

Drought Emergency Response Report

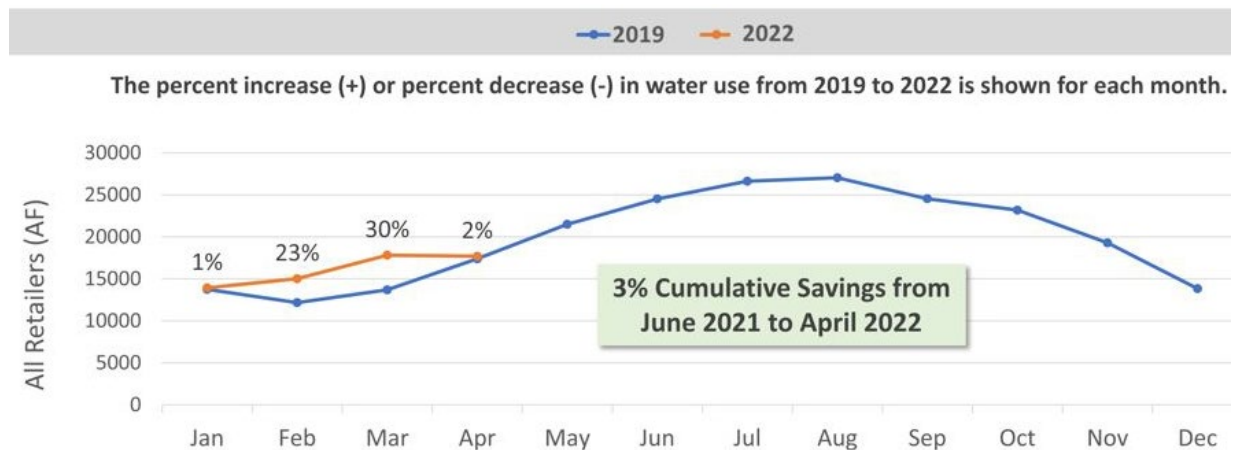
MAY 2022

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.

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.



