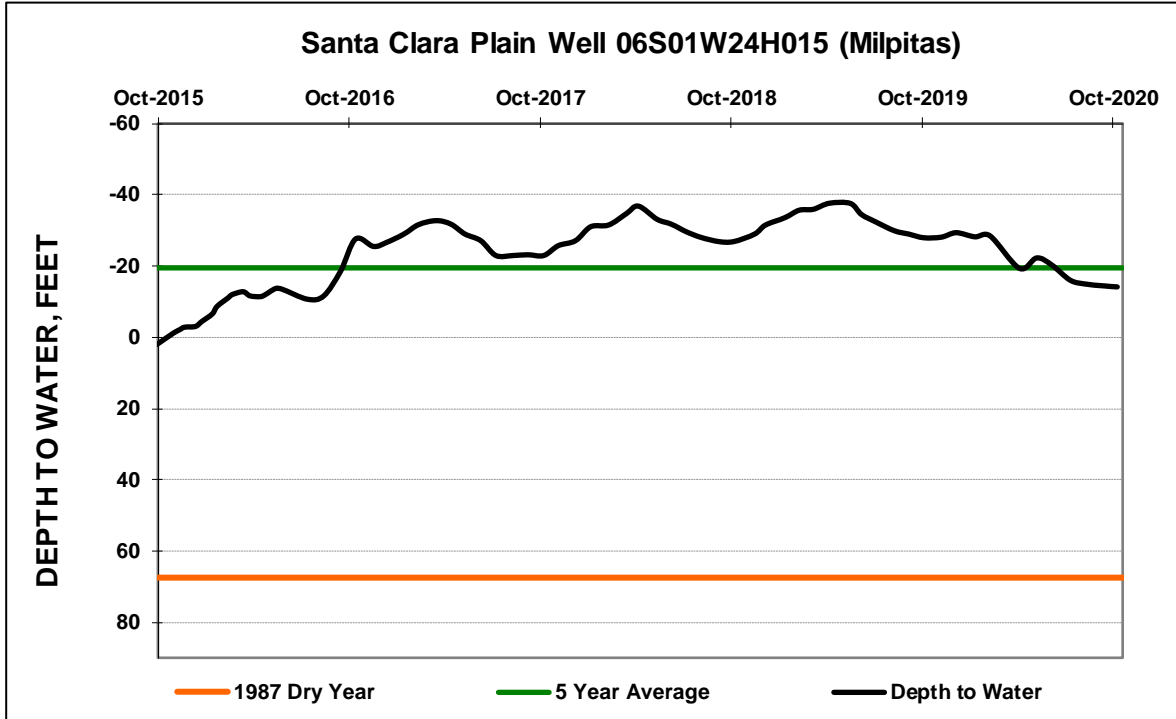


In Figures 8 through 18, hydrographs with October 2020 water levels from these eleven wells are compared to water levels from (i) September 2020, (ii) October 2019, (iii) October 2004 (a normal year), (iv) the prior five-year (2015-2019) average of October measurements, and (v) October 1987 (a dry year). *Note: One well did not have a September 2020 reading and one did not have an October 2019 reading.

These hydrographs show that the October 2020 groundwater levels were:

- i. Higher than September 2020 levels in one well by 4 feet, the same in five wells, and lower in four wells by about 1 to 6 feet,
- ii. Lower than October 2019 in all ten wells with readings by 3 to 37 feet,
- iii. Higher in eight wells by 1 to 26 feet and lower in two wells by 15 to 16 feet as compared to October 2004 (a normal year); one well does not have a 2004 water level,
- iv. Higher in five wells by 5 and 13 feet and lower in six wells by 4 to 15 feet as compared to the average of the previous five-years of October readings, and
- v. Higher in nine wells with levels by 1 to 106 feet and lower by 1 foot in one well as compared to October 1987 (a dry year).

Figure 8. Milpitas Well Hydrograph



A measured value at Milpitas for 2004 is not available for comparison. Between March 1998 and October 2006, this well was flowing artesian and not measured. In October 2006, the well was modified to allow measurement of artesian pressures.

