



Santa Clara Valley Water District

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Item No.: *4.8.

BOARD AGENDA MEMORANDUM

SUBJECT:

Receive Update on 2021 Water Supply Conditions and Consider Recommendations Resulting from the March 30 and April 12, 2021 Water Conservation and Demand Management Committee. (Item Previously Listed as Item 5.2)

RECOMMENDATION:

- A. Receive, review, and discuss information on water supply conditions; and
- B. Consider the following recommendations unanimously approved by the Water Conservation and Demand Management Committee on March 30 and April 12, 2021:
 - i. Increase the Landscape Rebate Program incentive to \$2.00 a square foot;
 - ii. Support maintaining the current voluntary call for conservation; and
 - iii. Direct staff to increase water conservation messaging and programs to inspire additional water savings.

SUMMARY:

In support of making Water Conservation a California Way of Life, on June 13, 2017, the Santa Clara Valley Water District (Valley Water) Board of Directors (Board) adopted a resolution to continue the call for a voluntary 20 percent reduction in water use compared to 2013 and to limit the irrigation of ornamental landscapes with potable water to no more than three days per week. The resolution is in effect until further notice. This memorandum provides an update on continued conservation since the 2012-2016 drought and 2021 water supply conditions. Also, this memorandum offers a strategy to mitigate dry-year risks.

Local water supply conditions are adequate to meet projected demands for calendar year 2021 despite a dry 2020 and very dry winter in 2021. This is partially because the federally mandated drawdown of Anderson Reservoir resulted in the release and beneficial use of a large amount of local water that would otherwise have been stored for emergencies. However, with Anderson Reservoir storage now unavailable for approximately 10 years due to seismic retrofit of the dam, Valley Water's ability to store and move local water is constrained. During this time, Valley Water will be more dependent on imported water supplies and continued conservation.

Based on forecasted water supply and use, local groundwater storage at the end of 2021 is projected to remain in Stage 1 (Normal) of Valley Water's Water Shortage Contingency Plan, although closer to the low end of the stage. Concern primarily focuses on maintaining water supply reliability absent

Anderson Reservoir operations in calendar year 2022 and beyond if dry conditions persist. To address this concern, Valley Water is planning to bring banked supplies to Santa Clara County (County) from the Semitropic Groundwater Bank in Kern County and is working to secure supplemental imported water supplies.

Reserving 10,000 to 20,000 acre-feet (AF) of this year's imported supplies in San Luis Reservoir for delivery in 2022 would provide needed surface supplies to help meet treatment plant and recharge demands next year. In order to reserve this quantity of water (typically called "carryover water in San Luis Reservoir"), current projections indicate that Valley Water needs to purchase between 30,000 and 40,000 AF of transfer supplies and maximize withdrawal of banked supplies from the Semitropic Groundwater Bank. These estimates may be altered if the water supply outlook changes.

Staff will continue to closely track statewide and local water supply conditions and will keep the Board apprised on the water supply outlook for Santa Clara County.

Water Use Reduction

During the 2012 to 2016 drought, the community and local water retailers did an excellent job in reducing water use. In prior droughts, water use generally rebounded to pre-drought levels within a few years. However, water use has only had a minimal rebound since the end of drought in 2016 as the community continues to conserve water (Table 1). Water retailers in Santa Clara County achieved a 16 percent reduction in water use in 2020 compared to 2013.

Table 1. Annual Water Use Reduction

Calendar Year	2014 ¹	2015	2016	2017	2018	2019	2020
Annual Water Use Reduction (compared to 2013)	13%	27%	28%	21%	20%	21%	16%

¹ Based on water retailer reporting to Valley Water, which began in February 2014.

Valley Water has updated its long-term demand projections to account for this persistent water savings. The updated projection was presented to the Board on October 27, 2020, as part of the Water Supply Master Plan Monitoring and Assessment Program.

2021 Water Supply Conditions

Heading into 2021, countywide groundwater storage was about 339,000 AF, which is well within Stage 1 (Normal) of Valley Water's Water Shortage Contingency Plan (anything above 300,000 AF is Stage 1). According to the April 6, 2021, U.S. Drought Monitor for California, all of Santa Clara County is in "Moderate Drought."

Despite critically dry conditions throughout California in 2021, the local water supply outlook indicates that, with continued conservation, there will be sufficient supplies to meet demands in 2021 due to normal local groundwater storage and above-normal out-of-county groundwater storage. However, the initial imported water allocations are low for 2021. Key statewide and local water supply indicators are summarized below.

