Drought Emergency Response Report

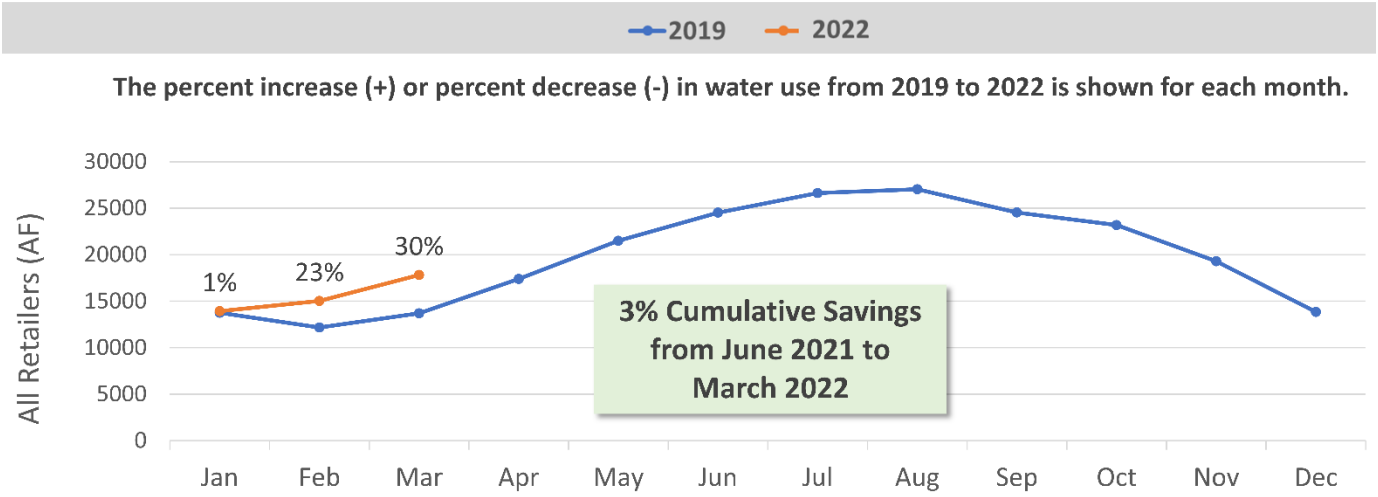
APRIL 2022

Resolution 21-68 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 lawns and ornamental landscapes and prohibit excessive runoff and midday irrigation.