Figure 9. Sunnyvale Well Hydrograph

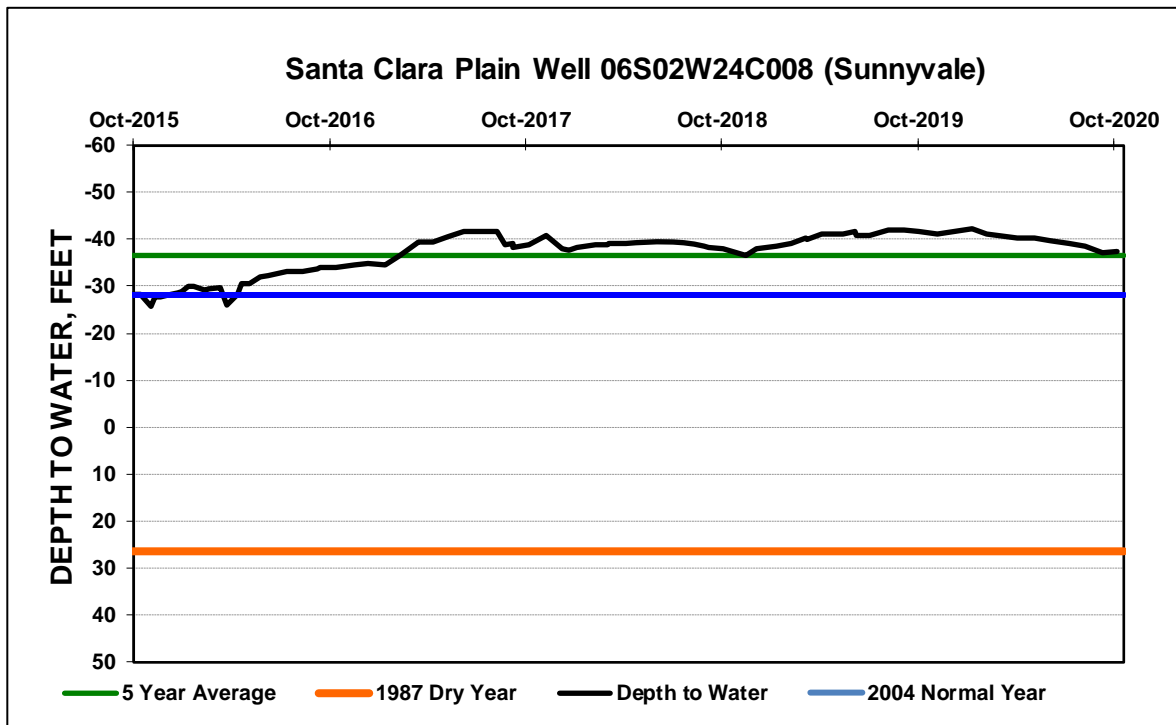


Figure 10. San Jose Well Hydrograph (Index Well for the Santa Clara Plain)

