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 November managed recharge estimate is 4,100 acre-feet. The year-to-date recharge estimate is 42,000 acre-feet, which is 85% of the five-year average.
  - The October groundwater pumping estimate is 6,200 acre-feet. The year-to-date pumping estimate is 46,400 acre-feet, which is 73% of the five-year average.
  - The groundwater level in the Santa Clara Plain (San Jose) index well is 5 feet lower than it was last November and 9 feet higher than the five-year average.

- Coyote Valley:
  - The November managed recharge estimate is 1,100 acre-feet. The year-to-date recharge estimate is 11,600 acre-feet, which is 94% of the five-year average (note that historic recharge for Coyote Valley has been updated which results in the current percent of five-year average showing a large drop from recent months).
  - The October groundwater pumping estimate is 1,150 acre-feet. The year-to-date pumping estimate is 10,400 acre-feet, which is 112% of the five-year average.
  - The groundwater level in the Coyote Valley index well is about 5 feet lower than last November and 6 feet higher than the five-year average.

- Llagas Subbasin:
  - The November managed recharge estimate is 2,200 acre-feet. The year-to-date recharge estimate is 23,700 acre-feet, which is 143% of the five-year average.
  - The October groundwater pumping estimate is 4,400 acre-feet. The year-to-date pumping estimate is 34,000 acre-feet which is 92% of the five-year average.
  - The Llagas Subbasin index well in San Martin was replaced in November with a well that should provide similar data to the previous well. Historic data from the destroyed well is used for comparison to the new well and it shows that groundwater levels are about 14 feet higher than last November and about 16 feet higher than the five-year average.
Groundwater Recharge

Compared to the November averages of the last five years (2014-2018), the estimated managed recharge for November 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

![Estimated Managed Recharge - Santa Clara Plain](image1.png)

Figure 2 - Estimated Managed Recharge in the Coyote Valley

![Estimated Managed Recharge - Coyote Valley](image2.png)

Figure 3 - Estimated Managed Recharge in the Llagas Subbasin

![Estimated Managed Recharge - Llagas Subbasin](image3.png)
Groundwater Pumping

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

**Figure 4 – Estimated Santa Clara Plain Pumping**

![Estimated Groundwater Pumping - Santa Clara Plain](image)

**Figure 5 – Estimated Coyote Valley Pumping**

![Estimated Groundwater Pumping - Coyote Valley](image)

**Figure 6 – Estimated Llagas Subbasin Pumping**

![Estimated Groundwater Pumping - Llagas Subbasin](image)
Groundwater Levels

November 2019 groundwater levels at eleven selected monitoring wells (Figure 7) are compared to the groundwater levels of October 2019, November 2018, November 2004 (a normal year), November 1987 (a dry year), and the prior five-year average of November measurements (2014 through 2018). This information is presented in individual well groundwater hydrographs in Figures 8 through 18. The San Martin well was recently replaced with a well that should provide data equivalent to the prior well.

November 2019 groundwater levels were higher than October 2019 levels in two index wells, the same in three wells, and lower in the remaining six wells. From November 2018 to November 2019, five index wells showed water level increases ranging from 4 to 22 feet and six wells showed water level decreases of between 1 and 20 feet. The November 2019 levels were higher than November 2004 levels by 1 to 24 feet in nine of the ten available index wells and lower by 2 feet in one well. November 2019 levels were higher than the five-year average of November measurements in ten of the eleven available index wells by between 3 and 20 feet and 6 feet lower in one well. November 2019 groundwater levels were higher than November 1987 dry year levels in ten of the eleven index wells and lower by 1 foot in one well.
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 8 - Milpitas Well Hydrograph

Figure 9 – Sunnyvale Well Hydrograph
Figure 10 - San Jose Well Hydrograph

Figure 11 - Santa Clara 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
The San Martin index well was replaced in October 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).
Figure 18 - Gilroy Well Hydrograph