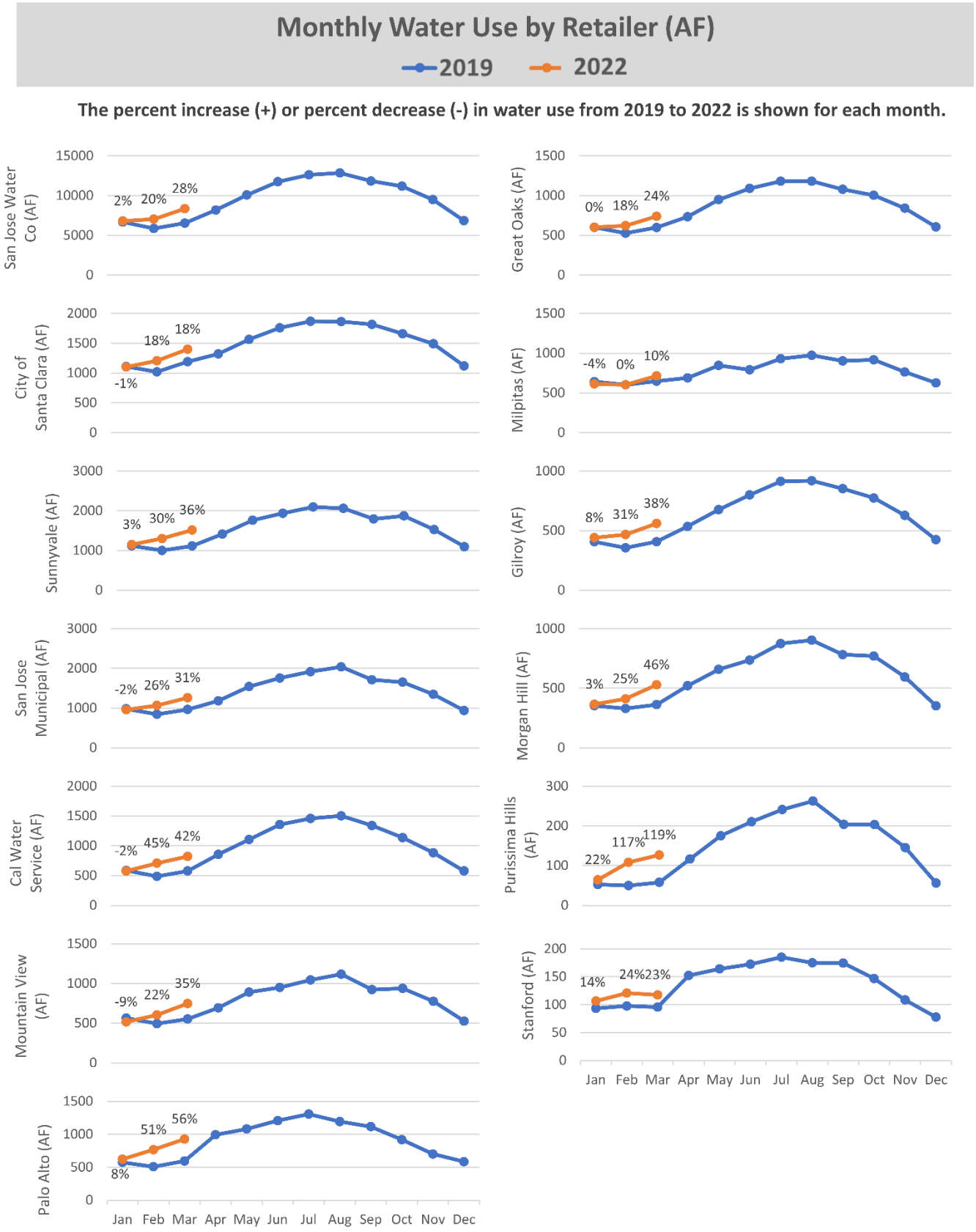
Retailer Water Use Reduction

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.