- As of April 12, 2021, storage in key northern California reservoirs, Oroville and Shasta, is 54 percent and 63 percent of average for this time of year, respectively.
- The 2021 State Water Project (SWP) allocation was initially set at 10 percent, which would have provided 10,000 AF to Valley Water. However, dry March hydrology and dry soil conditions resulted in extremely low runoff in key watersheds, and dry conditions are projected well into April. Storage levels in Oroville Reservoir are extremely low and projected to stay low through the calendar year. This led the California Department of Water Resources to reduce the SWP allocation to 5 percent on March 23, 2021.
- The initial 2021 South-of-Delta Central Valley Project allocation was 5 percent for agriculture, which would have provided 1,655 AF to Valley Water. However, on March 23, 2021, the U.S. Bureau of Reclamation announced that this water would not be available for delivery until further notice. The allocation for municipal and industrial use remains unchanged at 55 percent, which provides 71,500 AF to Valley Water.
- U.S. Secretary of Agriculture Tom Vilsack informed Governor Gavin Newsom in a March 5, 2021 letter that he is designating 50 California counties as primary natural disaster areas due to recent drought conditions, and that additional areas and adjacent states are names as contiguous disaster counties. This designation makes farm operators in these areas eligible to be considered for assistance from the Farm Service Agency (FSA), including FSA emergency loans. In total, all areas of California fall into one of these two categories. Santa Clara County is designated as a primary natural disaster area.
- On March 22, 2021, the Division of Water Rights mailed letters to all water right holders and agents regarding ongoing dry conditions in most California watersheds. This letter encourages water right holders to plan and prepare for potential water shortages later this year.
- As of April 1, 2021, Valley Water's current storage in the Semitropic Groundwater Bank is 329,548 AF or 94 percent of capacity. The maximum capacity is 350,000 AF and the five-year average is 284,120 AF.
- As of April 12, 2021, San Luis Reservoir is 53 percent full. Its storage is 59 percent of the historic average for this time of year.
- Local (San José) rainfall for the 2021 rainfall year -from July 1, 2020, to April 12, 2021- is 5.79 inches or 44 percent of average to date.
- As of April 12, 2021, local reservoir storage is at 26 percent of the 20-year average for this time of year and 44 percent of restricted storage capacity. The low storage is largely due to Anderson Reservoir, the County's largest reservoir, being drawn down to three percent of its full capacity, in compliance with the Federal Energy Regulatory Commission (FERC) order. Discounting Anderson Reservoir, storage in the remaining nine Valley Water reservoirs is at 48

percent of the 20-year average for this time of year.

- Local surface water supplies are constrained by the loss of storage in Anderson Reservoir. Valley Water's groundwater recharge operations usually depend on imported and local water availability but will rely more on imported water in the next 10 years due to the FERC order and the unavailability of Anderson Reservoir.
- The Operations Plan for 2021 provides 75,000 AF of water dedicated for recharge in Valley Water's creeks and a third of the 101 off-stream ponds, as well as the only in-stream pond in the County, the Coyote Percolation Pond, located on Coyote Creek just north of Metcalf Road. The Coyote Percolation Pond is the most productive recharge facility of Valley Water with a percolation capacity close to 10,000 AF per year. Ongoing recharge operations in the Coyote Percolation Pond are essential for maintaining healthy groundwater levels in south San José, where communities rely on groundwater for water supply. Recharge in the Coyote Percolation Pond also helps keep groundwater flowing toward the San Francisco Bay, helping avoid problems like land subsidence and saltwater intrusion, which have occurred in northern Santa Clara County in the past.
- Local groundwater levels continue to slowly drop relative to last year due to dry conditions. However, groundwater levels are still healthy and are far above the thresholds established to minimize the risk of resumed land subsidence.
- Groundwater storage for the end of 2021 is projected to be about 308,000 AF, which is in the lower end of Stage 1. This projection reflects an assumed water use reduction of 15 percent in 2021, an acquisition of 6,500 AF in supplemental imported water supplies, a maximum withdrawal from the Semitropic Groundwater Bank, and a less than average recharge program of 75,000 AF in 2021.
- It is too early to project the water supply conditions in 2022 with any reasonable degree of certainty. For preliminary, conservative planning purposes, continued dry conditions are assumed, along with water use reduction of 15 percent compared to 2013, a withdrawal of 20,000 AF from the Semitropic Groundwater Bank, and a further-reduced recharge program of 35,000 AF. Under this very dry scenario, groundwater storage at the end of 2022 is projected to be in Stage 3 (Severe) of the Water Shortage Contingency Plan. This projection demonstrates the need for a risk reduction strategy.

Risk Reduction Strategy

Staff intends to offset dry conditions and the loss of local supplies and storage in Anderson Reservoir by sustaining healthy local groundwater levels through (i) additional recharge of imported supplies, and (ii) reserving a significant portion of 2021 imported supplies in San Luis Reservoir for use in 2022, an approach typically called "carrying over" water. This will provide insurance against potential shortage conditions next year if dry conditions persist. However, implementing this strategy will require securing supplemental water supplies given that State Water Project and Central Valley Project water allocations are low. Staff intends to pursue the following activities:

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- Maximize withdrawals from the Semitropic Groundwater Bank and delivery to the County through January 2022.
 - Secure 30,000 AF to 40,000 AF of transfer supplies. The quantity and pricing of supplies secured depends on a number of factors, including availability of willing sellers, negotiated deal points, and determination of losses across the Delta; however, current estimates indicate that a total of 30,000 AF may be secured for roughly \$25 million, with an additional 5,000 to 10,000 AF possibly secured for roughly \$6 million.

