Groundwater Condition

REPORT | SANTA CLARA COUNTY

October 2019

SUMMARY

- Groundwater storage continues to be above both short-term and long-term storage averages in the three subbasins managed by Valley Water, the Santa Clara Plain, the Coyote, and the Llagas. Total storage at the end of 2019 is forecast to remain within the Stage 1 (Normal) storage range of Valley Water's Water Shortage Contingency Plan.

- Santa Clara Plain:
  - The September managed recharge estimate is 4,500 acre-feet. The year-to-date recharge estimate is 33,400 acre-feet, which is 77% of the five-year average.
  - The August groundwater pumping estimate is 6,000 acre-feet. The year-to-date pumping estimate is 33,900 acre-feet, which is 68% of the five-year average.
  - The groundwater level in the Santa Clara Plain (San Jose) index well is about one foot higher than last September and 18 feet higher than the five-year average.

- Coyote Valley:
  - The September managed recharge estimate is 1,200 acre-feet. The year-to-date recharge estimate is 9,300 acre-feet, which is 134% of the five-year average.
  - The August groundwater pumping estimate is 1,500 acre-feet. The year-to-date pumping estimate is 8,000 acre-feet, which is 109% of the five-year average.
  - The groundwater level in the Coyote Valley index well is about 3 feet higher than last September and 7 feet higher than the five-year average.

- Llagas Subbasin:
  - The September managed recharge estimate is 2,500 acre-feet. The year-to-date recharge estimate is 18,900 acre-feet, which is 143% of the five-year average.
  - The August groundwater pumping estimate is 4,600 acre-feet. The year-to-date pumping estimate is 25,200 acre-feet which is 93% of the five-year average.
  - The Llagas Subbasin San Martin index well was recently destroyed and a replacement well is being sought. Data from nearby wells shows that groundwater levels are about 13 feet higher than last September and about 17 feet higher than the five-year average.

Contact Us For questions, contact
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Valley Water
Clean Water • Healthy Environment • Flood Protection

Groundwater Recharge

Compared to the September averages of the last five years (2014-2018), the estimated managed recharge for September 2019 is lower for the Santa Clara Plain and higher for both the Coyote Valley and the Llagas Subbasins. The amount of managed recharge dependents on several factors, including water demand, water availability, regulatory requirements, storage levels, and facility maintenance schedules. Figures 1, 2, and 3 compare monthly managed recharge in 2019 to the averages of the previous five years.

Figure 1 - Estimated Managed Recharge in the Santa Clara Plain

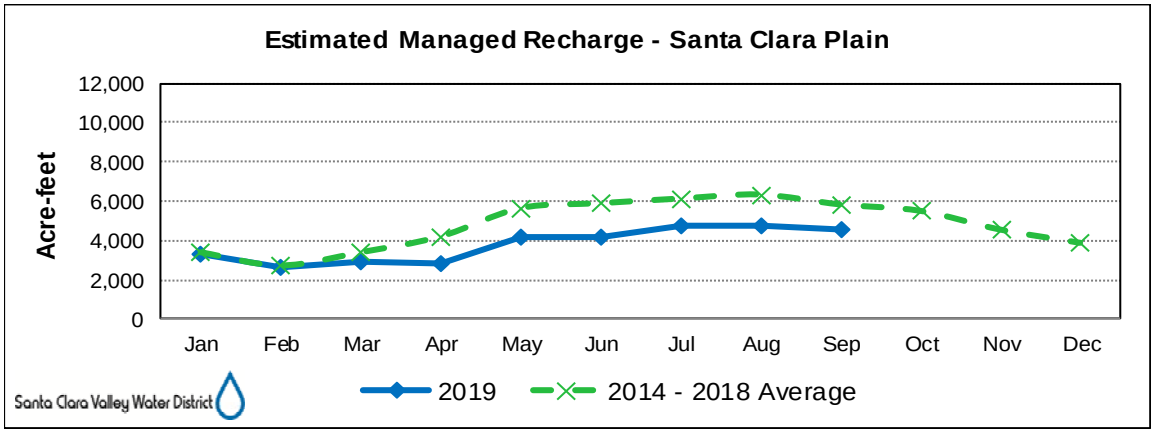


Figure 2 - Estimated Managed Recharge in the Coyote Valley

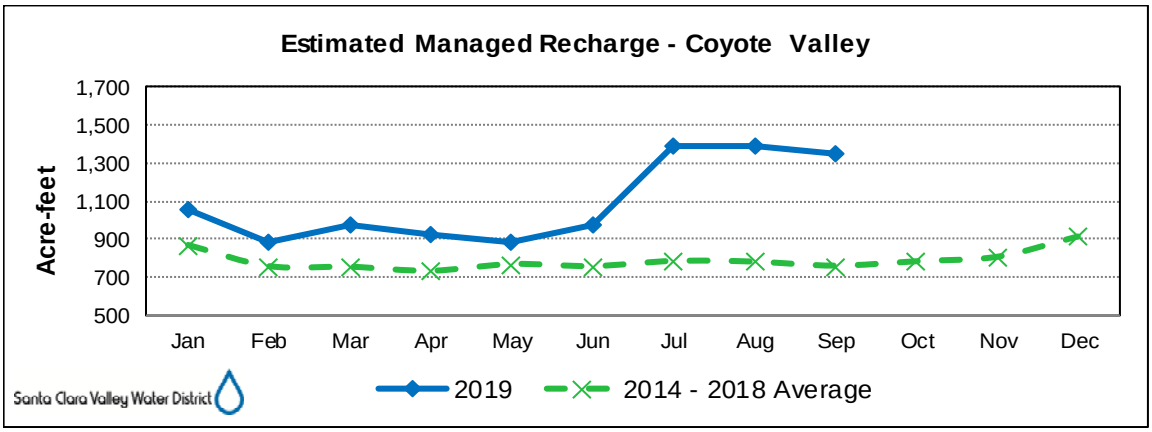
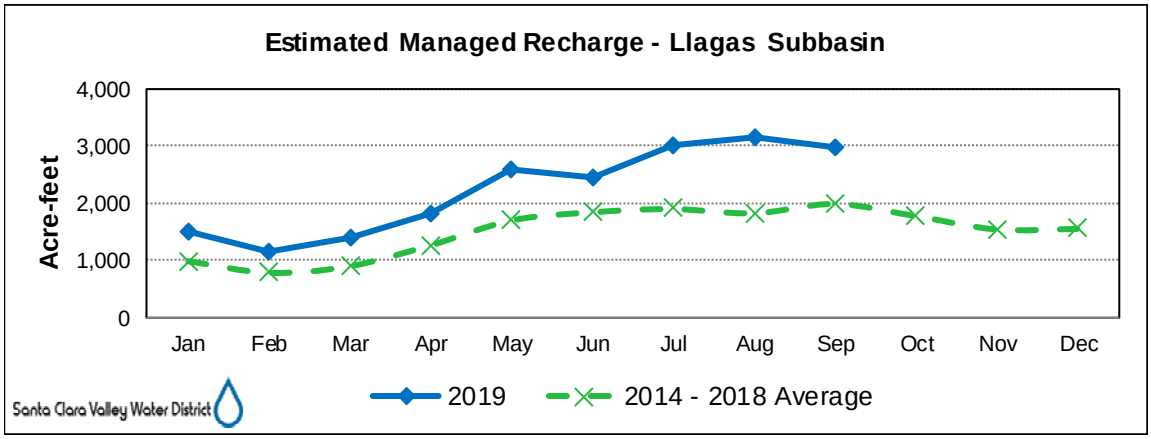