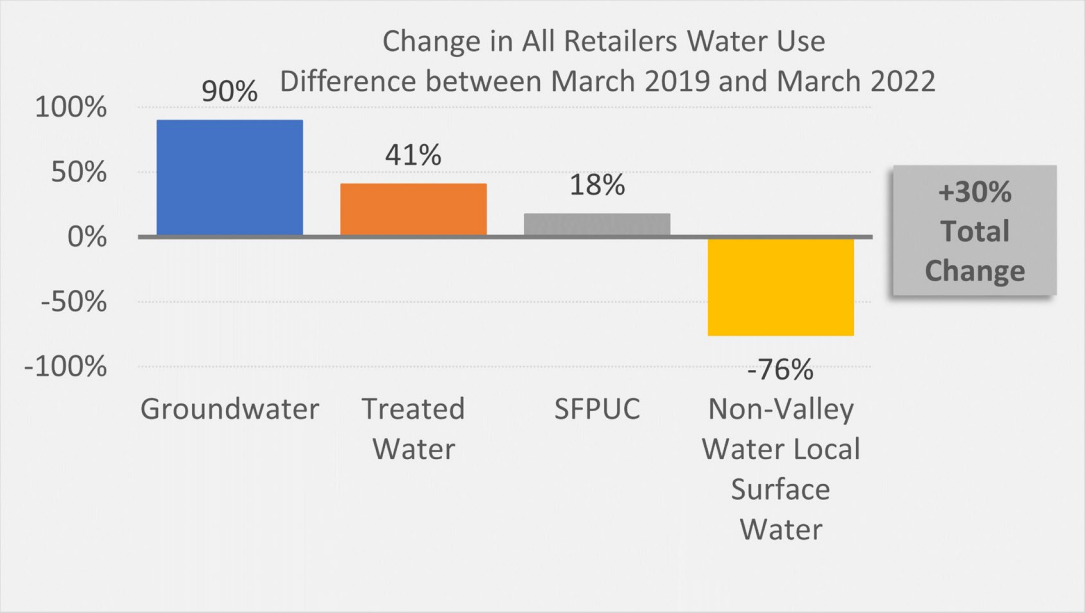


- With the driest start to the year on record, our water savings have trended in the wrong direction in 2022.
- In October and November 2021, Santa Clara County met the Board's June call of a 15% reduction in water use as compared to 2019. But February and March of 2022 have seen 23% and 30% increases compared to 2019 respectively.
- In April 2022, the Board of Directors responded with a unanimous vote to restrict outdoor watering to no more than two days a week.
- Recommendations for enforcing these restrictions with financial penalties for those who do not comply via development of an ordinance are being developed for Board approval in May.
- The recent increases have lowered the cumulative water savings from June 2021 – March 2022 to just 3% compared to the same months in 2019.
- A lack of rain to begin 2022 likely contributed to this increase. January, February and March 2022 were the driest first three months of the year in California history.
- San Jose received just 0.3 inches of rain in the first three months of 2022. In comparison, 11 inches fell during the same time period in 2019.
- Residents may have been using their outdoor irrigation systems much more based on the dry conditions. Outdoor watering is responsible for about 50% of outdoor water use in Santa Clara County. People continue to work from home on a more regular basis than in 2019 as well, which contributes to more water use.
- These conditions, coupled with diminishing imported water supply allocations, highlight the need to increase conservation.
- With an increase in Landscape Rebate applications each month of 2022 (almost 700 combined), residents are hearing our message for conservation.
- Valley Water continues its multilingual, multi-platform outreach to the media and community to encourage residents, businesses, farms and others to save water in order to achieve a cumulative 15% reduction in water use in 2022.

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.



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.

	Total Water Use in Acre-Feet (March 2019)					Total Water Use in Acre-Feet (March 2022)				
Water Retailer	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	1,440	2,900	-	2,190	6,530	3,790	4,040	-	530	8,360
Santa Clara, City	720	220	240	-	1,190	840	300	260	-	1,400
Sunnyvale	10	120	990	-	1,110	10	680	830	-	1,520
San Jose Municipal Water	40	600	320	-	960	80	790	380	-	1,260
California Water Service	170	410	-	-	580	590	240	-	-	820
Palo Alto	-	-	590	-	590	-	-	930	-	930
Mountain View	20	40	490	-	550	10	70	670	-	750
Great Oaks	600	-	-	-	600	740	-	-	-	740
Milpitas	-	270	370	-	650	-	300	410	-	710
Gilroy	410	-	-	-	410	560	-	-	-	560
Morgan Hill	360	-	-	-	360	530	-	-	-	530
Purissima Hills Water	-	-	60	-	60	-	-	130	-	130
Stanford	-	-	100	-	100	-	-	120	-	120
Total	**3,770**	**4,570**	**3,170**	**2,190**	**13,690**	**7,140**	**6,430**	**3,720**	**530**	**17,830**

Collaboration with the County, Retailers, and Cities

- On April 20, 2022, Valley Water sent a letter and a copy of Valley Water Resolution 22-20 to the President of the Santa Clara County Board of Supervisors from Chair Pro Tem Varela requesting that the Board of Supervisors proclaim a local emergency to underscore the seriousness of our region's ongoing severe drought and water supply conditions. The outreach to County Supervisors also highlighted our Board's calls for additional water use restrictions as outlined in the amended resolution.
- As of April 30, 2022, eight cities in Santa Clara County have implemented a maximum two-day irrigation schedule, including two cities that have taken formal action to their elected boards in response to the ongoing drought emergency and Valley Water's Amended Resolution 22-20.
- In April, 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. Some cities are 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 received a significant increase in applications for our landscape rebates, requests for water-saving devices, and reports of water waste since 2021. Estimated applications received in 2022 are shown below.

Program	Feb	March	April
Landscape Rebate Program Applications[1]	149	216	222
Water-saving Device Orders	2,516	908	302
Water Waste Reports	66	93	120

[1]Starting 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.