Another element of the strategy to address dry-year risks is to ramp up water conservation messaging and programs to inspire additional water savings. The current and planned public outreach will emphasize drought messaging and further expand efforts to promote Valley Water's many conservation and rebate programs that support making water conservation a way of life in Santa Clara County as highlighted by the Board's Resolution 17-43 (June 13, 2017). Recognizing the importance of early action, Valley Water will use one million dollars a year of Safe Clean Water Measure S funding in fiscal year 2022 and 2023 to increase the Landscape Rebate Program's Landscape Conversion Rebates once again to \$2 square foot and increase the maximum rebate from \$2,000 to \$3,000 for single-family homes; expand its partnership with a local nonprofit organization, Our City Forest, to offer the Lawn Busters Program to low-income community members, US veterans, and other disadvantaged community members; and develop multi-lingual educational videos to promote water conservation.

Consider and act on the following recommendations by the Water Conservation and Demand Management Committee (WCaDM Committee):

Action #1:

On March 30, 2021, The WCaDM Committee voted unanimously to approve increasing the Landscape Rebate Program to \$2.00 a square foot.

Staff Analysis #1:

Staff agrees with the Committee's recommendation and plans to utilize approximately \$700,000 a year of Safe Clean Water Measure S funding in fiscal year 2022 and 2023 to increase the landscape conversion rebate from \$1 to \$2 sq. ft. and increasing the maximum rebate from \$2,000 to \$3,000 for single-family homes. With the rebate amount increase, additional staffing resources will be needed to support the conservation program. The additional resource needs will be brought to the Board through the budget process.

Action #2:

On April 12, 2021, the WCaDM Committee voted unanimously to approve staff's following recommendations:

1. Support maintaining current voluntary call for conservation, and
2. Recommends the Board direct staff to increase water conservation messaging and programs to inspire additional water savings

The Committee also recommended the outreach messaging include the following suggestions since the messaging is being developed tailoring the messaging:

- To those who are conserving versus those who are not (what should be done if someone is not conserving),
- Encourage those who are already conserving and what tools/suggestions for them to continue,
- Be user-friendly,
- That the 20% water conservation message mention the base year (2013 or other year)
- Goal objective be clear-whether a # 15%-20% is used (or not)

Staff Analysis #2:

Staff agrees with the Committee's recommendation and plans to utilize \$1 million a year of Safe Clean Water Measure S funding in fiscal year 2022 and 2023 to increase the Landscape Rebate Program's Landscape Conversion Rebates to \$2 per square foot and increase the maximum rebate from \$2,000 to \$3,000 for single-family homes; expand its partnership with a local nonprofit organization, Our City Forest, to offer the Lawn Busters Program to low-income community members, US veterans, and other disadvantaged community members; and develop multi-lingual educational videos to promote water conservation. Staff is also working with the consultant firm Better World Advertising on concepts for the 2021 summer campaign. Those concepts will be used for a marketing study, which includes focus groups' feedback on our summer water conservation campaign, specifically to determine what message and or image resonates with the community. That input will provide insight on what motivates behavioral change. Subsequently, staff will apply the marketing study data to the summer campaign and future related messaging.

In addition, staff will be launching a Speakers Bureau Tour in mid-May focused on drought messaging and water conservation. Staff currently provides drought messaging during the virtual Water Infrastructure Tour Series, which includes the Silicon Valley Advanced Water Purification Center tour. Staff will also integrate drought messaging during the Water 101 Academy and Education Outreach presentations. That integration of drought messaging will occur in all strategic briefings and individual meetings with elected officials and key stakeholder groups including Chambers, Business Associations, Labor groups, and environmental and diversity advocacy organizations. Furthermore, as part of our joint meetings with cities, water conservation and drought messaging will be included and incorporated into all of our water supply presentations.

With the rebate amount increase, additional staffing resources will be needed to support the conservation program. The additional resource needs will be brought to the Board through the budget process.

FINANCIAL IMPACT:

There are adequate funds in the Adopted FY 2020-21 Budget, the proposed FY 2021-22 Budget, and in the Water Utility Enterprise Supplemental Water Supply Reserve to carry out the operations described in this memo. There are adequate funds in the Safe Clean Water Measure S to carry out the water conservation program enhancements as described in this memo. With the rebate amount increase, additional staffing resources will be needed to support the conservation program. The

additional resource needs will be brought to the Board through the budget process.

CEQA:

The recommended action does not constitute a project under CEQA because it does not have a potential for resulting in direct or reasonably foreseeable indirect change in the physical environment.

ATTACHMENTS:

Attachment 1: PowerPoint

Attachment 2: April 2021 Water Tracker

*Handout 4.8-A: Governors Declaration

*Handout 4.8-B: SFPUC Memo

UNCLASSIFIED MANAGER:

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