

# Drought Emergency Response Report

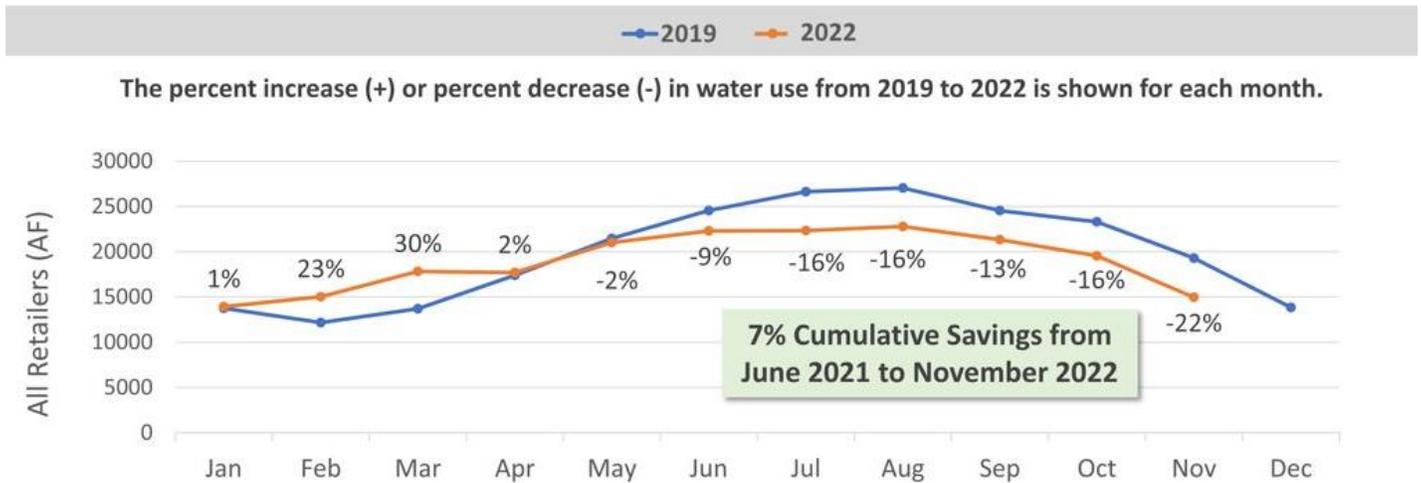
DECEMBER 2022

## Drought Resolution Implementation

On June 9, 2021, the Board adopted Valley Water Resolution 21-68 which declared a water shortage emergency condition pursuant to California Water Code §350, called for water use reduction of 15% compared to 2019, and urged the County of Santa Clara (County) to proclaim a local emergency. The County adopted a Resolution ratifying the proclamation of a local emergency due to the drought on June 22, 2021. California’s Governor included Santa Clara County as part of a drought emergency proclamation on July 8, 2021, and this proclamation included all California counties on October 19, 2021. Valley Water activated its Emergency Operations Center (EOC) on June 16, 2021 to assist with resolution implementation and other drought-related efforts. Valley Water Resolution 22-20 amended Valley Water Resolution 21-68 on April 12, 2022 to call for no more than 2 days of irrigation in a week for ornamental lawns and prohibit excessive runoff, midday irrigation, and irrigation after rainfall. On May 24, 2022, the Board approved Ordinance 22-02 to enforce these restrictions. The ordinance went into effect on June 1, 2022. On September 13, the Board amended Ordinance 22-02 to include the State’s ban against watering commercial, industrial, and institutional (CII) non-function turf amongst its list of enforceable restrictions.

## Retailer Water Use Reduction

The graph below depicts total water use from the 13 retailers in Santa Clara County to help track progress towards achieving Valley Water’s 15% call for water use reduction made in June 2021.



- Valley Water exceeded its water savings target in November 2022. Countywide water savings were 22% in November 2022 compared to November 2019.
- December rainstorms have increased the water levels in our local reservoirs and also increased the snowpack in the Sierra, however, Santa Clara County continues to be in drought.
- Valley Water continues its conservation and drought-messaging with the “Say Yes to Saving Water” campaign. The multilingual, multi-platform campaign encourages residents, businesses, farms, and others to follow watering restrictions and take actions, both large and small, that can increase water savings.

- The following table shows countywide water savings compared to 2019 (Valley Water’s baseline for conservation) and 2020 (Governor’s baseline for conservation).