Figure 3 - Estimated Managed Recharge in the Llagas Subbasin



Groundwater Pumping

Estimated pumping for August 2019 (the most recent month with pumping data available from retailers), when compared to the August average of the last five years (2014-2018), is lower for the Santa Clara Plain and Llagas Subbasin and higher for Coyote Valley. Figures 4, 5, and 6 show comparisons of the monthly estimated groundwater pumping through August 2019 to the five-year averages.

Figure 4 – Estimated Santa Clara Plain Pumping

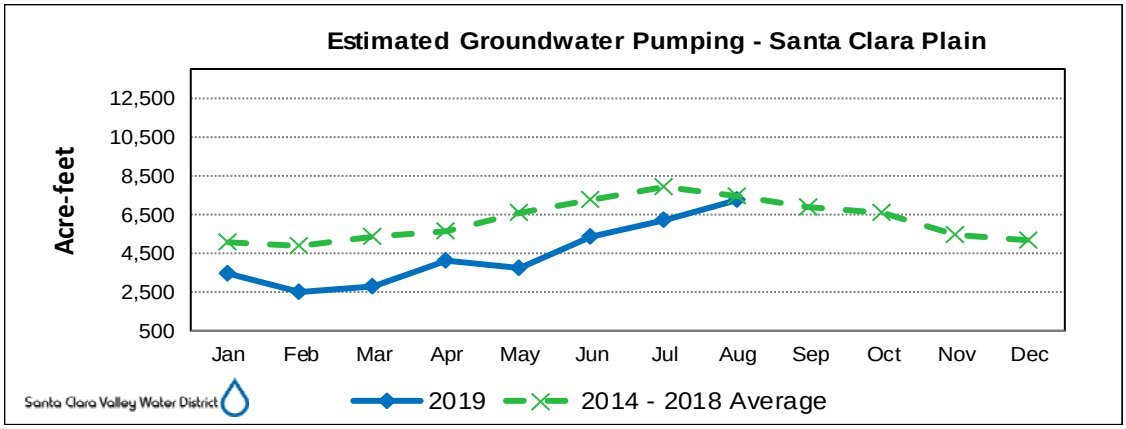


Figure 5 – Estimated Coyote Valley Pumping

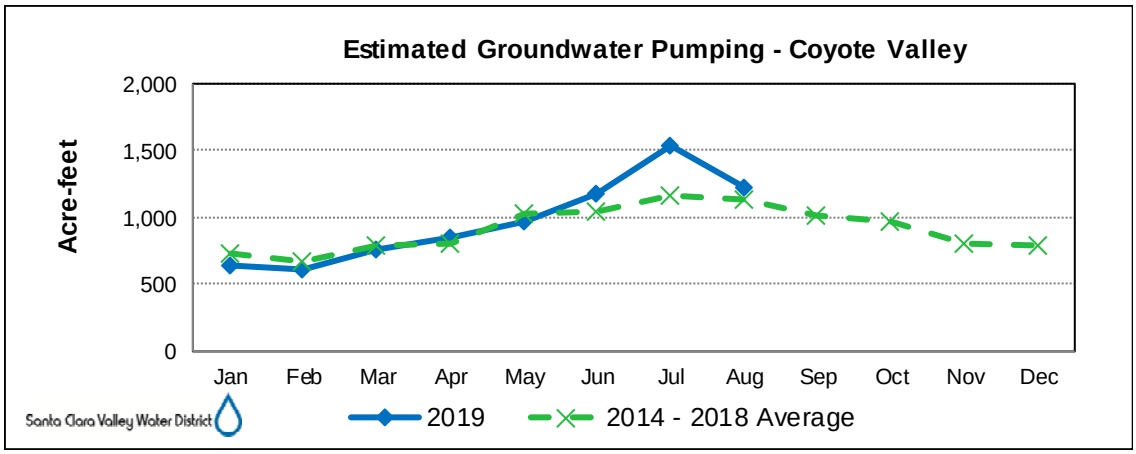
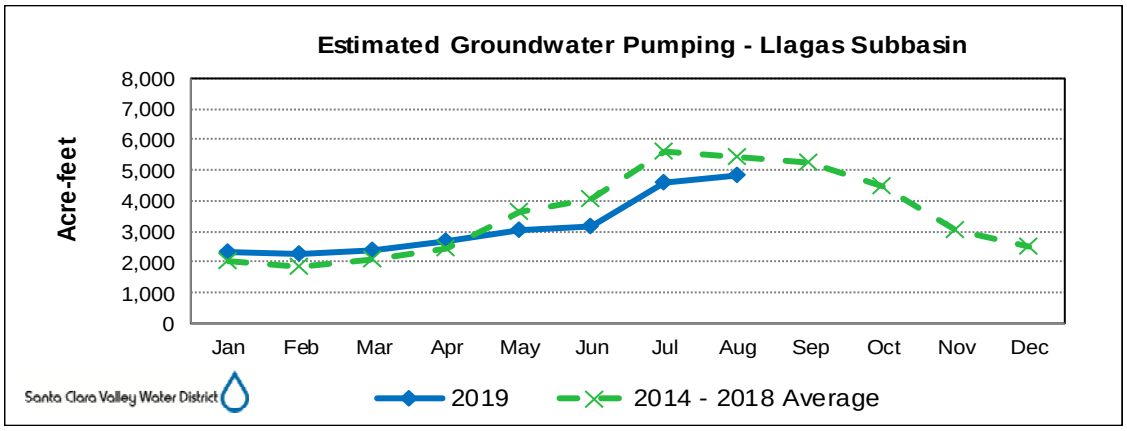