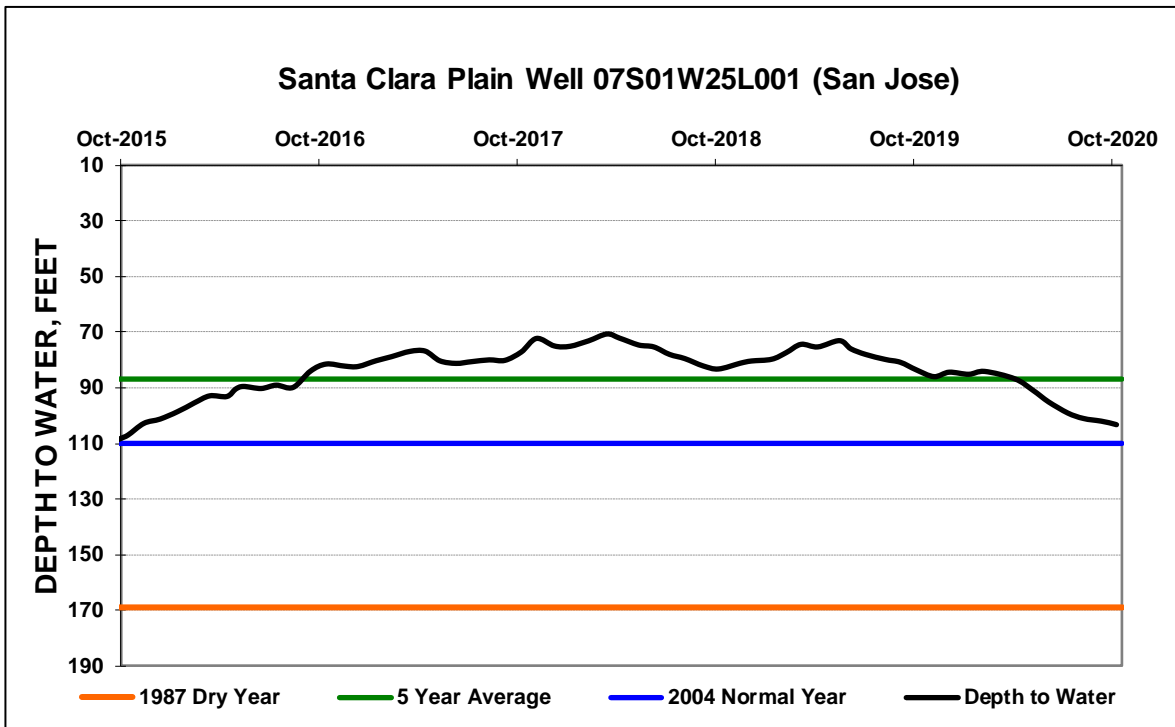


Figure 11. Santa Clara Well Hydrograph

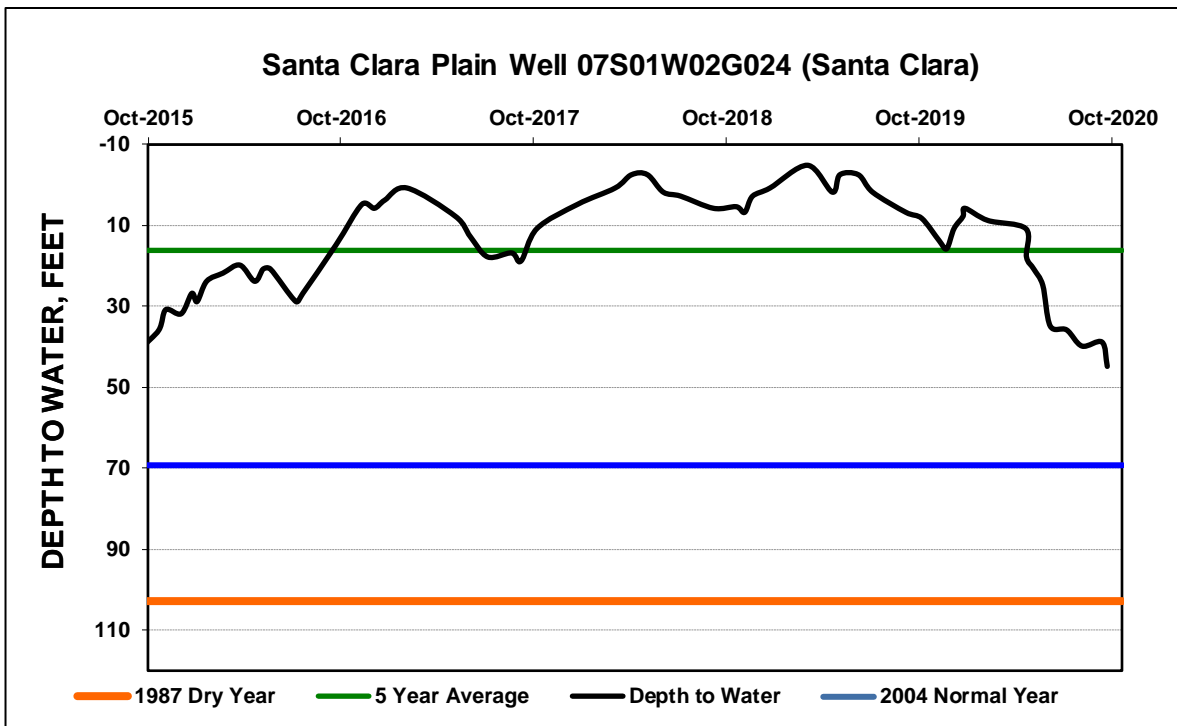