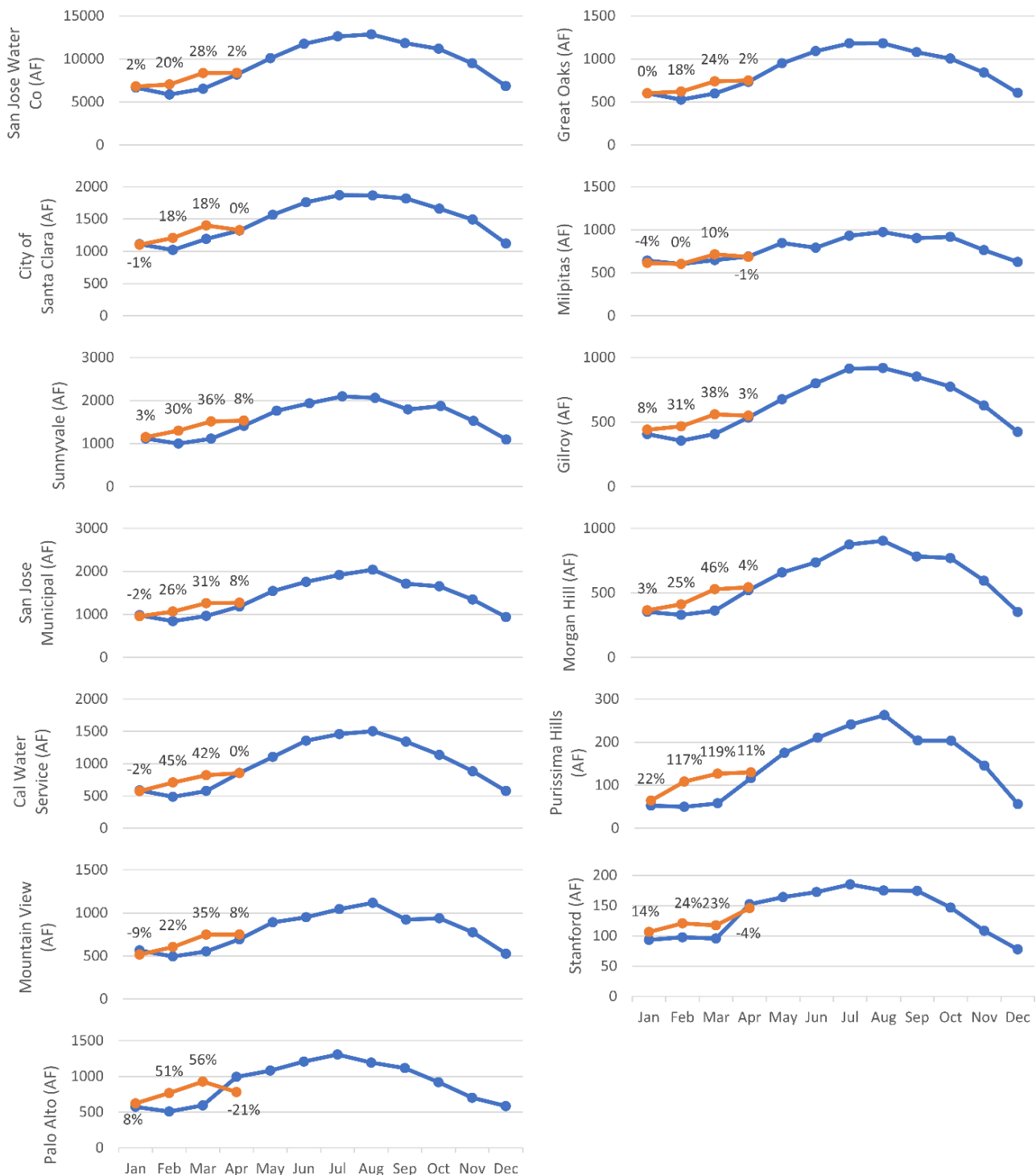
- Water use in the county is trending in the right direction with water use in April less than in March.
- Slightly more water, 2%, was used in April 2022 compared to April 2019, and 3% more water was used in April 2022 when compared to April 2020. The county made progress in reducing water use in April 2022 compared to February and March 2022.
- Santa Clara County's cumulative water savings from June 2021 – April 2022 is 3%, compared to 2019. The cumulative water savings from June 2021 – April 2022 is 8%, compared to 2020.
- On April 12, 2022, the Board called for no more than 2 days of irrigation in a week for ornamental lawns and prohibited runoff, midday irrigation, and irrigation following rainfall.
- On May 24, 2022, the Board approved an ordinance to enforce these restrictions in areas served by Valley Water supplies, with the goal of increasing countywide water savings.
- Valley Water continues its conservation and drought-messaging with a new "Say Yes to Saving Water" campaign. The new, 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.

These graphs 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.

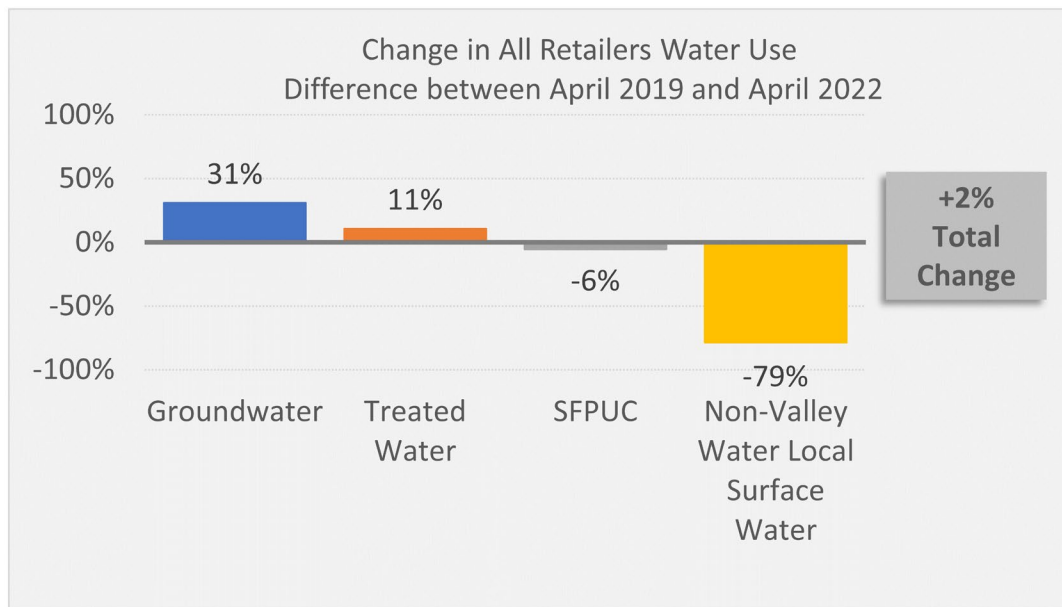
Monthly Water Use by Retailer (AF)