Baseline Year	Santa Clara County	
	2019	2020
November 2022 Savings	22%	21%
Cumulative*	7%	12%

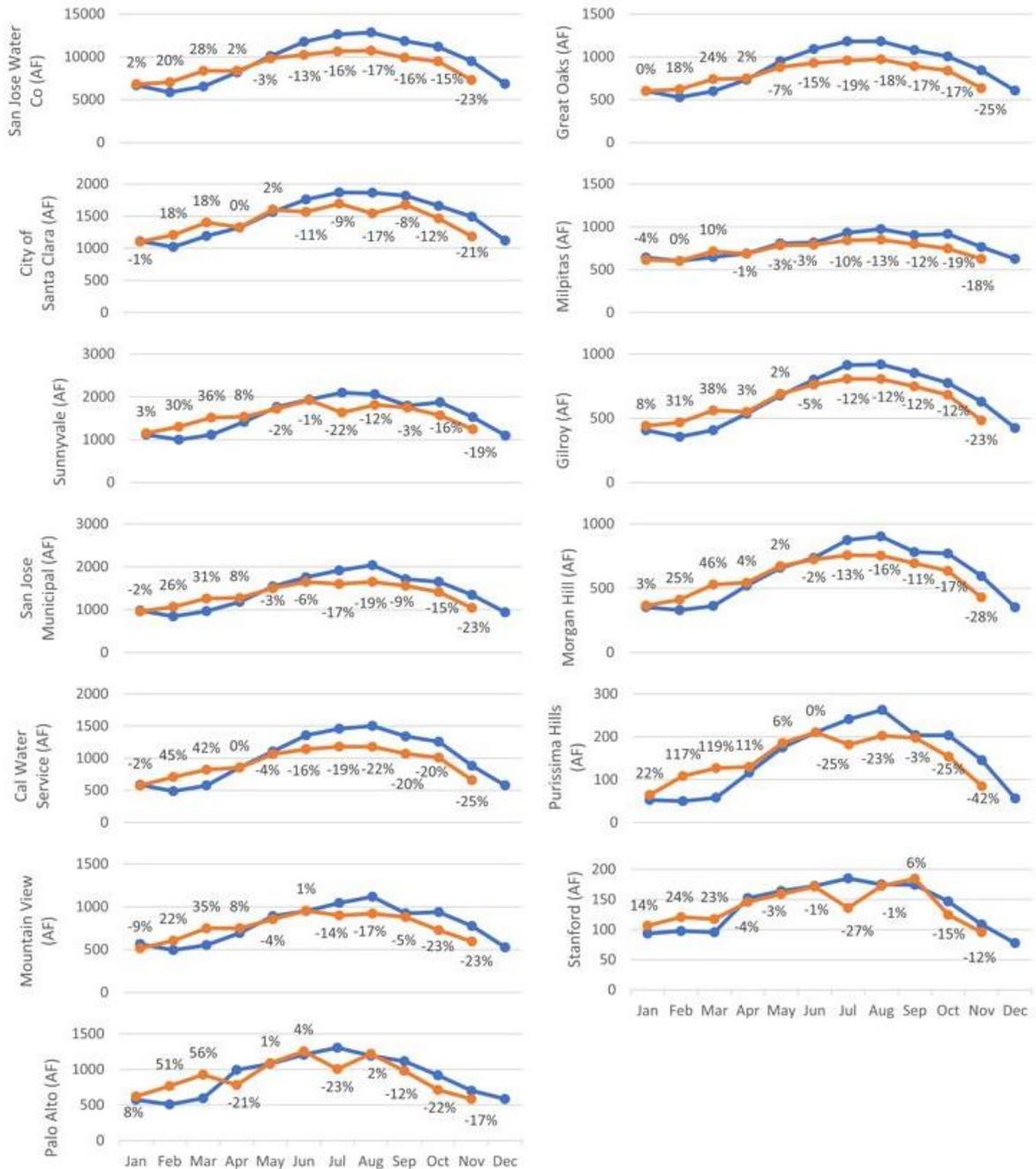
\* Cumulative for 2019 baseline begins in June 2021 and for 2020 baseline begins in July 2021

The graphs below depict water use by each of Valley Water’s 13 retailers to help track progress towards achieving the 15% call for water use reduction made in June 2021. Note that City of Palo Alto Utilities (Palo Alto) and Purissima Hills Water District (Purissima) normally do not use Valley Water sources of water. A large proportion of water used by the City of Mountain View Public Works (Mountain View) and Stanford Utilities (Stanford) is not from Valley Water sources.