Figure 12. South Santa Clara Well Hydrograph

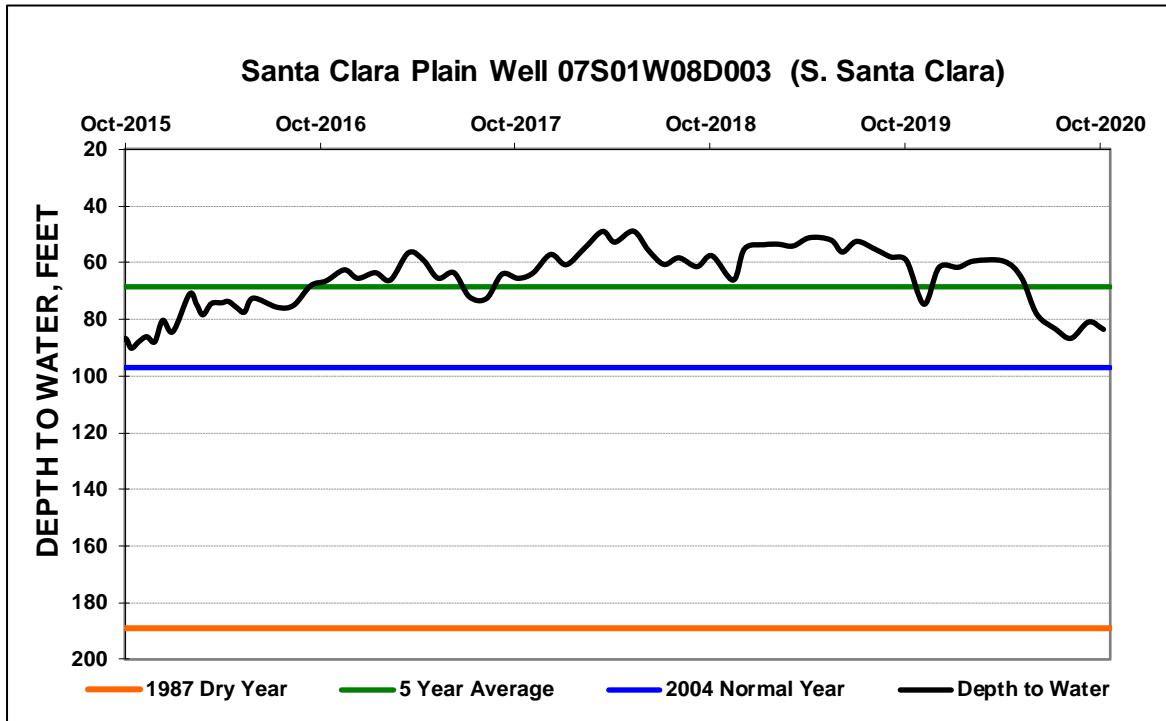
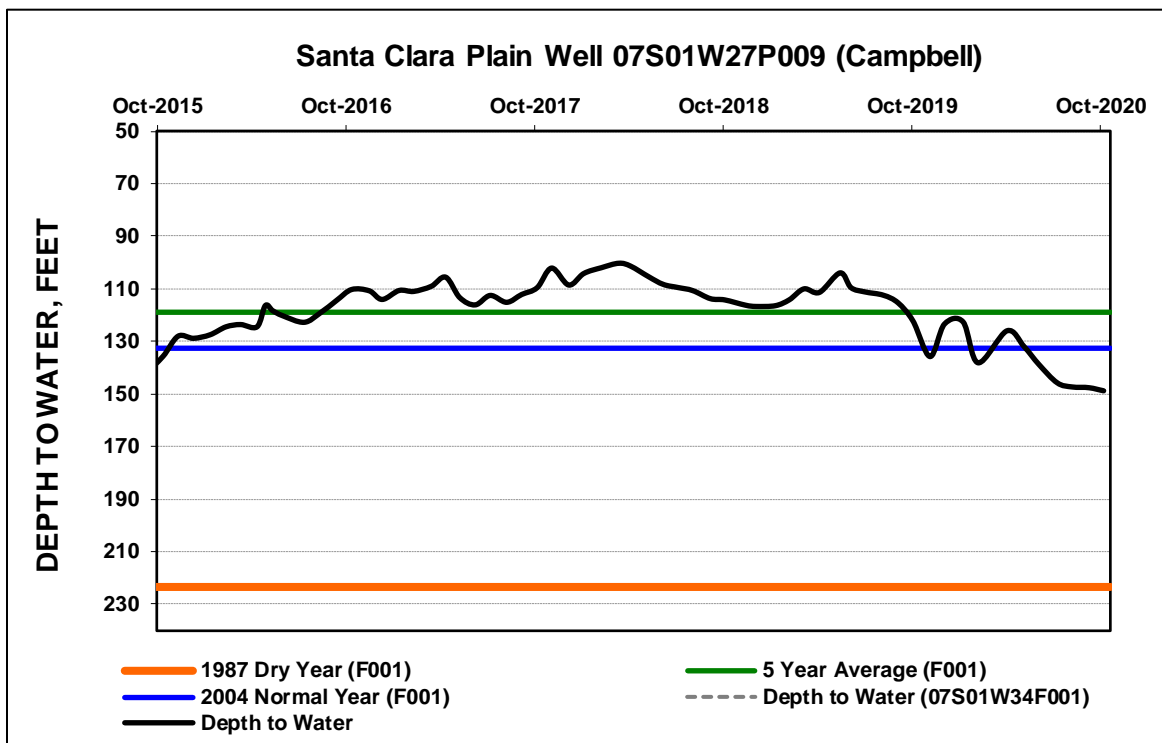