— 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 and shows that Valley Water retailers' total water use in January 2022 was 2% higher than in January 2019. 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 (April 2019)					Total Water Use in Acre-Feet (April 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	2,480	3,470	-	2,240	8,180	3,690	4,210	-	480	8,370
Santa Clara, City	640	440	250	-	1,320	780	290	250	-	1,330
Sunnyvale	10	550	850	-	1,410	10	710	810	-	1,530
San Jose Municipal Water	50	760	370	-	1,180	60	840	370	-	1,270
California Water Service	230	630	-	-	860	430	420	-	-	850
Palo Alto	-	-	990	-	990	-	-	780	-	780
Mountain View	20	70	610	-	690	10	70	670	-	750
Great Oaks	730	-	-	-	730	750	-	-	-	750
Milpitas	-	280	410	-	690	-	300	390	-	690
Gilroy	540	-	-	-	540	550	-	-	-	550
Morgan Hill	520	-	-	-	520	540	-	-	-	540
Purissima Hills Water	-	-	120	-	120	-	-	130	-	130
Stanford	-	-	150	-	150	-	-	150	-	150
Total	5,210	6,190	3,760	2,240	17,390	6,820	6,850	3,550	480	17,690

Collaboration with the County, Retailers, and Cities

- As of May 31, 2022, 11 cities in Santa Clara County have implemented a maximum two-day irrigation schedule, including three 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.
- On May 24, 2022, the County of Santa Clara Board of Supervisors unanimously approved adopting a resolution urging all residents and businesses in the county to adopt water conservation practices to achieve a 15% reduction in water usage.

- In May, Valley Water continued to conduct outreach to the municipalities for their consideration and adoption of the Model Water Efficient New Development Ordinance (MWENDO), as part of ongoing efforts to support cities' and the County's interests in expanding water efficiency measures. The County and some cities are considering aligning the adoption of new MWENDO measures as part of the upcoming Title 24 triennial building code update. The 2022 version of California's Title 24 is currently under development, with a publication date of July 1, 2022, and is expected to become effective on January 1, 2023.

Water Conservation Programs

Valley Water is actively promoting ways people can save water through rebates, free water-saving devices, and behaviors. The Landscape Rebate Program (LRP) provides rebates for converting high-water use landscape to low-water use landscape, as well as retrofitting existing irrigation equipment with approved high-efficiency irrigation equipment. The Shopping Cart (eCart) Program offers free water-saving devices to homes and businesses. The Water Waste Program enables callers to confidentially report water waste and leaks, which Valley Water addresses by providing educational assistance to the owner of the leak.