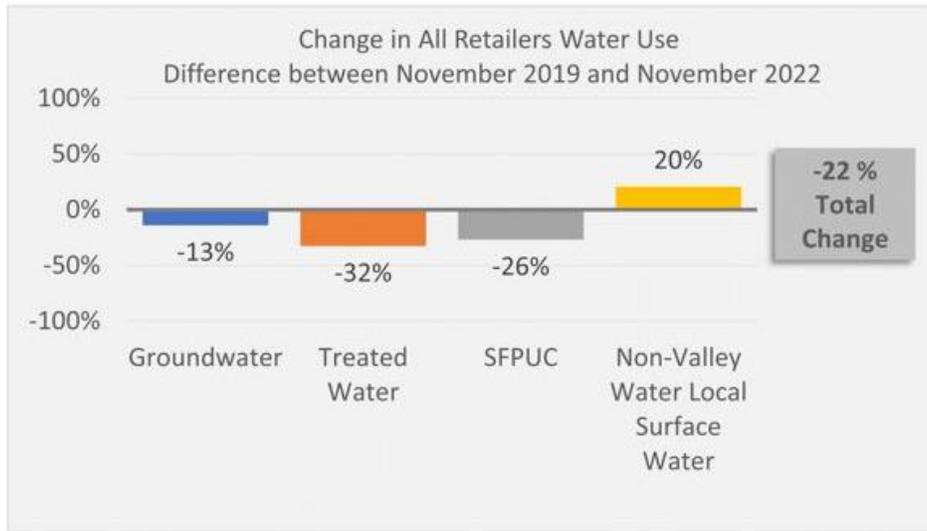
### Monthly Water Use by Retailer (AF)

— 2019 — 2022

The percent increase (+) or percent decrease (-) in water use from 2019 to 2022 is shown for each month.



The graph below depicts changes between the retailers' different types of water use. As expected, the proportion of groundwater use tends to increase during drought.



The table below shows Valley Water retailers' water usage volumes by type.

Water Retailer	Total Water Use in Acre-Feet (November 2019)					Total Water Use in Acre-Feet (November 2022)				
	Groundwater	Treated Water	SFPUC	Non-Valley Water Local Surface Water	SUM	Groundwater	Treated Water	SFPUC	Non-Valley Water Local Surface Water	SUM
San Jose Water Company	4,270	4,910	-	320	9,490	3,970	2,960	-	380	7,310
Santa Clara, City	990	170	340	-	1,490	680	240	260	-	1,180
Sunnyvale	10	450	1,070	-	1,530	-	580	660	-	1,240
San Jose Municipal Water	80	890	380	-	1,350	60	650	330	-	1,040
California Water Service	300	580	-	-	880	440	220	-	-	660
Palo Alto	-	-	700	-	700	-	-	580	-	580
Mountain View	20	80	670	-	780	10	50	530	-	590
Great Oaks	840	-	-	-	840	630	-	-	-	630
Milpitas	-	250	510	-	760	-	280	350	-	630
Gilroy	630	-	-	-	630	480	-	-	-	480
Morgan Hill	590	-	-	-	590	430	-	-	-	430
Purissima Hills Water	-	-	150	-	150	-	-	80	-	80
Stanford	-	-	110	-	110	-	-	100	-	100
<b>Total</b>	<b>7,730</b>	<b>7,320</b>	<b>3,920</b>	<b>320</b>	<b>19,300</b>	<b>6,710</b>	<b>4,980</b>	<b>2,890</b>	<b>380</b>	<b>14,960</b>

Collaboration with the County, Retailers, and Cities

- As of December 31, 2022, 14 cities in Santa Clara County have implemented a maximum two-day irrigation schedule, including five cities that have taken additional formal action to their elected boards in response to the ongoing drought emergency and Valley Water's Amended Resolution 22-20. Of the current jurisdictions that have implemented a two-day irrigation schedule, one city has further restricted outdoor watering to one-day-a-week, effective through February, under its current Level 4 Water Supply Shortage declaration.
- In December, Valley Water continued to monitor actions related to the adoption of the Model Water Efficient New Development Ordinance (MWENDO) and provide staff support to municipalities as part of ongoing efforts to support cities' and the County's interests in expanding water efficiency measures. Currently, the County and

several cities are considering select MWENDO measures to include as part of their jurisdictions' updated building code.