Figure 6 – Estimated Llagas Subbasin Pumping



Groundwater Levels

September 2019 groundwater levels at selected monitoring wells (Figure 7) are compared to the groundwater levels of August 2019, September 2018, September 2004 (a normal year), September 1987 (a dry year), and the prior five-year average of September measurements (2014 through 2018). This information is presented in individual well groundwater hydrographs in Figures 8 through 18. The San Martin well was destroyed by the property owner. Valley Water has identified a replacement well and is pursuing an access agreement.

September 2019 groundwater levels were higher than August 2019 levels in one index well, the same in three wells, and lower in the remaining six available wells. From September 2018 to September 2019, seven index wells showed water level increases ranging from 1 to 19 feet, one well was the same, and two wells showed water level decreases of 1 foot. The September 2019 levels were higher than September 2004 levels by 3 to 61 feet the nine of the available index wells. September 2019 levels were higher than the five-year average of September measurements in all nine available index wells by between 7 and 29 feet. September 2019 groundwater levels were higher than September 1987 dry year levels in all ten of the available index wells.

Figure 7 - Location of Selected Monitoring Wells

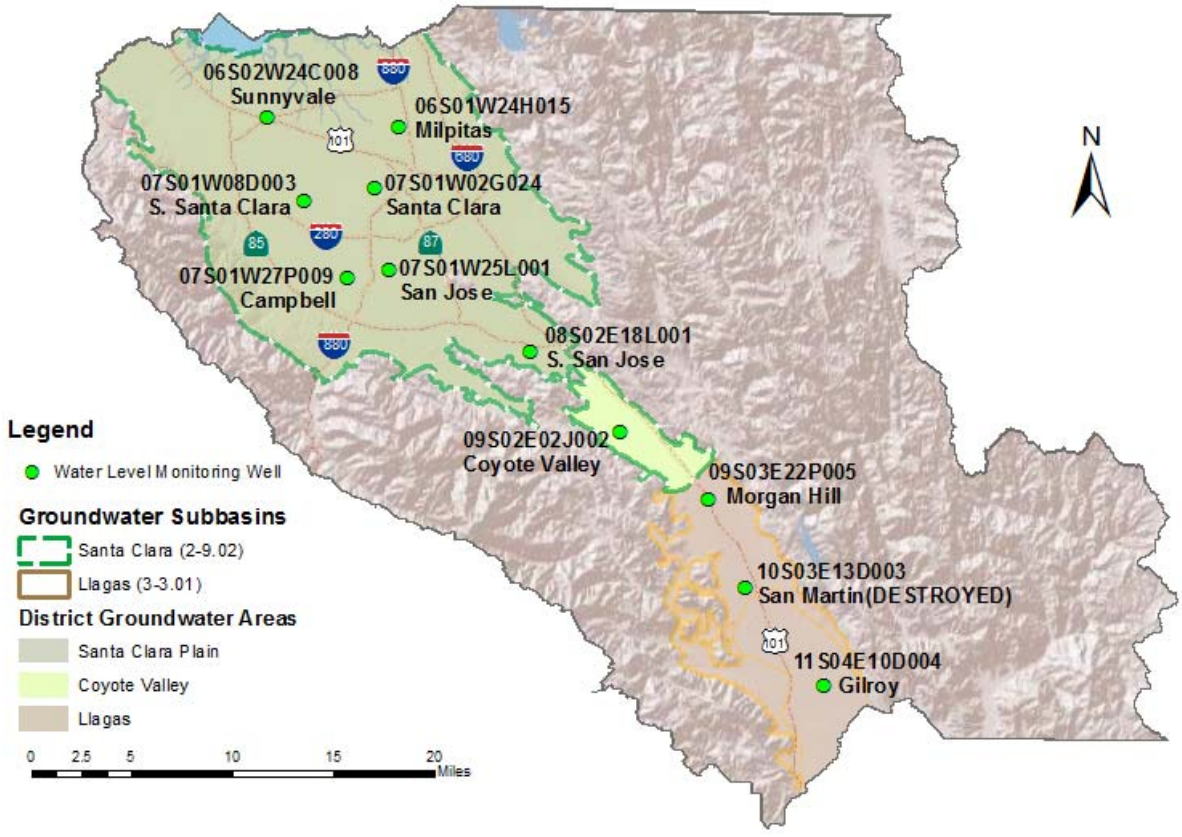
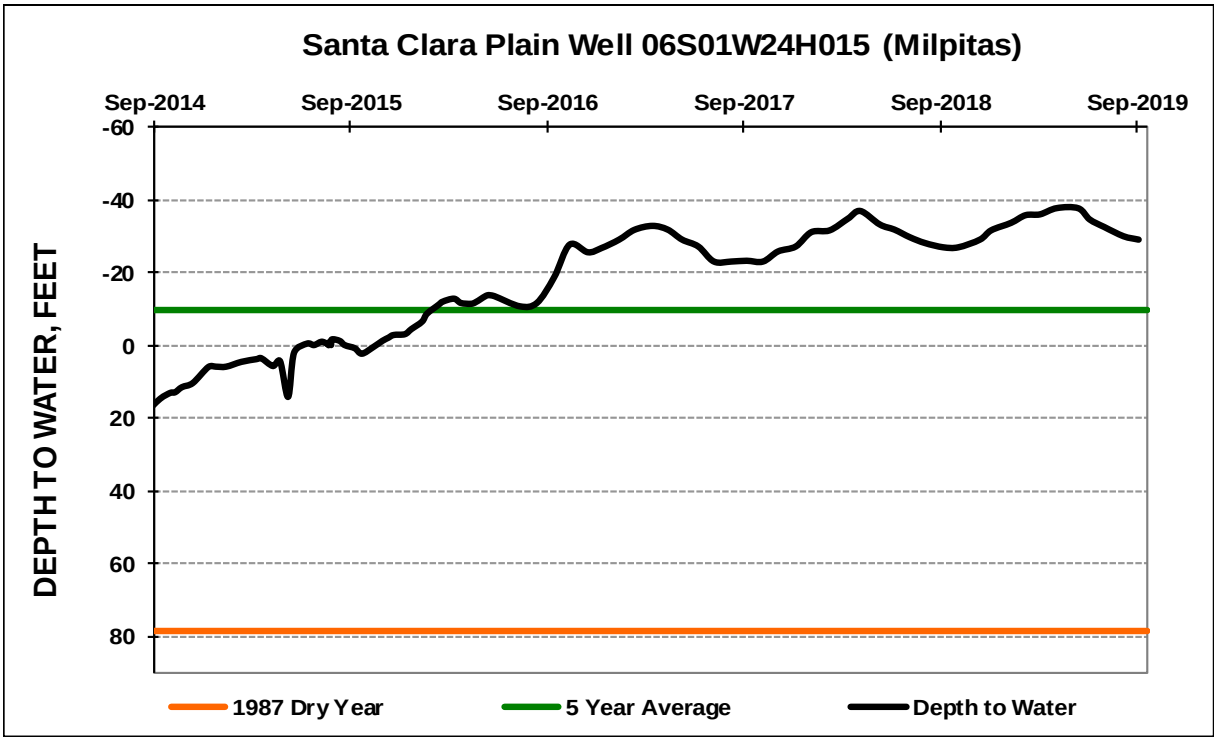


