



PUBLIC WORKS DEPARTMENT

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CITY COUNCIL STAFF REPORT

Meeting: July 20, 2021

Subject

Receive 2021 Drought Condition Information and Update on the City's Ongoing Water Conservation Measures for City Operations; Provide Input to Staff on Potential Further Water Conservation Measures.

Recommended Action

Receive the Staff Presentation on the County's Drought Conditions and Provide Any Input.

Background

The State of California, including Santa Clara County (County) is in its second consecutive year of a drought. The June 2021 U.S. Drought Monitor reports that most of the County is now in a situation of "Extreme" drought. The year 2021 is the third driest year on record and the driest since 1977. In addition, the combination of 2020 and 2021 were the second driest back-to-back years on record. Local watershed runoff in the County has been substantially limited since 2020 due to extremely dry conditions. As a result, Santa Clara Valley Water District's (Valley Water) current local surface water storage is at 26 percent of the 20-year average as of June 2021.

In addition to the low reservoir storage and imported water allocations, Valley Water is impacted by the unavailability of Anderson Reservoir as a surface water storage facility for the duration of the Anderson Dam Seismic Retrofit Project, which is expected to last 10 years. Anderson Reservoir was drained in 2020 for public health and safety reasons, as ordered by the Federal Energy Regulatory Commission. Anderson Reservoir is Valley Water's largest surface water reservoir and holds more than all of Valley Water's other nine surface water reservoirs combined.

The availability of Coyote Reservoir, Valley Water's second largest reservoir, is also limited because of the California Department of Water Resources, Division of Safety of Dams storage limits. The unavailability of Anderson Reservoir and limited availability of Coyote Reservoir significantly limits Valley Water's ability to store water locally for groundwater recharge and use at Valley Water's three water treatment plants.

Half of the County's water supply comes from outside the County, and with Sierra Nevada snowpack at a zero percent, a significant reduction in the amount of imported water will be received this year. Valley Water is addressing this by working to withdraw previously banked supplies and by purchasing emergency water from partners outside the County.

Groundwater storage is currently within normal levels but may drop rapidly due to limited recharge and increased pumping due to drought conditions. Using groundwater as a majority supply is an option, however, it would greatly increase the risk of land subsidence in northern Santa Clara County and could cause salt-water intrusion into the aquifer.

On June 9, 2021, Valley Water held a special meeting to discuss the drought condition. They considered a resolution declaring a water shortage emergency condition within the County and a call for retailers to achieve a water use reduction target equal to 15 percent of 2019 water use (33 percent of 2013 water use). The resolution passed unanimously.

Some agencies within the County operate their own water system and others do not and instead rely on water retailers via the California Public Utility Commission (CPUC) to provide the services. Therefore, water retailers serving the agencies impose water conservation measures and enforcement actions to their water customers if the customers do not comply with the restrictions. With this recommended action in place, water retailers providing service in Cupertino, San Jose Water and California Water Services, have submitted filings to the CPUC outlining how they propose to meet this 15 percent reduction. City staff is continuously coordinating with the water retailers to obtain information on how they propose to meet the reduction goal and to encourage San Jose Water and California Water Services to coordinate their water usage tiers, surcharges and enforcement for all water users in the City.

Discussion

City Operations

The City has a long history of conserving water across its operations, leading by example through its practices, and encouraging businesses, residents and schools to do the same. During the 2015 drought, to achieve the 30 percent of 2013 water use reduction target set by the Valley Water and the targets placed by the California Regional Water Quality Control Board upon the City's two water retailers, staff developed and implemented water conservation restriction measures for City operations and made amendments to the Municipal Code Chapter 15.32 to allow Council to adopt water use restrictions and to allow Public Works to implement water conservation measures at City facilities. Through City's actions, the City was able to achieve a cumulative savings that is 31 percent below the 2013 consumption baseline, thereby achieving conservation targets.