### Water Conservation Programs

Valley Water is actively promoting ways our community can save water through rebates, free water-saving devices, and behaviors. The Shopping Cart (eCart) Program offers free water-saving devices to homes and businesses. The Landscape Rebate Program (LRP) provides rebates for converting high-water use landscapes to low-water-use landscapes, as well as retrofitting existing irrigation equipment with approved high-efficiency irrigation equipment. As expected, application submittal rate, though higher than non-drought years, continues to decrease as we move into winter.

Estimated conservation program applications received are shown below.

<b>Program</b>	<b>October</b>	<b>November</b>	<b>December</b>
<b>Landscape Rebate Program Applications</b>	276	170	96
<b>Water-saving Device Orders</b>	278	218	113

### Water Waste Enforcement

Valley Water began enforcing outdoor water waste restrictions against runoff, midday watering, and watering after rainfall, and a limit of two days a week of watering for non-functional turf on June 1, 2022. On September 13, 2022, Valley Water's Board of Directors amended the Ordinance 22-02 to allow Valley Water to enforce the State of California's ban against watering non-functional turf on commercial, industrial, and institutional properties. The Water Waste Program is enforcing these restrictions while continuing its educational mission. The number of water waste reports since program launch in June 2022 is shown below.

	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
<b>Water Waste Reports</b>	515	236	484	286	221	156	79

Complaints of violations against water waste restrictions are submitted by members of the public. A total of 79 water waste complaints were received in December 2022. Twenty-eight of the complaints received are enforceable, as they relate to the restrictions listed in Ordinance 22-02 and occurred in service areas supplied by Valley Water sources; the remaining are not enforceable but are addressed through education. Each complaint may include multiple reports of violations against water waste restrictions. Below is a breakdown of the numbers of reported water waste violations related to the restrictions listed in Ordinance 22-02. Not all violations are verified by staff to be occurring, such as those related to watering after rainfall. Seven second complaints on the same violation were received from enforcement program launch through the end of December.

<b>Enforceable Water Waste Violations</b>	<b>June</b>	<b>July</b>	<b>Aug</b>	<b>Sept</b>	<b>Oct</b>	<b>Nov</b>	<b>Dec</b>
More than 2 days of watering per week	76	39	113	83	54	26	17
Watering from 9AM-6PM	84	30	92	45	29	14	4
Watering within 48 hours of rainfall	11	4	3	21	4	19	17
Runoff	199	95	210	129	118	46	21
Watering CII non-functional turf	n/a	n/a	n/a	15	38	18	5

## Drought and Water Conservation Outreach

- In December, an on-site media event updating the public on the progress of the tunnel portion of the Anderson Dam Seismic Retrofit Project was held. Chair Pro Tem Varela and Assistant Officer Ryan McCarter gave interviews to NBC Bay Area, ABC7, CBS5, KTVU, NTD, KCBS-Radio, the Mercury News, Morgan Hill Times and Morgan Hill Life. They discussed the round-the-clock work being done and the project’s overall importance to our future water supply. Media interest also focused on December rain events. Staff addressed the storm, flood preparedness, the drought and the need to conserve water even when it rains.
- Our water conservation campaigns continue with tips for saving water and messaging on dialing back on irrigation during the winter. We are also promoting our landscape, irrigation and graywater rebates, outdoor water surveys and e-cart. A campaign focused on commercial watering rules continued until December 31. Ads run on audio and video streaming platforms, digital, social media, newspapers and supermarket shopping carts. Our monthly newsletter continues to feature water conservation tips and resources.
- The Say Yes to Saving Water public service announcement (PSA) involving local professional sports teams was published on Valley Water’s social media channels. The PSAs are running on television, radio and streaming services. The video features San Francisco 49ers player Taybor Pepper, who encourages everyone to make a difference in their community by Saying Yes to Saving Water. In partnership with the City of Gilroy, our Say Yes to Saving Water PSA with San Jose Earthquakes player Tommy Thompson ran in its movie theater during December. The second commercial Landscape Rebate success story was published on Valley Water’s social media channels. Chair Pro Tem Varela was featured in the video which highlighted the landscape transformation at Morgan Hill’s Woodland Estates clubhouse.
- Staff shared a news release on all social platforms in early December to address the California Dept. of Water Resources allocation numbers. The release and social posts reminded people although we’ve seen early-season rain, the low allocation is a reminder we’re still in a severe drought emergency. Staff continues to share posts with water-saving tips and links to our conservation programs.
- Community outreach put on one Speakers Bureau presentation in December. Chair Pro Tem Varela and staff conducted a virtual drought presentation to South County RE/MAX Realtors during an informational meeting.
- Statistics for public outreach efforts are shown below.