- Valley Water's Water Conservation Webinar Series launched in April with about 30 in attendance for a Sheet Mulching education program. In May, about 30 attendees joined a webinar on programming irrigation controllers on Facebook to help residents follow the two days a week watering limit. The series runs on Zoom and Valley Water's Facebook Live, and simultaneous translation is available to expand reach to non-English speakers.
- Valley Water launched a new office hours program for members of the public to ask staff about applying for water conservation rebates once per week, alternating between lunch hours and early evening.
- Valley Water announced the following:
 - Pending launch of Valley Water's new Lawn to Mulch component of the Landscape Rebate Program to help larger commercial properties convert non-functional turf to mulch and to install high-efficiency irrigation for trees on their property.
 - Doubling its Landscape Rebate Program's maximum rebate for commercial, industrial, institutional, and multi-family properties from \$50,000 to \$100,000.
- Estimated applications received for 2022 are shown below.

Program	March	April	May
Landscape Rebate Program Applications¹	216	222	343
Water-saving Device Orders	908	302	868

¹Starting July 1, 2021, the landscape rebate was increased from \$1 to \$2 per square foot and the maximum rebate was increased from \$2,000 to \$3,000 for single-family homes.

Water Waste Enforcement

At the May 24th Board meeting, Valley Water passed Resolution 22-02 to establish mandatory outdoor conservation measures for properties served potable water directly or indirectly from Valley Water sources. These mandatory measures include limiting irrigation of non-functional turf to a maximum two days per week, and not irrigating any outdoor landscape during and within 48 hours of measurable rainfall, between 9 AM and 6 PM, or in a manner that causes runoff. The Water Waste Program will continue its educational mission while enforcing the mandatory outdoor measures. The ordinance effective date is June 1, 2022. The ordinance was published in a newspaper. Next month's drought report will provide additional information on water waste reports received specifically related to the ordinance.

Program	March	April	May
Water Waste Reports	93	120	207

Drought and Water Conservation Outreach

- In May 2022, media interest focused on the Board of Directors' unanimous approval of the watering restrictions enforcement ordinance. The May 24 board meeting garnered national and regional television, online, print and radio coverage.
- Staff published statements on valleywater.org from Chair Pro Tem Varela on the proposed water use reduction enforcement ordinance and on its subsequent. Blog posts on valleywaternews.org accompanied these statements.
- The "Say Yes" water conservation campaign was launched, encouraging residents to reduce outdoor watering and engage in simple actions to save water. In addition to running in newspapers, the campaign is on social, digital, streaming and radio platforms. Public space ads on buses will be deployed in June, along with a broadcast video ad. Yard signs will be available through the shopping cart in June and Valley Water fleet vehicles will begin showcasing bumper stickers encouraging water conservation. Vehicle magnets with the same messaging are also being fabricated.
- The spring campaigns promoting our landscape rebate program and online shopping cart are running. Our animations have been seen more than half-a-million times.
- Staff continues to run social media videos and posts promoting outdoor surveys, tips to save water outdoors, watering trees, using shower buckets and designing yards with water-efficient plants. To highlight the importance of conserving water and to show where the county is at in this effort, social media posts were shared showing water use rose 30% in March. These posts encouraged residents to take advantage of tools and rebates at watersavings.org. Statements and blogs on the Board's new action on water waste reporting were also shared on all social media platforms.
- The Speakers Bureau Program held six drought presentations in May. On May 3 staff gave an in-person presentation to the Rotary Club of Campbell, Willow Glen and West San José. On May 4, staff conducted a Zoom presentation to the International Right of Way Association Chapter 42 and gave an in-person presentation to Latinos United for a New America (LUNA) as part of its environmental justice series. On May 19 staff delivered a Zoom presentation to San José Public Library patrons as part of District 9 & 10 library branches' Community Conversations series. On May 21, staff conducted a Zoom presentation to the Cottle to Lean Neighborhood Association. On May 31, Chair Pro Tem Varela offered welcoming remarks to Valley Water summer interns in person and was supported by staff who delivered the drought presentation.
- Statistics for public outreach efforts are shown below.

Outreach Type	May 2022
Social Media¹	
Impressions ²	6,921,604
Engagements ³	48,633
Link Clicks	11,012
Video Views	1,053,803
Website Page Views	
Water conservation webpages	55,970
BeHeard.ValleyWater.org/drought-information	448
Media	
Media Mentions ⁴	939
Speakers Bureau	
Presentations ⁵	6

¹Includes Facebook, Twitter, Instagram, and LinkedIn

²Impressions are the number of times a post is displayed in a newsfeed.