Figure 13. Campbell Well Hydrograph



The Campbell index well was replaced in August 2015 with a nearby well with similar water levels. Historic comparisons for 1987, 2004, and 5-year average use data from the former index well (07S01W34F001).

Figure 14. South San Jose Well Hydrograph

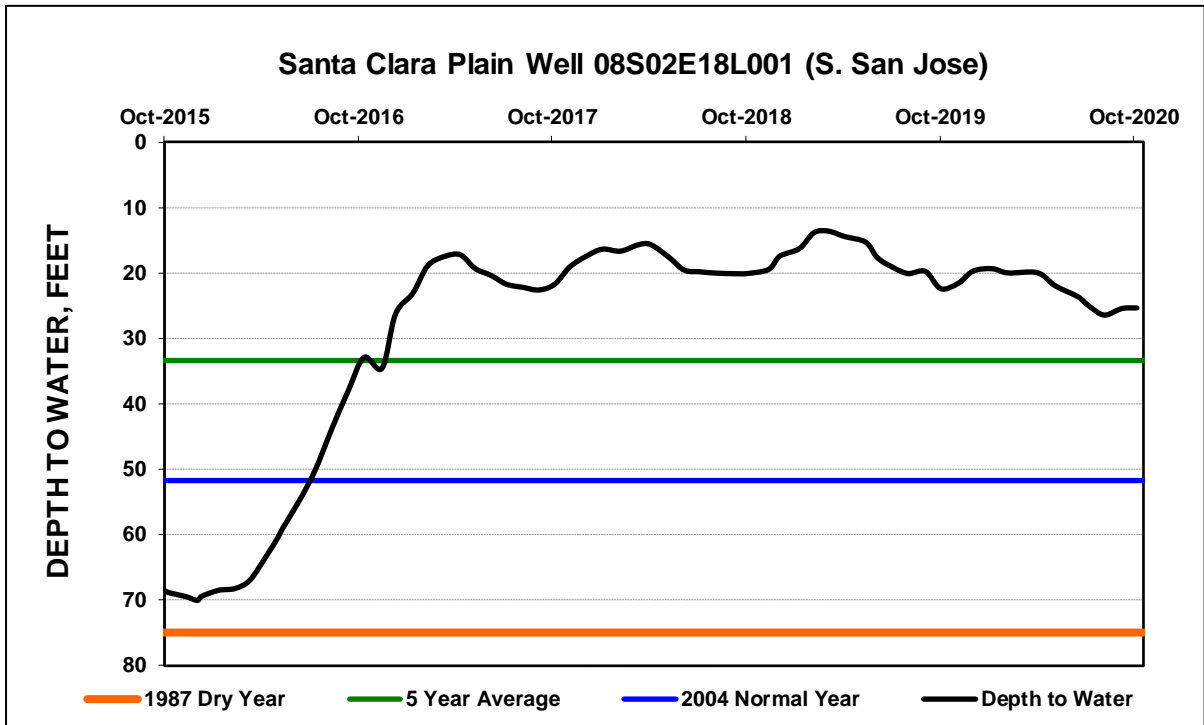


Figure 15. Coyote Valley Well Hydrograph (Index Well for the Coyote Valley)