<b>Outreach Type</b>	<b>December 2022</b>
<b>Social Media<sup>1</sup></b>	
Impressions <sup>2</sup>	4,888,040
Engagements <sup>3</sup>	281,421
Link Clicks	45,456
Video Views	942,010
<b>Website Page Views</b>	
Water conservation webpages	54,370
BeHeard.ValleyWater.org/drought-information	238
<b>Media</b>	
Media Mentions <sup>4</sup>	1,264
<b>Speakers Bureau</b>	
Presentations <sup>5</sup>	1

<sup>1</sup>Includes Facebook, Twitter, Instagram, YouTube and LinkedIn

<sup>2</sup>Impressions are the number of times a post is displayed in a newsfeed.

<sup>3</sup>Engagements are the number of times a user interacts with a post, such a retweet, click, and more.

<sup>4</sup>Includes TV, radio, social media, online and print

Drought and Water Conservation Education

- In December, the Education Outreach Program (EO) supported 27 educators and 696 students through nine in-person presentations, one virtual presentation and one tour of the Alamos Outdoor Classroom. EO staff also engaged with 15 members of the public during a San Jose Public Library after-school “Kids In Science” virtual program at Empire Branch Library. All students, teachers and families attending EO programs recited the Water Conservation Pledge and received a Water Conservation Pledge Bookmark. The bookmark contains the pledge and suggestions on saving water every day with links to the Valley Water website.
- The table below shows Education Outreach efforts in Fiscal Year 2023, all of which included drought and water conservation messaging.

<b>EDUCATION OUTREACH PRESENTATION NUMBERS</b>			
<b>MONTH</b>	<b>STUDENTS &amp; EDUCATORS</b>	<b>PUBLIC ATTENDEES</b>	<b>FY23 YEAR TO DATE</b>
<b>July – November</b>	5,563	508	6,071
<b>December</b>	723	21	744
<b>Total</b>	<b>6,286</b>	<b>529</b>	<b>6,815</b>

- Members of the Valley Water Youth Commission Youth Citizen Science Network Working Group continued raising awareness about the ongoing drought and the need for water conservation through their social media campaign. Three stories, posted on the Valley Water Instagram account, featured Valley Water Youth Commissioners promoting the water-saving devices available in the Valley Water Online Shopping Cart.
- Through the assistance of the Water Ambassadors, a total of 500 Do-It-Yourself (DIY) kits for Water Conservation have been completed. These kits help people identify where to look for potential leaks. The kits will be distributed via the Shopping Cart.

Water Supply Operations and Outlook

- The cumulative rainfall in San José in this rainfall year through December 31, 2022, is 8.86 inches or 180% of the long-term average for the valley floor for this date. The current rainfall year extends from July 1, 2022, to June 30, 2023.
- Total reservoir storage as a percentage of unrestricted reservoir capacity is 33% for January 1, 2022, which is 79% of the (20-year) average storage for January.

Imported Water

- The current drought from Water Year 2020 to 2022 is the driest three-year period on record, breaking the old record set by the last drought from Water Year 2013 to 2015. California’s water year runs from October 1 to September 30 and is the official timeframe used to compare hydrologic records. Water Year 2023 began on October 1, 2022, and while precipitation was below average in October and November, recent storms have resulted in above average precipitation in December.
- Despite the recent storms, state reservoir levels remain below the historical average. As of December 29, 2022, Shasta Reservoir is at 55% of average for this date, Oroville Reservoir is at 61% of average for this date, and

Folsom Reservoir is at 82% of average for this date. Total storage in each of these three major reservoirs has increased in December.