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

⁴Includes TV, radio, social media, online and print

⁵ Office of Communications and Government Relations

Drought and Water Conservation Education

- In May, the Education Outreach team (EO) supported 78 educators and reached 1,788 students through 61 virtual presentations. EO supported a tour of the Alamos campus by Santa Clara University Water Resources students, as they learned about the challenges of supplying water during the drought. EO staff presented to teachers participating in the Santa Clara County Office of Education “Environmental Literacy Cohort” educator training who shared they have integrated water education and drought awareness messaging into their classroom curriculum.
- The table below shows Educational Outreach efforts in 2022, all of which included drought and conservation messaging.

Program	Mar 2022	Apr 2022	May 2022
Educators/Teachers	68	43	74
Classes/Groups	36	37	62
Students	792	1,078	1,788

- The Youth Commission Drought Awareness Social Media Campaign has been extremely impactful. During the three-month long campaign, which ran from February – April 2022, there were over 300 engagements and over 70 comments from members of the public on the seven social media posts on Instagram. Staff is working with the commissioners to launch a second phase of the social media campaign around ways to reuse water.

Committee Updates

- Drought-related updates are being provided regularly at Committee meetings to receive feedback and guidance. These updates were provided to the Water Conservation and Demand Management Committee in May 2022.

Water Supply Operations and Outlook

The cumulative rainfall in San José this rainfall year, through May 31, has been 8.35 inches or 59% of the long-term average for the valley floor, for this date. The rainfall year is July 1 – June 30.

Imported Water

- While storms in October and December provided a wet start to the water year, January through March have been the driest combined first three months on record in California. While northern California received above average precipitation in April, major reservoir levels generally remain below average. As of May 31, 2022, the northern Sierra Nevada snowpack, a primary source of imported water, is at 17% of normal for this date.
- As of May 31, 2022, total state reservoir storage is below the historical average. Shasta Reservoir is at 48% of normal for this date, Oroville Reservoir is at 68% of normal for this date, and Folsom Reservoir is at 109% of normal for this date. Total storage in these three major reservoirs has increased slightly in May due to inflow from snowmelt runoff.
- As of May 31, 2022, storage in San Luis Reservoir is approximately 921 thousand acre-feet (TAF). San Luis Reservoir storage was reduced by approximately 30 TAF in May.
- 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 and is intended to provide reliability in the event dry conditions continue in 2022, while also mitigating for the loss of storage in Anderson Reservoir.

- The California Department of Water Resources (DWR) has announced a 2022 SWP allocation of 5 percent, which equates to an allocation of 5 TAF for Valley Water. DWR has approved Valley Water's request for additional water to meet our critical human health and safety needs.
- The U.S. Bureau of Reclamation (Reclamation) Central Valley Project (CVP) water supply allocations for south-of-Delta CVP contractors, including Valley Water, are currently set to a municipal and industrial allocation of public health and safety water only and an agricultural allocation of zero percent. Reclamation has approved Valley Water's request for public health and safety water.
- Valley Water will continue to withdraw previously stored supplies from the Semitropic Groundwater Bank in 2022 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.
- Valley Water previously executed several long-term water transfer agreements that could provide emergency transfer supplies in 2022, but transfer supply this year is severely limited due to the critically dry conditions across the state. To date in 2022, Valley Water has secured agreement for 5,500 AF of emergency transfer supplies. Staff is also pursuing other water transfer opportunities for additional supplemental supplies.

Treated Water

- The taste and odor compound, geosmin, had slightly elevated concentrations in water from the South Bay Aqueduct during the month of May. Staff were able to proactively optimize the water treatment process and mitigate potential impact.
- Cyanotoxins levels were non-detect in all source water.
- Total organic carbon continued to remain elevated in the South Bay Aqueduct and San Luis Reservoir. Bromide levels also continued to be elevated in San Luis Reservoir. Staff are monitoring water quality data closely and will implement mitigation and process optimization measures as needed.
- No reports of significant water quality issues for the treated water delivered in May 2022 and no complaints were received from retailers.