Drought and Water Conservation Outreach

- In April 2022, blog and social posts supported Valley Water's 2-day-a-week watering restriction call. This garnered media interest as did the April 1st snowpack survey, Central Valley Project allocation reduction, the ongoing drought, record heat, water conservation and water supply issues.
- On April 14, the Office of Communications conducted a drought and conservation news conference prior to the South San Francisco Bay Shoreline Project groundbreaking event. Wade Crowfoot, California's Natural Resources Secretary joined Chair Pro Tem Varela and CEO Callender to discuss ramifications of the April 1st snowpack survey and Valley Water's call to reduce outdoor watering to no more than two days per week. Media coverage included TV, newspaper, digital and radio outlets.
- Staff published statements on valleywater.org from Chair Pro Tem Varela on the worsening drought conditions and the Voluntary Agreement, which was announced by state, federal and local water leaders to develop a comprehensive, science-based solution for water management in the Sacramento-San Joaquin River Delta watershed (https://www.valleywater.org/news-events/news-releases/valley-water-board-chair-pro-tem-john-l-varela-statement-voluntary). Staff shared a Spring Water Conservation board column from Director LeZotte with local newspapers.

- On social media, staff shared animations promoting our shopping cart, landscape rebate program, and information on the water waste program as well as a statement on the snowpack's low levels and reduced state water allocations. Valley Water's social media accounts featured the first 2022 Water Conservation online webinar on mulching and promoted our online landscape guide.
- Staff launched the Spring Conservation Campaign. The campaigns feature multilingual animations and GIF's promoting the Landscape Rebate Program and Shopping Cart running as digital, social and newspaper ads. Bill inserts and a Partner Toolkit were shared with cities and retailers.
- The Speakers Bureau Program held four presentations in April. On April 13, Chair Pro Tem Varela and staff gave a presentation to the South County Realtors Association via Zoom about Anderson Dam. On April 20, Director Richard Santos, along with staff, gave an afternoon drought presentation to Mission College students and faculty via Zoom as part of the college's Earth Day festivities. Also on April 20, Director Barbara Keegan and staff presented via Zoom to Santa Clara Library patrons as part of the library's program series. On April 28, staff assisted Director Gary Kremen who gave an in-person drought presentation to the Mountain View Senior Center as part of its workshop series.
- Statistics for public outreach efforts are shown below.

Outreach Type	**April 2022**
Social Media[1]	
Impressions[2]	1,549,580
Engagements[3]	4,763
Link Clicks	5,797
Video Views	556,936
Website Page Views	
Water conservation webpages	22,115
BeHeard.ValleyWater.org/drought-information	381
Media	
Media Mentions[4]	1,267
Speakers Bureau	
Presentations[5]	4

[1]Includes Facebook, Twitter, Instagram, and LinkedIn

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

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

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

[5] Office of Communications and Government Relations

Drought and Water Conservation Education

- In April, the Education Outreach team supported 43 educators and reached 1078 students through 37 virtual classroom presentations. The team supported one Science, Technology, Engineering, Arts, and Mathematics (STEAM) event, and engaged 95 members of the public through four Wonders of Water Wednesdays after-school enrichment programs and two public library programs.
- The table below shows Educational Outreach efforts in 2022, all of which included drought and conservation messaging.

Program	**Feb 2022**	**Mar 2022**	**Apr 2022**
Educators/Teachers	51	68	43
Classes/Groups	44	36	37
Students	1,210	792	1078

- The Valley Water Youth Commission launched a Drought Awareness Campaign Toolkit (DACT) to engage the community in their ongoing Drought Awareness Campaign. The DACT is located on the Youth Commission webpage (https://www.valleywater.org/learning-center/valley-water-youth-commission) and contains information about the drought in Santa Clara County, Drought Awareness Campaign social media and video resources, suggested ways to promote drought awareness in your community, and links to Valley Water's Water Saving Resources. The drought awareness videos include "Carla the Conscious Conservationist!" and "Sam Saves Water!" which contain water conservation tips and drought messaging.