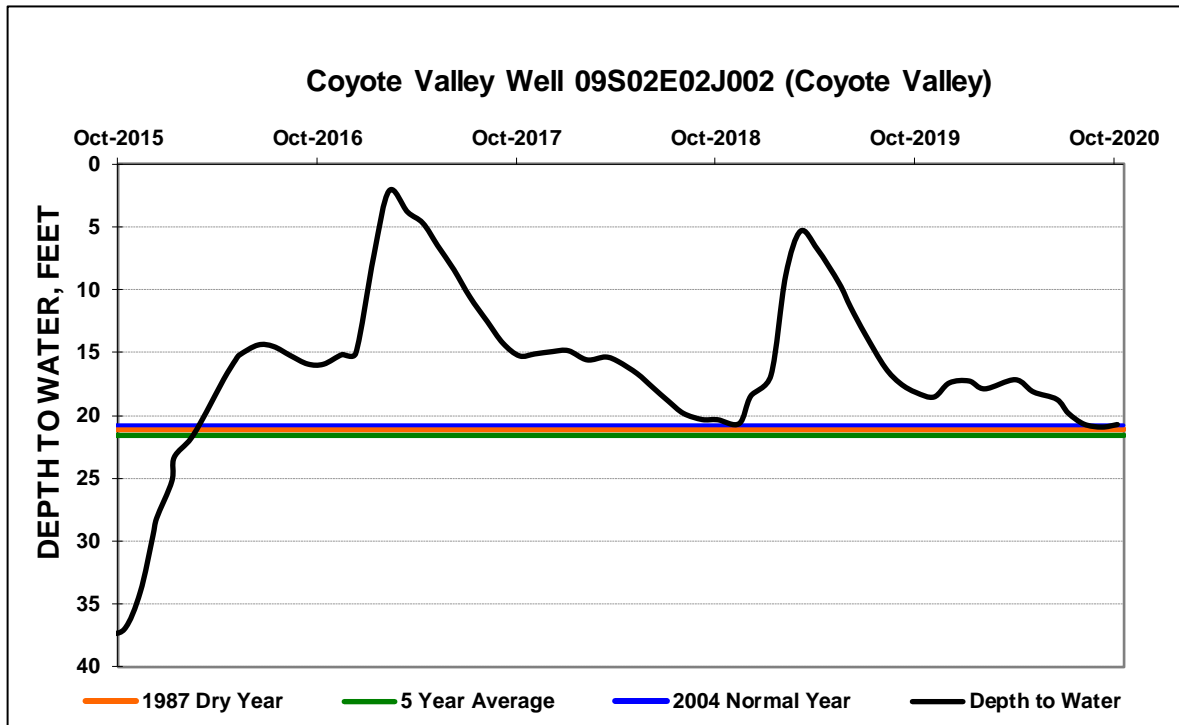


Figure 16. Morgan Hill Well Hydrograph

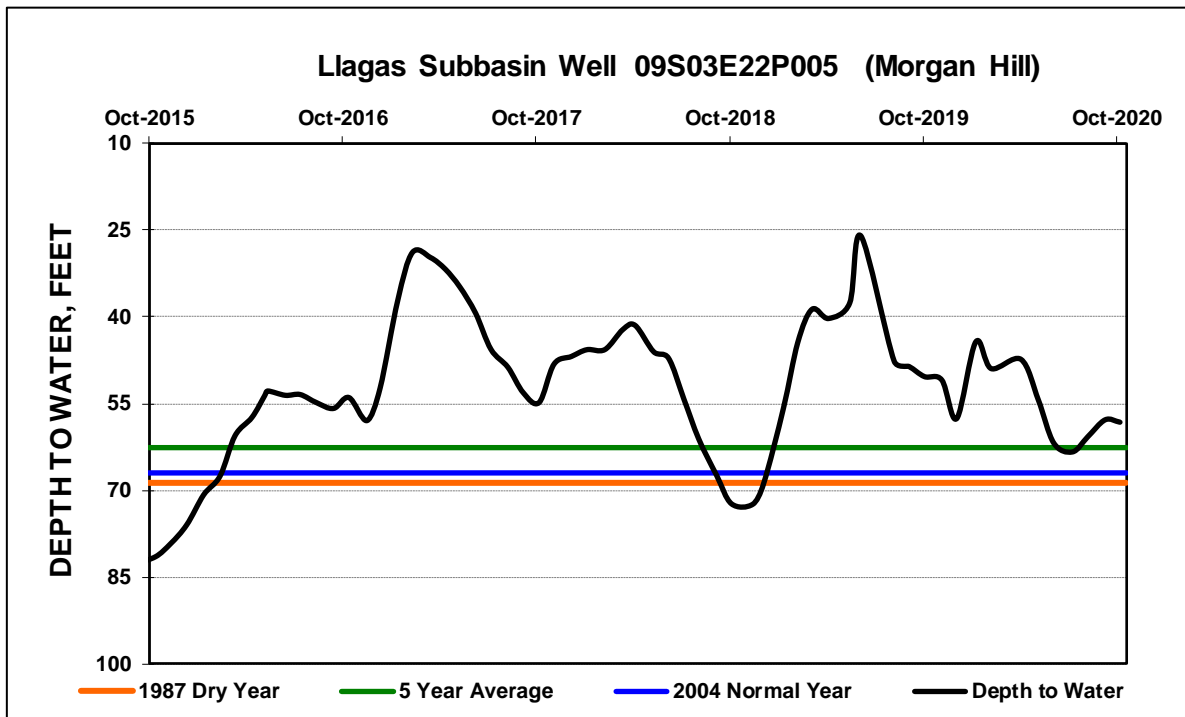
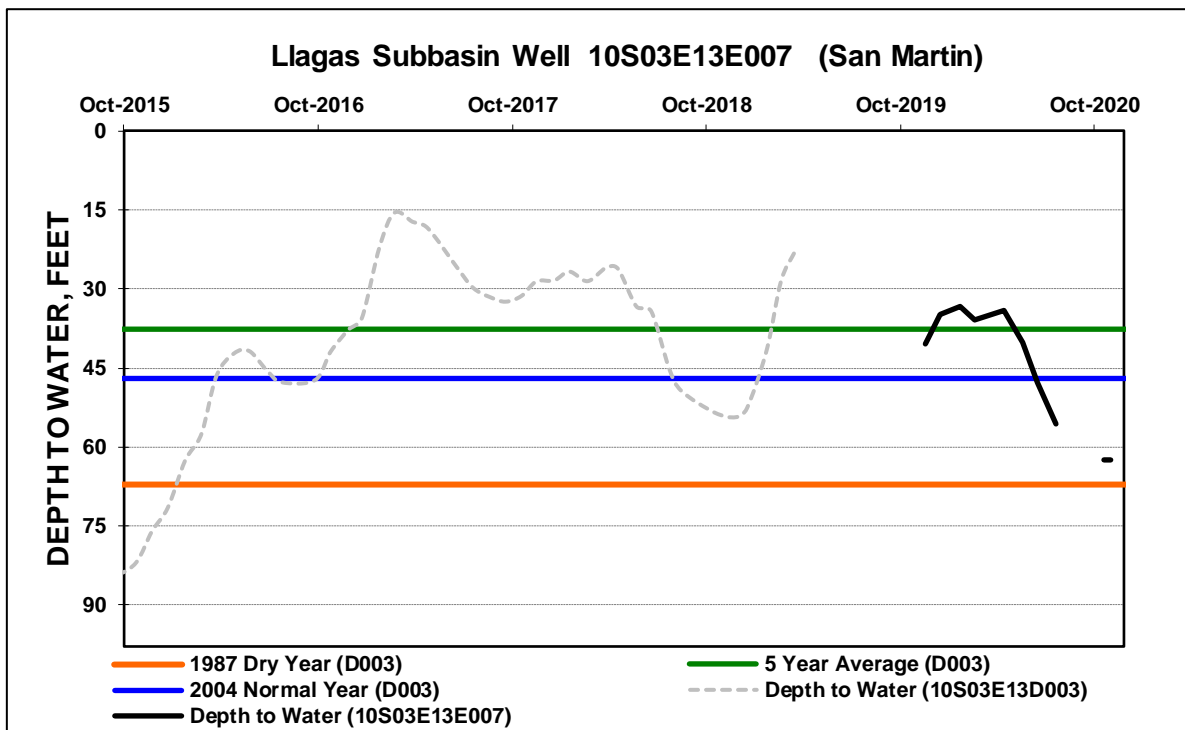


Figure 17. San Martin Well Hydrograph (Index Well for the Llagas Subbasin)



The San Martin index well was replaced in November 2019 with a nearby well with similar water levels. Historic comparison data for 1987, 2004, and 5-year average use data from the former index well (10S03E13D003). *Note: There was no measurement for August and September 2020.

Figure 18. Gilroy Well Hydrograph