- As of December 29, 2022, storage in San Luis Reservoir is approximately 628 thousand acre-feet (TAF), which is 50% of the average 1,248 TAF for this day. San Luis Reservoir storage increased by approximately 114 TAF in November.
- Valley Water entered 2022 with over 65 TAF of imported supplies stored in San Luis Reservoir. This includes emergency transfer supplies purchased in 2021, previously undelivered State Water Project (SWP) supplies, and water recovered from the Semitropic Groundwater Bank. This amount is higher than normal to ensure reliable supplies in the event the drought continues. The added carryover was needed given that Anderson Reservoir is undergoing construction and cannot support water supply needs. This strategy was very effective in 2022 and will be used again to mitigate expected drought conditions in 2023.
- The California Department of Water Resources (DWR) announced a 2022 SWP allocation of 5% on March 18, 2022, which equates to an allocation of 5 TAF for Valley Water. Subsequently, DWR approved Valley Water's request for additional water to meet our critical human health and safety needs in 2022.
- The California Department of Water Resources (DWR) announced an initial 2023 SWP allocation of 5% on December 1, 2022, which equates to a 5 TAF allocation for Valley Water. DWR has also indicated that water agencies may apply for additional water in order to meet minimum human health and safety needs in 2023. Valley Water has submitted an initial request for human health and safety water to meet the County's minimum human health and safety needs in 2023.
- The U.S. Bureau of Reclamation (Reclamation) Central Valley Project (CVP) 2022 water supply allocations for south-of-Delta CVP contractors, including Valley Water, were set to a municipal and industrial allocation of public health and safety water only and an agricultural allocation of zero percent. Reclamation approved Valley Water's request for public health and safety water in 2022. The CVP water supply allocation for 2023 has not been announced yet.
- Valley Water will continue to withdraw previously stored supplies from the Semitropic Groundwater Bank in 2023 if SWP and CVP allocations remain low. Staff continues to work with DWR and other Semitropic Banking partners and anticipates that at least 31.5 TAF would be available for delivery to Valley Water. As of November 30, Valley Water has withdrawn approximately 35 TAF in 2022 from Semitropic Groundwater Bank.
- Valley Water previously executed several long-term water transfer agreements that provided emergency transfer supplies in 2022, but transfer supply was severely limited due to the critically dry conditions across the state. Valley Water secured agreements for approximately 24 TAF of emergency transfer supplies in 2022. After conveyance losses, this provided an estimated 18 TAF of additional supply for the district.

#### Treated Water

- In December, MIB (Methyl-Isoborneol) level was briefly above our internal trigger level ( $\geq 8$  ng/l) in our source water (South Bay Aqueduct, at Lake Del Valle) to the plants. Per VW Taste and Odor Response Plan, staff took proactive measures to implement source water change and treatment process adjustment to minimize impact. No complaint was reported by retailers during this brief episode. MIB is a naturally occurring taste and odor compound produced by algae in the water and does not pose any human health risks.
- Source water algal toxins were below our internal triggers and treated water delivered met all applicable drinking water standards.

#### Groundwater Recharge

- Valley Water has been maintaining a reduced managed groundwater recharge program countywide due to a three-month shutdown to conduct a pipeline inspection and rehabilitation project from the first week of November 2022 through the end of January 2023.

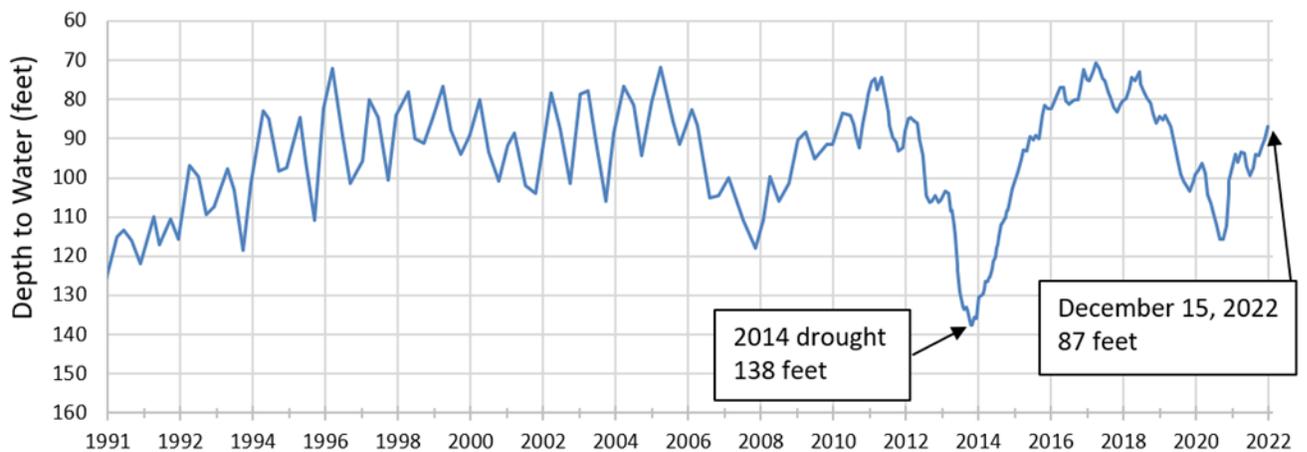
- However, recharge operations continue in creeks downstream of local reservoirs, including Coyote Creek, as well as in off-stream percolation ponds in the Los Gatos Recharge System.
- Countywide managed recharge in 2022 was at 97% of normal or the 20-year average.