Committee Updates

- Drought-related updates are being provided regularly at Committee meetings to receive feedback and guidance. These updates were provided to the Agricultural Water Advisory Committee, Water Commission, and Water Conservation and Demand Management Committee in April 2022. The Water Conservation and Demand Management Committee also received an update on the water use reduction enforcement plan and the Youth Commission's Drought Awareness Campaign Toolkit

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Water Supply Operations and Outlook

The cumulative rainfall in San José this rainfall year, through April 28, has been 8.35 inches or 60% 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 April 27, 2022, the northern Sierra Nevada snowpack, a primary source of imported water, is at 32% of normal for this date.
- As of April 26, 2022, total state reservoir storage is below the historical average. Shasta Reservoir is at 47% of normal for this date, Oroville Reservoir is at 70% of normal for this date, and Folsom Reservoir is at 104% of normal for this date. Storage in Shasta has stayed relatively flat in April, while storage in Oroville and Folsom has increased due to runoff from April storms.
- As of April 26, 2022, storage in San Luis Reservoir is approximately 946 thousand acre-feet (TAF). San Luis Reservoir storage gained approximately 25 TAF in April.
- 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. Valley Water has submitted a request to Reclamation for water supplies to provide for our public health and safety needs.
- 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, which is the contractual minimum recovery amount at low SWP allocations.

- 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. Staff is also pursuing other water transfer opportunities for additional supplemental supplies.

Treated Water

- Level of a taste and odor compound, geosmin, was slightly elevated in water from the South Bay Aqueduct during the month of April. Staff were able to proactively optimize the water treatment process and mitigate potential impact.
- Cyanotoxins levels were low in all source water.
- Total organic carbon (TOC) continued to remain elevated in the Delta 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 April 2022 and no complaints were received from retailers.

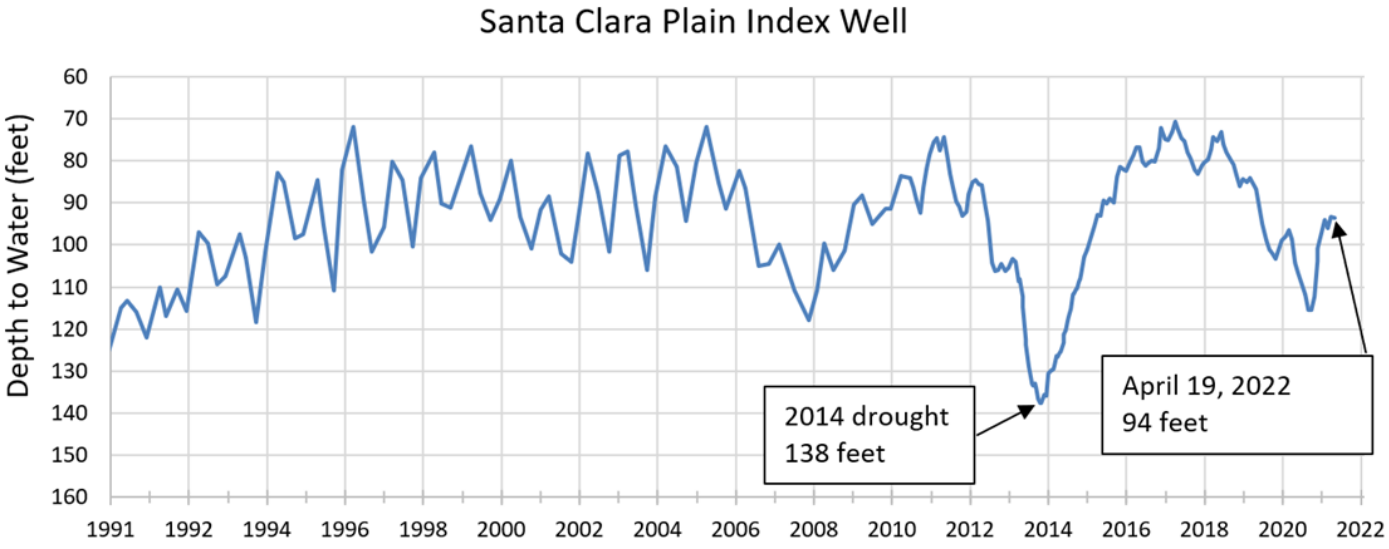
Groundwater Recharge

- If Valley Water receives approval for its request for Public Health & Safety water from the Central Valley Project, then Valley Water will increase 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.
- Valley Water's operations plan shows that the countywide managed recharge for calendar year 2022 is projected to be below average, but would be much lower without the public health and safety imported water supplies expected.