Groundwater Recharge

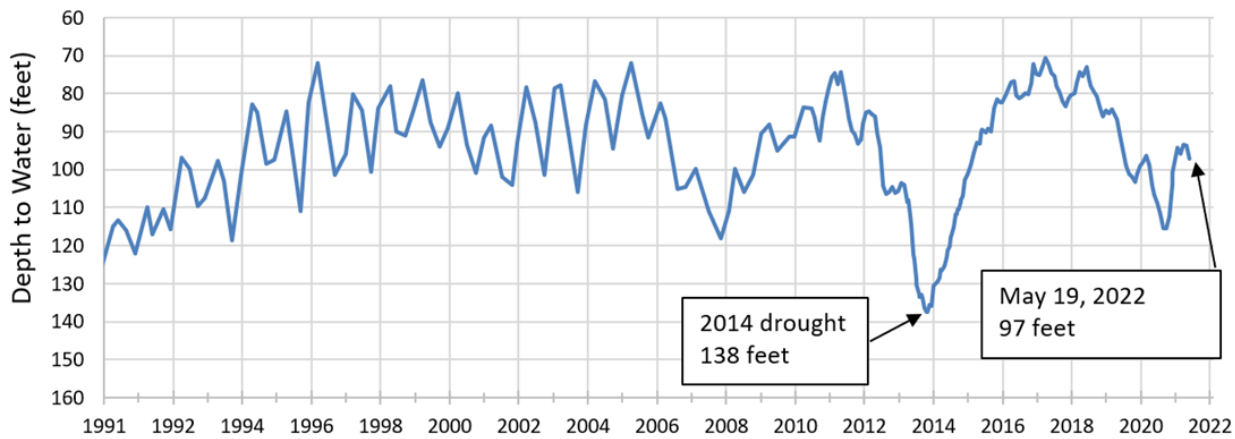
- Valley Water received approval for its request for Public Health & Safety water from the Central Valley Project and has increased its releases of imported water for managed groundwater recharge in calendar year 2022.
- Releases from local reservoirs will continue, albeit at lower levels than normal due to the current low storage conditions.
- Valley Water's operations plan shows that the countywide managed recharge for calendar year 2022 is projected to be about 75% of average.

Groundwater Conditions:

Groundwater levels in May have continued the seasonal decline, which typically occurs in spring and summer due to higher temperatures, increased water demand, and associated increased pumping. Greater than average declines in groundwater levels are expected this year because of the drought. As shown below, water levels in the North and South County index wells have generally declined since 2018 due to dry conditions, with a similar pattern as the 2012–2016 drought. Achieving the Board's water use reduction target is essential to minimize the risk of resumed subsidence in North County and wells going dry, particularly in South County. That risk increases as the drought persists.

- North County Groundwater
 - o The current water level at the regional index well has decreased by about 3 feet since last month and is about 41 feet above the minimum water level in 2014. The water level at this well is about 10 feet higher compared to this time last year.
 - o Groundwater levels are more than 42 to 100 feet above thresholds established to minimize the risk of permanent subsidence.
 - o No reports of dry wells have been received.