Groundwater Conditions:

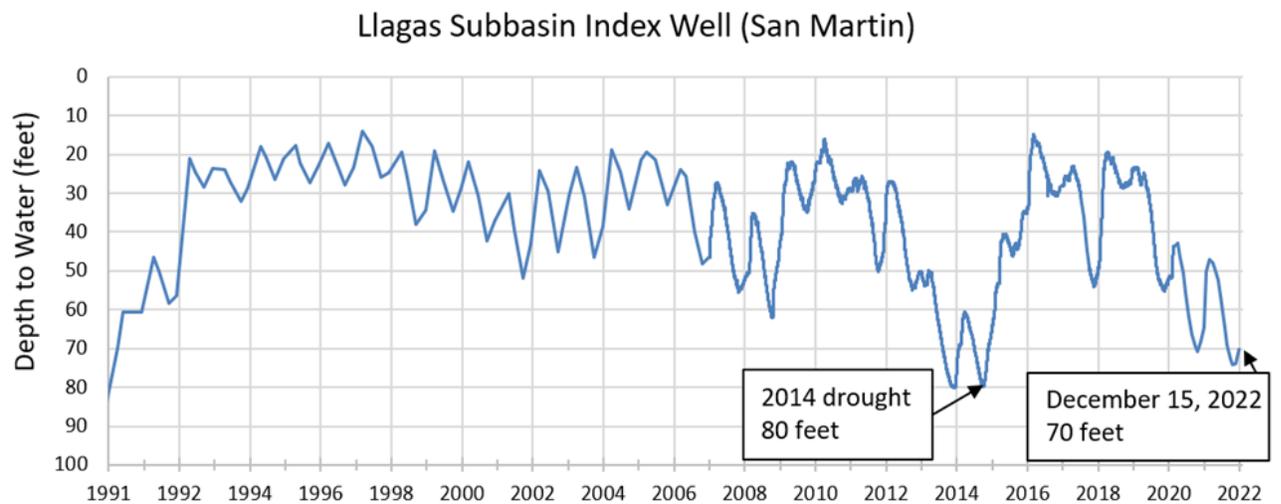
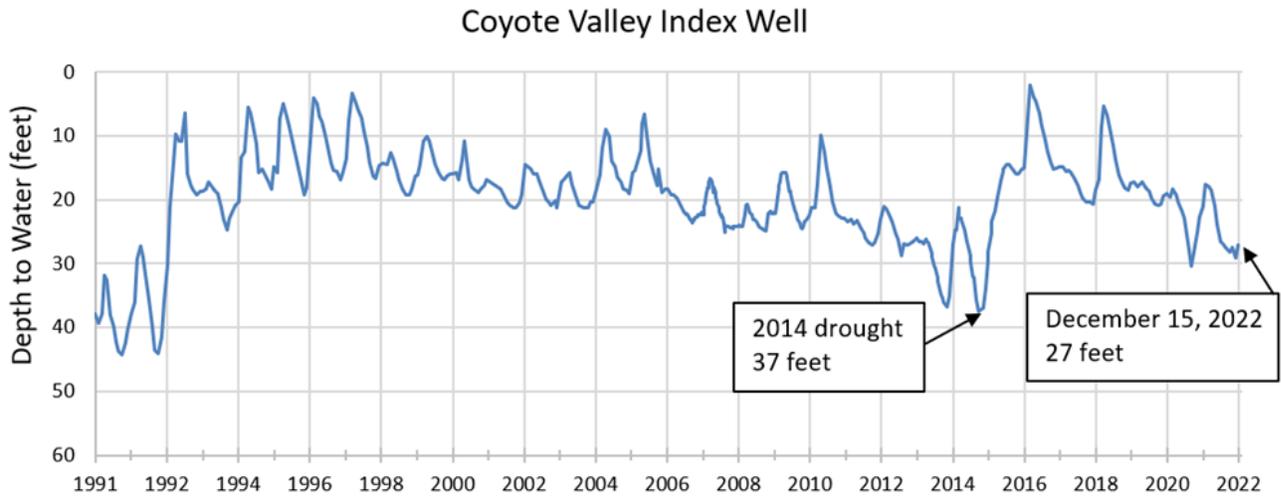
Groundwater levels are increasing in most areas due to seasonal recovery, Valley Water’s managed recharge operations, and ongoing water conservation by the community. While groundwater levels in most monitoring wells are higher than last month, many are lower relative to December 2021. With drought conditions expected to continue, water use reduction is essential to minimize the risk of resumed subsidence in North County and wells going dry, particularly in South County. The risk of dry wells and subsidence increases as the drought persists. One new dry well was reported in December.