The City will take similar steps during this drought to achieve the 15 percent savings goal. Based on the current restrictions imposed by Valley Water, City Municipal Operations are currently at Stage 4 of water conservation measures (Attachment A), which means the City will follow the guidelines such as:

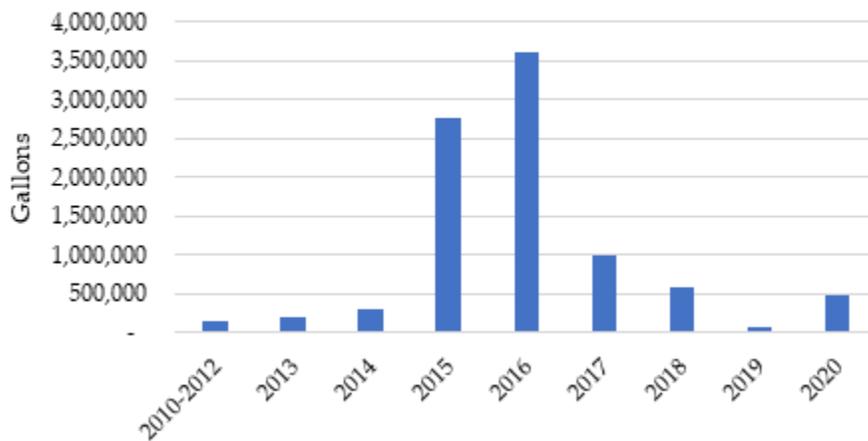
- Reduce water programming for all outside irrigation for trees/shrubs, having them be at a minimum according to the conservation amount.
- No watering of turf used passively.
- Limited watering (consistent with two days/week watering or similar) of turf areas used intermittently at City permitted events.
- A minimum of 20 percent reduced watering of turf areas by City or school recreation events.
- No filling of ponds at Memorial Park.
- No operation of the interactive fountain at Community Hall.
- No water used to clean asphalt areas/sidewalks/plaza areas.
- Water used for street sweeping to be minimized while complying with Santa Clara Valley Air Board requirements.

Community Water Conservation

In addition to the implementation of water conservation measures during the 2015 drought, the City also provided additional incentives to residents that participated in the landscape rebate program. Valley Water offered a \$1 per square foot of landscape that is converted to be drought tolerant through the program. Starting from 2015, the City offered an additional \$1 to the rebate for Cupertino residents and businesses. From 2010 through 2020, there were a total of 339 rebates processed with 457,569 square feet of landscape converted to drought-tolerant plantings. These projects resulted in permanent conservation of approximately 9.2 million gallons of water every year. As shown in the following table, the number of residents and businesses participating in the landscape conversion program increased during 2015 and 2016.

Currently, the City partners with Valley Water to offer residents water conservation incentives, such as the Graywater Laundry to Landscape Rebate, the Rainwater Capture Rebate, and the Landscape Rebate Program as described above which also includes incentives for efficient irrigation. Beginning July 1st, Valley Water increased the maximum rebate to \$3,000 for residential sites and Landscape Conversion Rebates have been raised to \$2.00 per sq ft, increasing the total incentive to \$3.00 per sq ft in Cupertino. The rebate cap for Commercial and large multi-Family sites (5 or more units) was also recently increased from \$20,000 to \$50,000. Just as promotions and increasing the value of incentives drove more participation in water conservation projects during the 2015-2017 time frame, the City expects that these recent changes by Valley Water will drive additional interest and activity in this space.

Estimated Annual Water Savings from Landscape Rebate Program in Cupertino



Cupertino Participation in SCVWD Landscape Rebate Program			
Year	# Rebates	Sq. Feet Converted	Est. Annual Savings (gallons)*
2010-2012	5	7,196	143,920
2013	8	9,933	198,660
2014	16	15,585	311,700
2015	106	138,121	2,762,420
2016	114	180,400	3,608,000
2017	37	49,525	990,500
2018	27	28,834	576,680
2019	6	3,800	76,000
2020	20	24,075	481,500