Figure 8 - Milpitas Well Hydrograph



A measured value for 2004 is not available for comparison for this well. 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

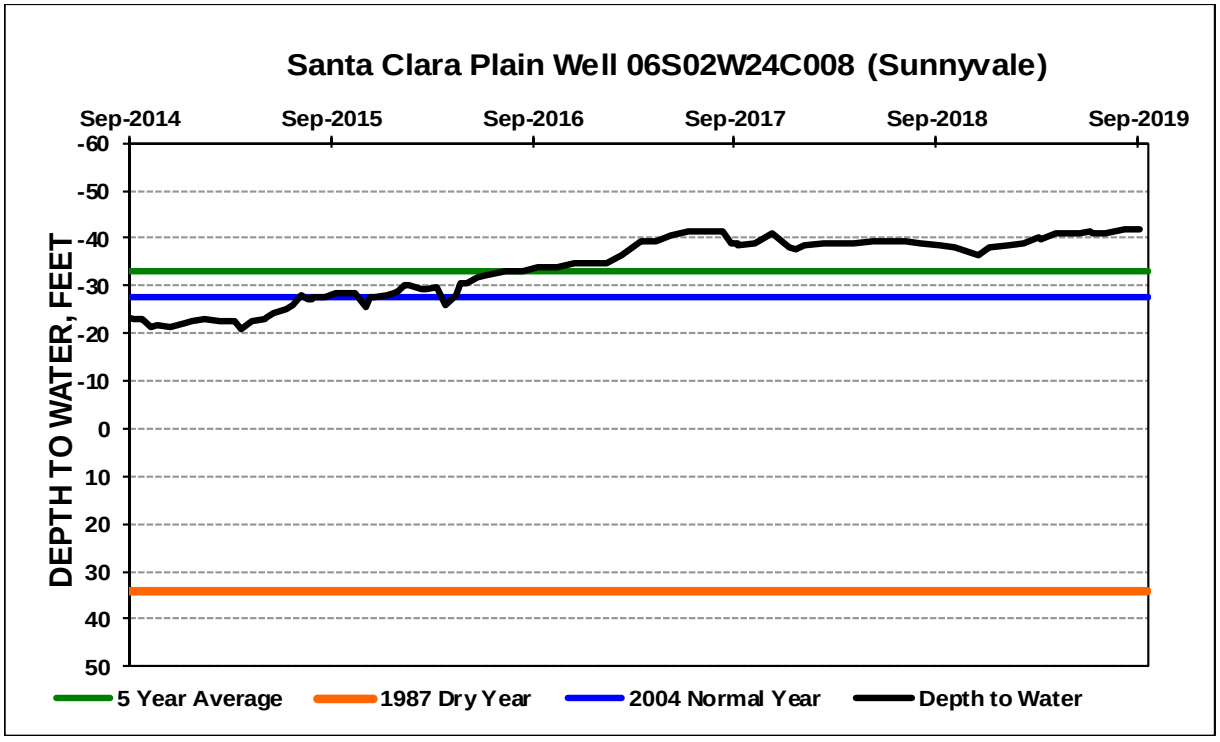


Figure 10 - San Jose Well Hydrograph