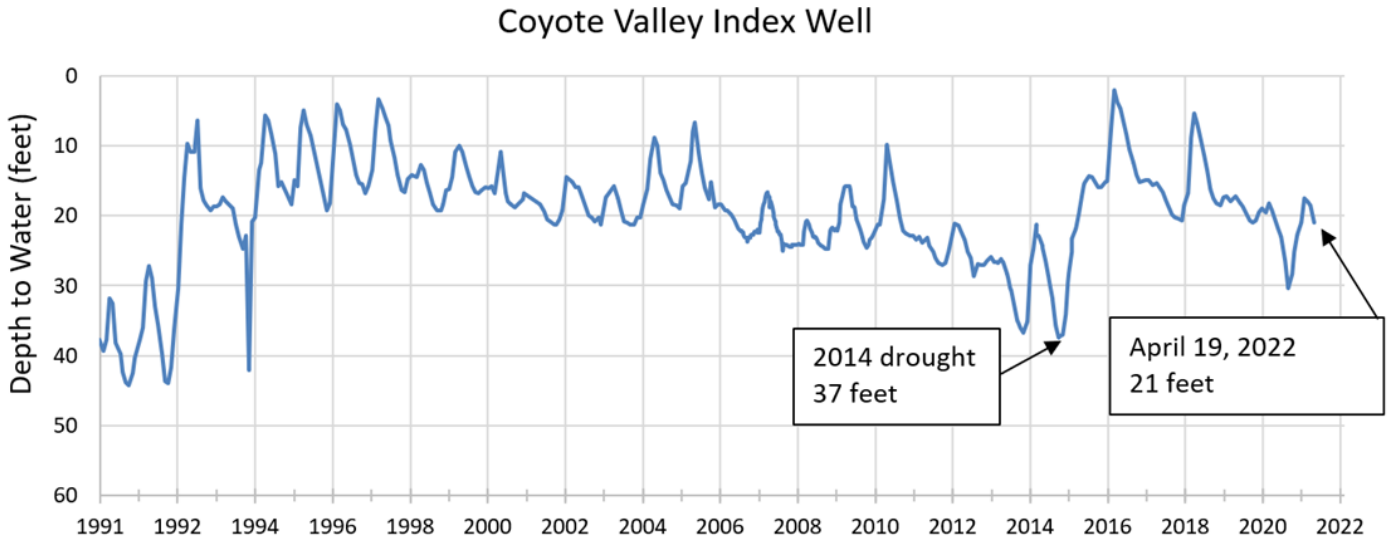
Groundwater Conditions:

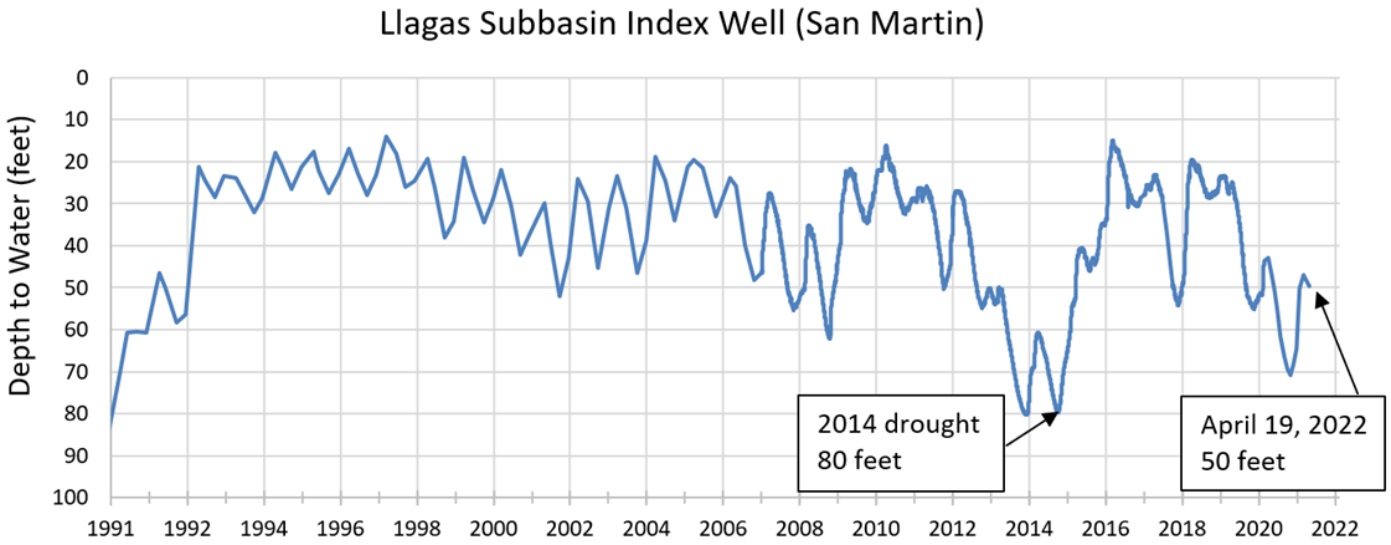
Although there was a good seasonal recovery in groundwater levels this winter, the seasonal decline has begun. Higher temperatures and increased water demand in spring and summer will lead to increased pumping and the seasonal decline in groundwater levels, with greater than average declines expected 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 Conditions
    - The current water level has decreased by 1 foot since last month and is about 44 feet above the minimum water level in 2014. The water level at this well is about 11 feet higher compared to this time last year.
    - Groundwater levels are more than 58 to 100 feet above thresholds established to minimize the risk of permanent subsidence.
    - No reports of dry wells have been received.



- South County Conditions
  - The current water level in these wells have each decreased by 2 feet since last month and are about 16 and 30 feet, respectively, above the minimum water level in 2014. Additionally, the water levels in these wells are about the same and 3 feet lower, respectively, compared to this time last year.
  - 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.





State Coordination

- On April 21, 2022, the State Water Resources Control Board (Water Board) held a workshop on the emergency regulations to implement the Governor's Executive Order (N-7-22). The Water Board staff indicated the goal is to have the new regulation take effect on June 10, 2022 if the adoption hearing and review by the Office of Administrative Law can be completed. The emergency regulation includes a requirement for all urban water suppliers to implement their demand reduction actions identified for a shortage of up to 20% (Level 2) from their Water Supply and Demand Assessments. In addition, the emergency regulations would ban watering non-functional turf around commercial, industrial, and institutional buildings. As proposed by the Governor, the ban would not include residential lawns or grass used for recreation. The Water Board indicated enforcement would be conducted by them, with the expectation local water agencies would relay the message to the public.
- On April 14, Secretary of Natural Resources Wade Crowfoot joined Valley Water Chair Pro Tem Varela and CEO Callender at a news conference on the drought and met with Valley Water staff and directors to discuss Valley Water's drought challenges and the purified water project.

Staffing and Resources

- Drought emergency expenses are expenditures supplemental to the regular budget that would have been adopted had there been no drought. The only expenses 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. Should additional funds be needed for drought related activities, budget adjustments will be brought to the Board.
- Expenses through the month of March FY22 totaled approximately $30.3 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 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 has collected and completed a QA/QC of water use, land use, and irrigation information for Santa Clara County sourced from remote sensing datasets, publicly available data, Valley Water billing data, and field verification.

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 has continued to develop the procurement and California Environmental Quality Act (CEQA) documents for the Purified Water Project.

Flood-Managed Aquifer Recharge (Flood-MAR) Study

Valley Water is collaborating with a team of water resources researchers 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 to develop a GIS-based tool to identify potential sites for Flood-MAR projects in Santa Clara County and to evaluate institutional/regulatory requirements for implementing Flood-MAR projects.

- The study status was presented to the Agricultural Water Advisory Committee Meeting on April 4, 2022.
- The evaluation of incentivization options for participation in a potential Flood-MAR program begun.

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.

- The Benchmark Study is complete and was presented to the Water Conservation Demand Management Committee in March 2022 and the Environmental and Water Resources Committee in April 2022. Work was started on the Vulnerability Assessment which will be presented to the Committees in late spring/early summer.

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