*Based on an estimate of 20 gallons per square foot of lawn conversion

The City has been innovating new ways to increase participation in water conservation throughout the community. The Climate Victory Gardens¹ is one such innovation which is unique in Cupertino that was initiated by Council in the FY 2019-2020 City Work Program to reduce barriers for residents to elect water-wise turf conversions and access incentive funds. The pilot program offers a concierge service for Cupertino residents to receive technical support to convert their front lawns to drought tolerant options, including support for landscape design, installation, and rebate processing. The program was funded at \$100,000 to support 40 sites assessments and 20 designed projects. So far, the program has successfully converted 8 sites and has another 15 sites in the pipeline. If all sites in the pilot are completed as planned, the program will result in 33,295 square feet of converted landscapes, three new laundry greywater systems, and an estimated 665,900 gallons saved annually, for a total program cost of approximately \$3/square foot served. The program currently has a waitlist of 44 sites that will not be served under the current pilot program due to limited funding.

The City is also launching an education campaign to help residents and businesses conserve water throughout Cupertino. This campaign will consist of actively promoting short-term conservation measures through the City website, a social media campaign, and live data dashboards.

Water Retailers

City staff has been in discussion with both water retailers, San Jose Water and California Water Services, regarding the drought restrictions in their perspective agency. Currently, San Jose Water and California Water Service has implemented Stage 3 and State 1, respectively, of their water shortage contingency plan. Like the drought in 2015, the current restrictions center on outdoor water usage which typically accounts for majority of the residential customer's consumption. However, the restriction measures can escalate over time such as drought surcharges and enforcement actions if the drought worsens.

The water retailers and Valley Water are emphasizing quick and effective ways to reduce water in the short term, providing conservation tips and promoting rebates/incentive to residents which can be accessed through the retailer's websites. All residents/businesses shall be conscientious about the drought and are encouraged to always conserve and use water wisely. More permanent measures such as landscape conversions are also encouraged to conserve water to meet future water demands for consumption and fire protection.

Online Resources

Water conservation information can be found through the following websites:

City of Cupertino

<https://www.cupertino.org/our-city/departments/environment-sustainability/water/water-conservation>

Valley Water

<https://www.valleywater.org/water-conservation-programs>

San Jose Water Company

<https://www.sjwater.com/drought>

<https://www.sjwater.com/conservation>

<https://www.sjwater.com/customer-care/help-information/rebates-incentives>

California Water Service

<https://www.calwater.com/conservation/drought/>

<https://www.calwater.com/conservation/resources/>
<https://www.calwater.com/conservation-rebates/>

Next Steps

The following items will be undertaken by the City:

- Outreach to the community regarding the call to reduce water consumption and to advise on what drought restrictions are likely to occur.
- Continue to coordinate with San Jose Water and California Water Service and obtain information on how they propose to meet the current 15 percent of 2019 water use (33 percent of 2013 water use) reduction target and any future water restrictions.
- Determine how the new drought restrictions affect water use at different City facilities and parks as they emerge.

Sustainability Impact

Actions taken to conserve water across the City's municipal portfolio directly implement Cupertino's Climate Action Plan Measure M-F-7: Conserve Water through Efficient Landscaping and enable the City to advance its emissions reduction goals arising from onsite water use. Further, these visible actions showcase the City's commitment to protecting this diminishing limited resource with the goal of spurring similar water conservation action across the community, above and beyond minimum requirements.

Fiscal Impact

Staff will monitor water use and expenses and will provide a report in future drought updates. During the 2015 drought, the City browned out several landscaped areas to conserve water. Those areas have remained through the present and no additional damage to our facilities is anticipated.

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Reviewed by: Roger Lee, Director of Public Works

Approved for Submission by: Dianne Thompson, Acting City Manager

Attachments:

A – City of Cupertino Water Conservation Restriction Measures for City Operations

B – City Council Resolution Nos. 15-056 and 15-057

C – Valley Water Resolution 21-68

D – California Water Service Rule 14.1 Restrictions

E – San Jose Water Advice Letter 563