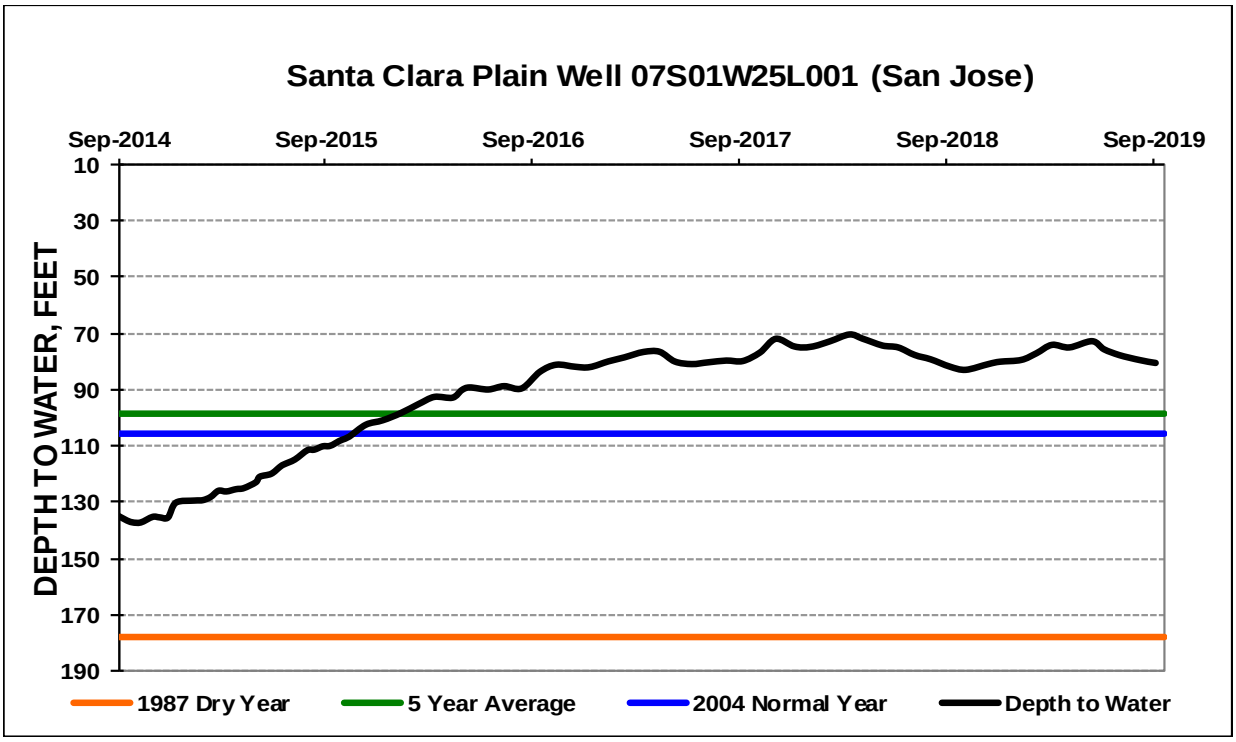


Figure 11 - Santa Clara Well Hydrograph

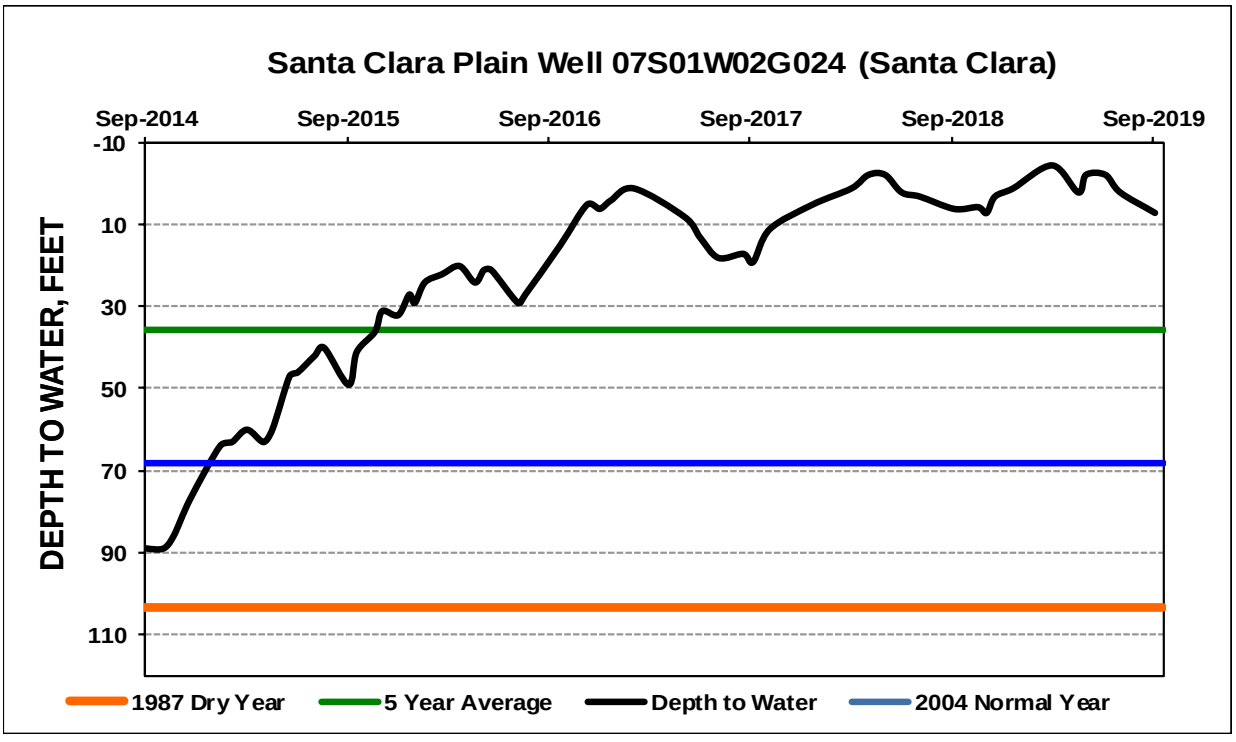


Figure 12 - South Santa Clara Well Hydrograph

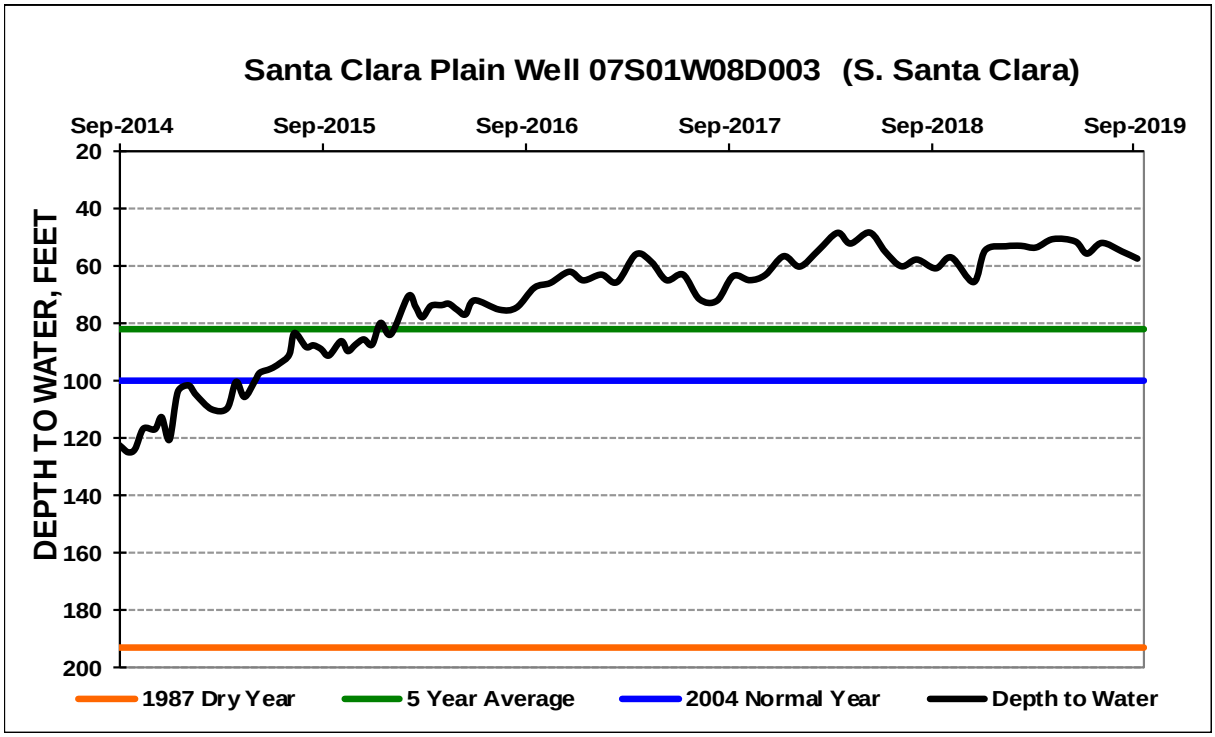
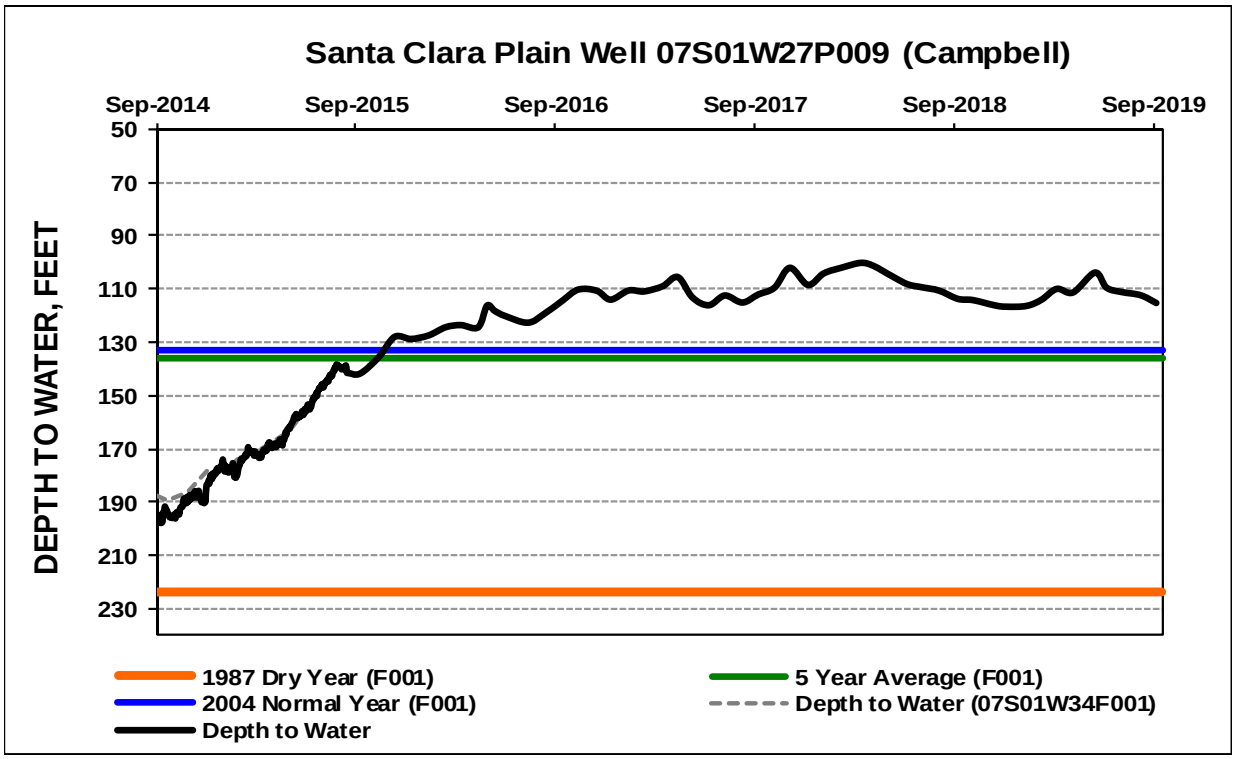


Figure 13 - Campbell Well Hydrograph



The Campbell index well was replaced in August 2015 with a nearby well with similar water level history. Comparisons with 1987, 2004, and 5-year average are against the former index well (07S01W34F001)