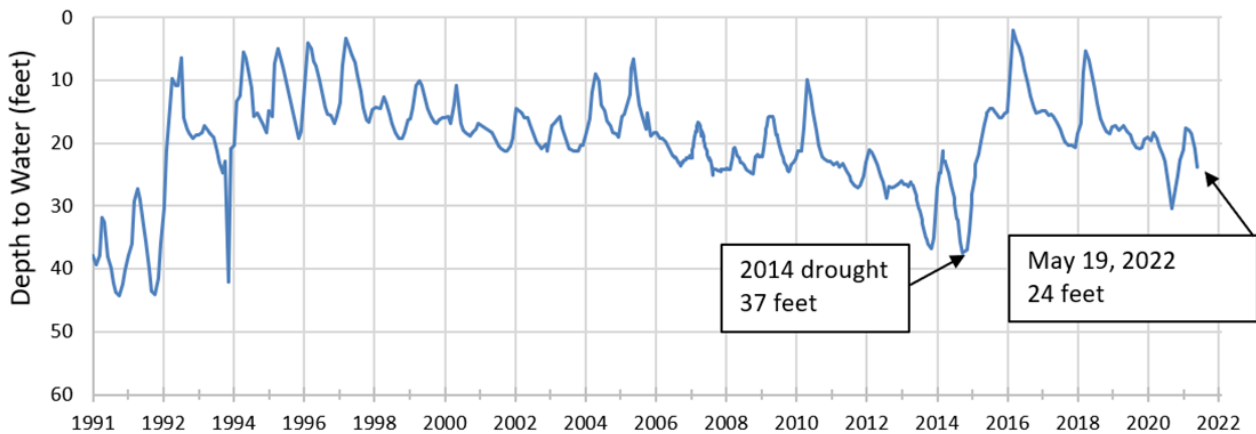
Santa Clara Plain Index Well



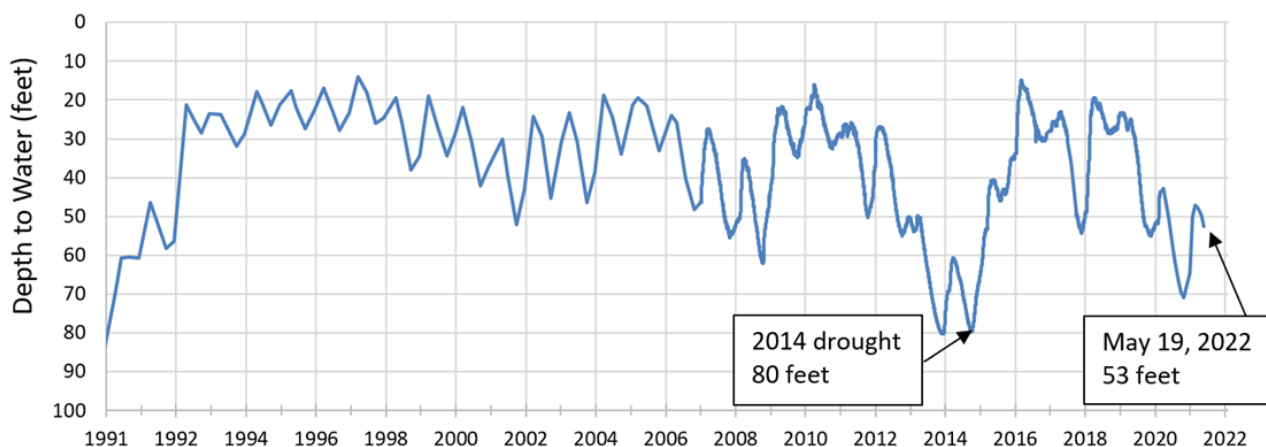
- South County Groundwater

- o The current water level in the Coyote Valley and Llagas Subbasin regional index wells have each decreased by about 3 feet since last month and are about 13 and 27 feet, respectively, above the minimum water level in 2014. Additionally, the water levels in these wells are each about 2 feet lower compared to this time last year.
- o Valley Water has received one direct report of a dry well. The well is in unincorporated area within the southwestern Coyote Valley and is close to the foothills where well yield is generally less reliable.