- North County Groundwater
  - The current water level at the regional index well has increased about 3 feet since last month and is about 51 feet above the minimum water level in 2014. The water level at this well is about 14 feet higher compared to this time last year.
  - Groundwater levels are more than 60 to 100 feet above thresholds established to minimize the risk of permanent subsidence.
  - No dry wells were reported in December. Since the onset of the current drought, a total of two dry wells have been reported in North County, all in the foothills where yield is generally less reliable.

Santa Clara Plain Index Well



- South County Groundwater
  - The current water level in the Coyote Valley and Llagas Subbasin regional index wells have increased by about 2 and 4 feet, respectively, since last month and both are about 10 feet above the minimum water level in 2014. Additionally, the water levels in these wells are about 6 and 5 feet lower, respectively, compared to this time last year.
  - One dry well was reported in December. Since the onset of the current drought, a total of six dry domestic wells have been reported in South County, with most located near the foothills where yield is generally less reliable. Valley Water works to provide affected well owners with appropriate assistance, including information on available resources or billing support as needed.



## **Staffing and Resources**

- Drought emergency expenses are expenditures supplemental to the regular budget that would not have been adopted had there been no drought. Due to the timing of monthly financial system closes, drought expenditures are reported one month behind the monthly Drought Emergency Report.
- The FY 2022-23 Adopted Budget of \$37 million for drought emergency is comprised of \$17 million for emergency water purchases, \$7 million for water banking expenses to help bring approximately 32,000 acre-feet of water banked at Semitropic Water Storage District into the county, and \$13 million for conservation programs and drought related public relations. Budget adjustments will be brought to the Board for any additional expenses incurred during the year.
- November 2022 expenses totaled approximately \$5.57 million spent or encumbered primarily for emergency water purchases tied to contracts executed in prior years, operating supplies and services for public relations, eCart supplies, temps and interns supporting drought related conservation programs, and labor expenses for staff time supporting Valley Water’s drought response program.

## **Expanded Opportunities**

### **Purified Water Project**

The Purified Water Project will replenish groundwater supplies with purified water and expand usage of recycled and purified water, a drought-resilient, locally-controlled water source.

- Staff continues to work with our partner agencies on agreements, technical requirements, and the draft EIR.

### **Flood-Managed Aquifer Recharge (Flood-MAR) Study**

Valley Water is collaborating with a team of water experts from the University of California system (referred to as UC Water) to complete a reconnaissance study for Flood-MAR implementation in Santa Clara County. The study began in 2021. Study deliverables include a GIS-based tool to identify potential sites for Flood-MAR projects in Santa Clara County and an evaluation of institutional/regulatory requirements for implementing Flood-MAR projects.

- Drafts are currently being reviewed by staff.

### **Drought Response Plan**

Valley Water is developing a Drought Response Plan (DRP) to improve water supply reliability in Santa Clara County during times of future shortage through a WaterSMART grant from the Bureau of Reclamation. Valley Water's DRP will evaluate new approaches for determining when to request water use reductions from the public and develop a response framework to employ during future droughts.

- Internal work continues to develop potential drought triggers and water shortage actions.