Figure 14 - South San Jose Well Hydrograph

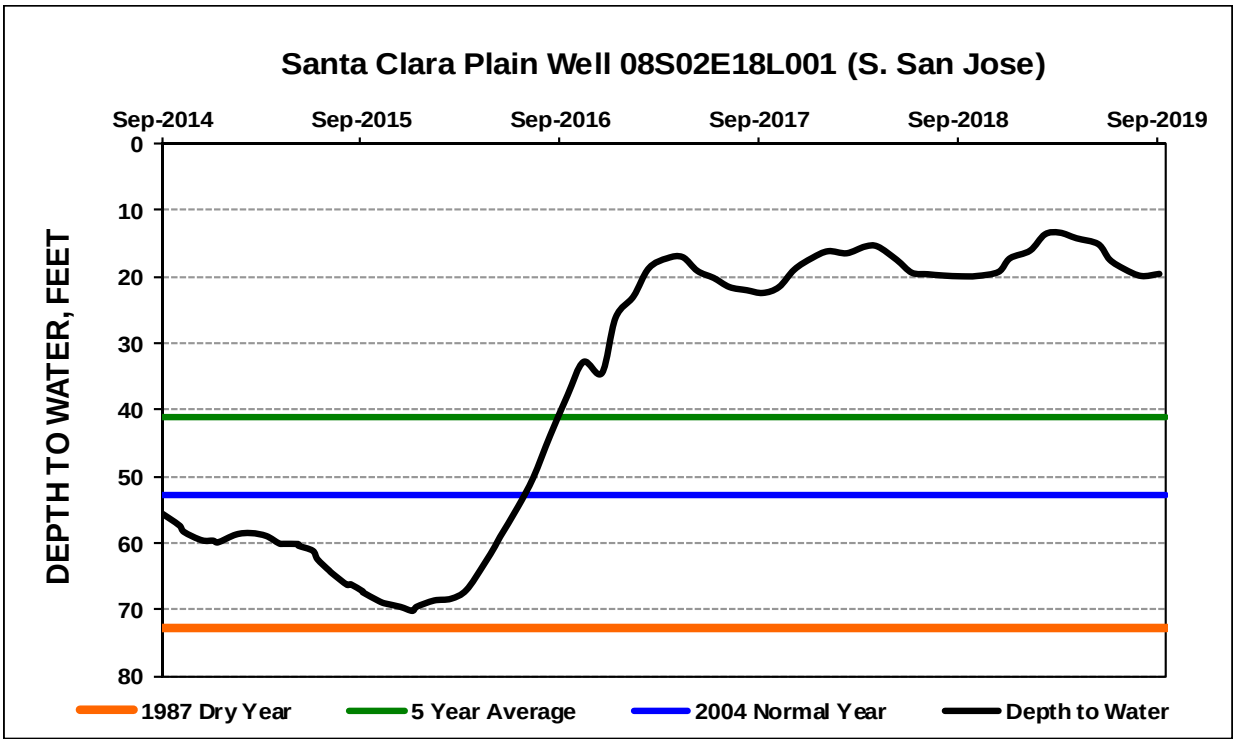


Figure 15 - Coyote Valley Well Hydrograph

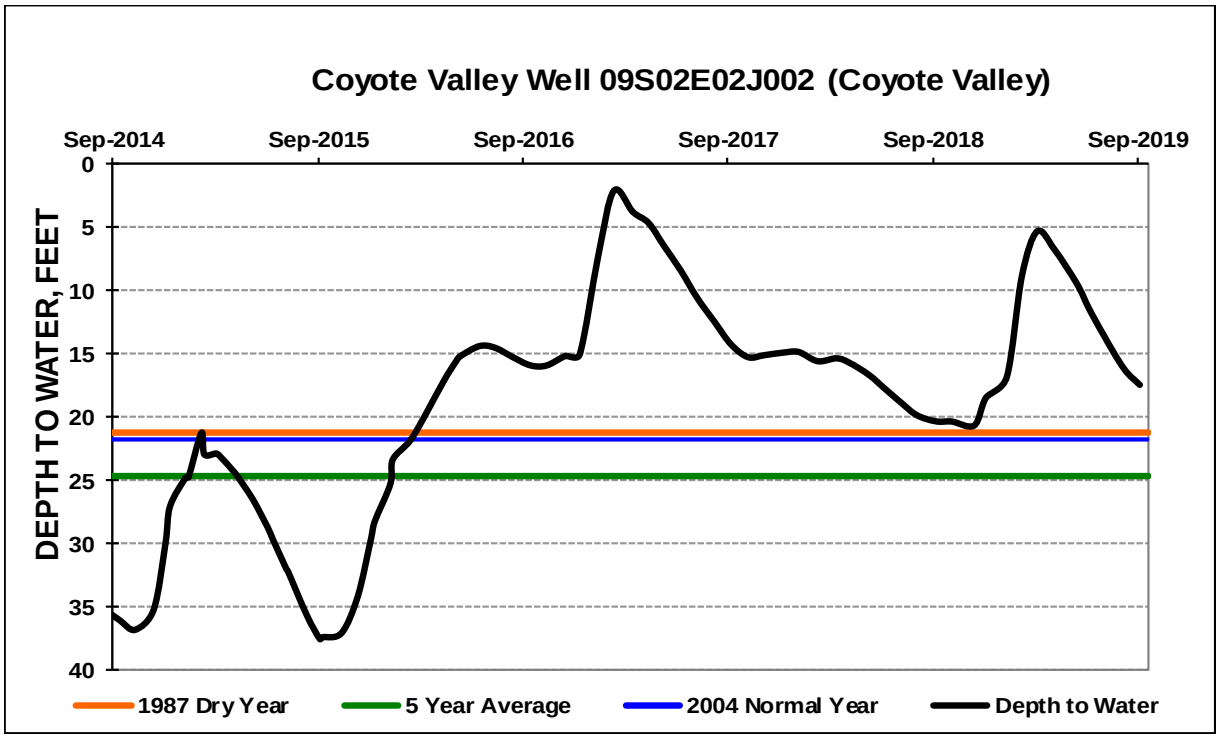


Figure 16 - Morgan Hill Well Hydrograph

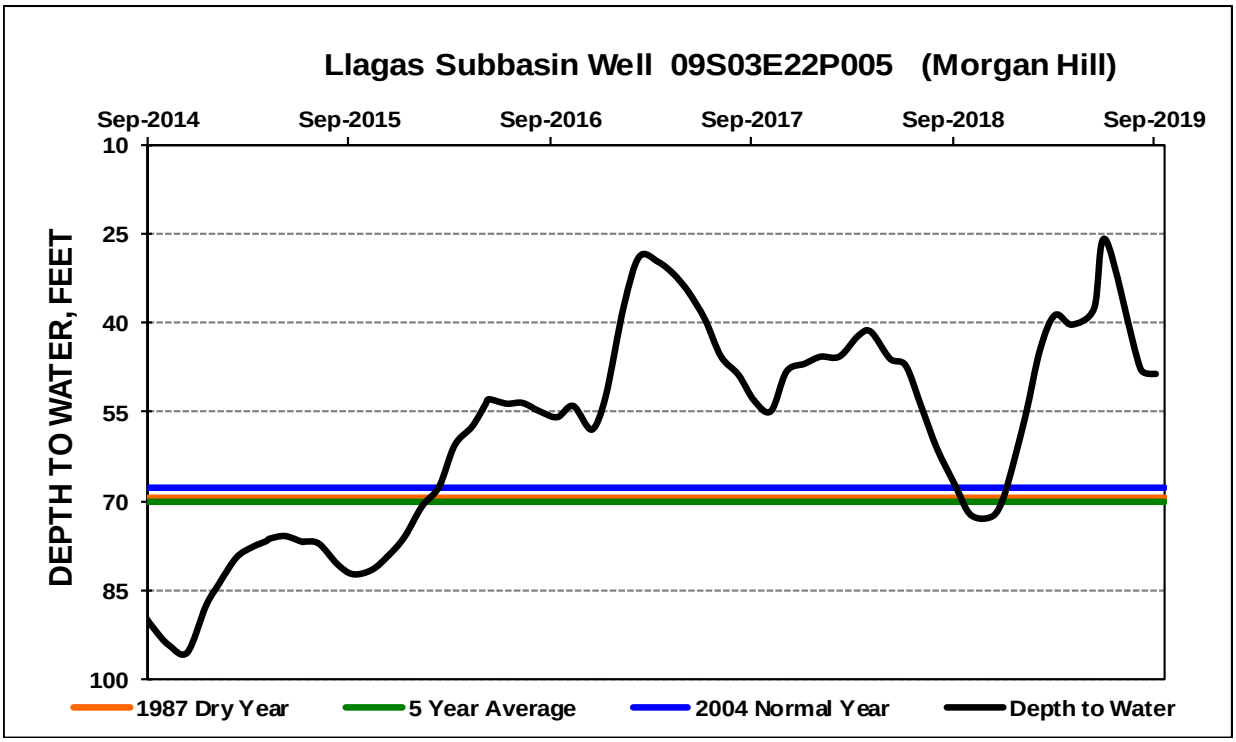