Coyote Valley Index Well



Llagas Subbasin Index Well (San Martin)



State Coordination

- On May 23, 2022, Valley Water CEO and staff participated in a meeting with Governor Gavin Newsom, key state agency water leaders, and other large urban water agencies. In the meeting, the Governor pointed to disappointing statewide conservation numbers for March 2022 that missed his voluntary call for a 15 percent reduction in water use, asked what more can be done to increase conservation, and indicated he would move to a mandatory conservation order if the numbers did not improve in the next 60 days.
- On May 24, 2022, the State Water Resources Control Board adopted the Emergency Regulation on Water Conservation. The regulation includes the following actions.
 - Requires Urban Water Suppliers to submit their water supply assessments by June 1, 2022. Valley Water submitted its water supply assessment by this date.
 - Requires Urban Water Suppliers to implement their stage 2 water shortage contingency plan demand reduction actions. Valley Water has been implementing stage 3 actions of its water shortage contingency plan since June 2021.
 - Prohibits the irrigation of non-functional turf with potable water in commercial, industrial, and institutional sectors (CII). The prohibition applies solely to non-functional turf that is not for human use and does not apply to trees. The regulations include an exemption for agencies that do not connect to the Colorado River system, State Water Project, or the Central Valley Project, use below 55 gallons total gallons per capita daily, and can demonstrate to have 3 years of additional water supply.
 - Authorizes Urban Water Suppliers to make determinations allowing the irrigation of CII turf that is comprised of low water use plants with a plant factor of 0.3 or less, if actual use is less than 40 percent of reference evapotranspiration.

Federal Coordination

- Directors and staff met with the U.S. Bureau of Reclamation during the ACWA Spring Conference to discuss the CVP supply outlook and to thank them for their continued support of our Public Health and Safety requests. Staff also advocated for completing the Pacheco Project feasibility study (under the San Luis Low Point Improvement Project) so that this important emergency water supply project can move forward.

Staffing and Resources

- Drought emergency expenses are expenditures supplemental to the regular budget that would not have been adopted had there been no drought. The budget for drought emergency costs included in the FY 2021-22 Adopted Budget are \$20 million for supplemental water and an additional \$3.3 million for water banking expenses to bring approximately 32,000 acre-feet of water banked at Semitropic Water Storage District into the county.
- On November 23, 2021, the Board approved establishment of the Drought Emergency project with a budget of \$6.5 million to fund two Limited Term Public Information Representatives to support expanded drought related communications with retailers, government agencies and the public. Funds also include expansion of the eCart program and various conservation rebate programs available to the public.
- On April 1, 2022, the United States Bureau of Reclamation (USBR) reduced the Municipal and Industrial water supply allocation of CVP contract water to public health and safety water only due to water shortage. Therefore, staff redirected associated CVP project and other Water Utility Enterprise operations project savings to the FY 2021-22 budget for emergency water purchases and water banking expenses (\$36 million). This brings total emergency drought budgets to \$42.5 million. Should additional funds be needed for drought related activities, budget adjustments will be brought to the Board.
- Expenses through the month of April FY22 totaled approximately \$32.24 million spent or encumbered primarily for emergency water purchases tied to contracts executed in FY21, relatively small draws of water from Semitropic Water Storage District in August, December, February and March, operating supplies and services

including communications contracts, and labor expenses for staff time implementing Valley Water's drought response program.

Expanded Opportunities

Agricultural Water Use Baseline Study

Valley Water is collaborating with a team from University of California-Merced (UCM) to complete an Agricultural Water Use Baseline Study to better understanding of the current agricultural water use practices and identify opportunities to expand water conservation programs offered to the agricultural community.

- UCM is completing their final report and recommendations.
- Valley Water staff are evaluating agricultural land fallowing programs in other parts of the state for applicability in Santa Clara County and are documenting opportunities and constraints related to well metering of smaller water users.

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.

- Valley Water continued to develop the procurement and CEQA documents for the Purified Water Project.

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.

- A workshop was held with Valley Water staff on June 1, 2022 on potential incentivization approaches for encouraging Flood-MAR implementation on non-Valley Water properties.

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.

- Valley Water's consultant is finishing a draft Vulnerability Assessment that evaluates the risks and impacts of drought in the county, focusing on key factors that increase Valley Water's vulnerability to drought, such as climate change, existing and potential regulations, infrastructure conditions, and future water quality conditions.