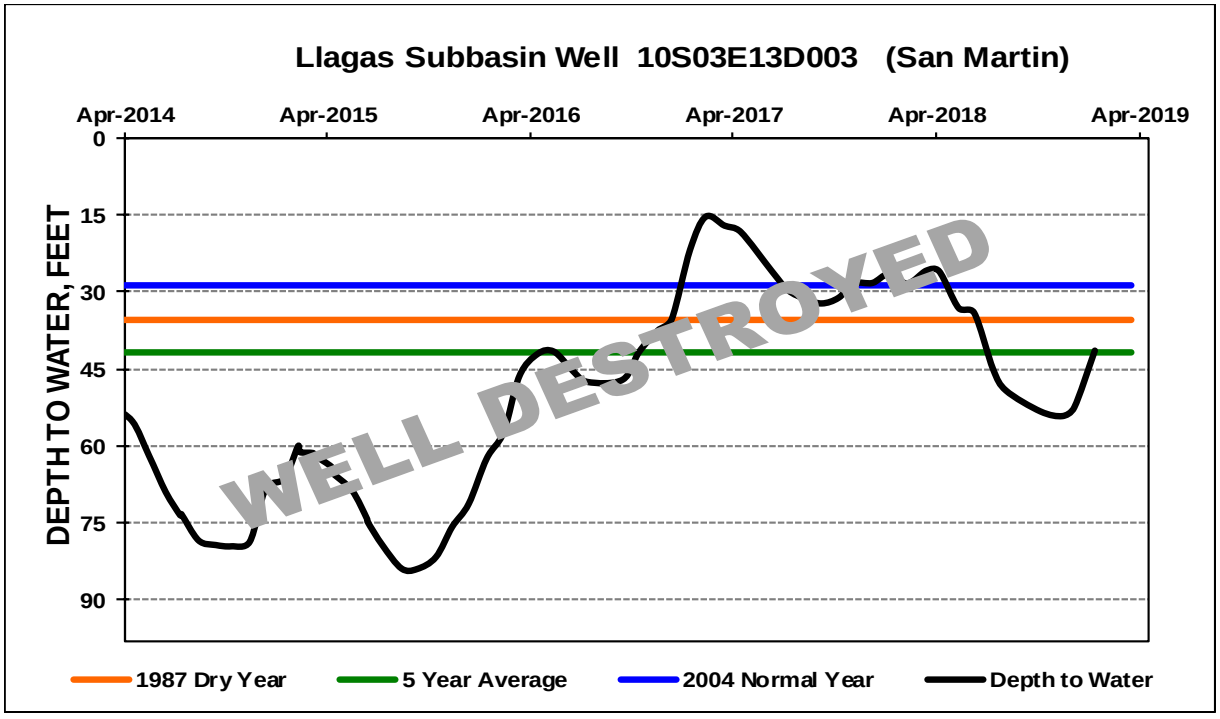


Figure 17 - San Martin Well Hydrograph



This well was recently destroyed by the property owner. Valley Water is evaluating a replacement well.

Figure 18 - Gilroy Well Hydrograph