



Santa Clara Valley Water District

File No.: 21-0643

Agenda Date: 6/9/2021
Item No.: 2.1.

BOARD AGENDA MEMORANDUM

SUBJECT:

Public Hearing to Consider Adoption of a Resolution Declaring a Water Shortage Emergency Condition Calling for Water Use Restrictions and Urging the County of Santa Clara to Proclaim a Local Emergency.

RECOMMENDATION:

- A. Conduct a public hearing to receive public comments regarding a proposed Resolution Rescinding Resolution 17-43, Declaring a Water Shortage Emergency Condition Calling for Water Use Restrictions, and Urging the County of Santa Clara to Proclaim a Local Emergency;
- B. Close the Public Hearing;
- C. Receive an update on drought conditions, water shortage risk affecting Valley Water and actions taken in response; and
- D. Adopt the Resolution RESCINDING RESOLUTION 17-43, DECLARING A WATER SHORTAGE EMERGENCY CONDITION CALLING FOR WATER USE RESTRICTIONS, AND URGING THE COUNTY OF SANTA CLARA TO PROCLAIM A LOCAL EMERGENCY.

SUMMARY:

This memorandum provides information regarding drought conditions and water shortage risk impacting Santa Clara County (County). It also describes State and federal drought response, as well as Santa Clara Valley Water District's (Valley Water) response to drought and associated water shortage risk. A recommendation to declare a water shortage emergency condition is also described. Notice of this public hearing was made available to the public in accordance with California Water Code requirements (Attachment 1). A resolution that rescinds Valley Water Resolution 17-43 (Attachment 2) and declares a water shortage emergency condition calling for water use restrictions and urging proclamation of a local emergency is provided (Attachment 3).

Drought Conditions Impacting Santa Clara County

The County is in its second consecutive year of drought, and the U.S. Drought Monitor Report from May 25, 2021 indicates that the County is in Extreme Drought.

On March 22, 2021, the California State Water Resources Control Board (State Water Board) mailed Valley Water and other water rights holders an early warning notice to urge planning for potential

shortages by reducing water use and adopting practical conservation measures. On April 21, Governor Newsom issued a drought proclamation for Mendocino and Sonoma counties, directing the Department of Water Resources (DWR) to partner with local water districts to make Californians aware of the drought and reduce water use. On May 10, the Governor expanded the drought proclamation to 41 counties, including Alameda County. Though Santa Clara County was not included at that time, this proclamation may possibly be expanded to include it.

The year 2021 is the third driest on record and the driest since 1977, with the combination of 2020 and 2021 being the second driest back-to-back pair of years on record. Based on June 1, 2021 data, San José rainfall is less than half of average (41%). Local watershed runoff in the County has been substantially limited in the 2020 and 2021 water years due to extreme dry conditions. As a result, Valley Water's current local surface water storage as of June 1 is very low, at 26 percent of the 20-year average.

With 50% of the County's water supply imported from the Delta, the snowpack is an important indicator of water supply conditions. This year's lack of spring snow and warm weather left the snowpack virtually gone by mid-May, about two months earlier than average. What little snowpack was left melted into the dry ground or evaporated, leaving very little runoff to fill statewide reservoirs. Currently, the snowpack in the Northern Sierra is at 5% of average as of June 1, 2021, and zero percent of average Statewide. Imported water allocations reflect these critically dry conditions: the 2021 State Water Project (SWP) allocation is 5 percent providing 5,000 AF to Valley Water, the 2021 South of Delta Central Valley Project (CVP) allocation has been reduced from 55 percent for Municipal & Industrial water to 25% prospectively providing 42,300 AF to Valley Water over 2021, and the CVP agricultural allocation is zero percent. These imported water allocations are over 35,000 AF less than the imported water allocations Valley Water received in 2015, the previous critically dry year during the last drought. There is significant uncertainty as to local and statewide water supply conditions, and imported water allocations may continue to be negatively impacted.

In addition to 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 approximately 89,278 acre-feet (AF) of water -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 California Department of Water Resources Division of Safety of Dams storage limits. The unavailability of Anderson Reservoir and limited availability of Coyote Reservoir due to regulatory restrictions significantly limits Valley Water's ability to store water locally for groundwater recharge and use at Valley Water's three water treatment plants, and as a buffer to mitigate against current and future water shortages.

Water Shortage Risk to Valley Water

The primary trigger for Valley Water's Water Shortage Contingency Plan is the projected countywide end of year groundwater storage. Projected storage above 300,000 AF relates to Stage 1 (Normal) and the remaining steps decrease in 50,000 AF increments. While significant progress and

investments have been made in local supplies, Valley Water remains highly dependent on imported water to supply the water treatment plants and maintain sustainable groundwater conditions.

As described in subsequent sections, Valley Water is working to secure emergency imported water supplies. However, extreme drought conditions may affect transfer partners' allocations, and challenges with conveyance may jeopardize Valley Water's ability to get these supplies into the County. Given the high uncertainty regarding these supplies, Valley Water evaluated several water supply scenarios for calendar years 2021 and 2022, which are summarized in Attachment 4.

Though County groundwater storage at the start of 2021 was within the "Normal" stage (Stage 1) of Valley Water's Water Shortage Contingency Plan, this storage could potentially drop **rapidly and significantly** due to limited recharge and increased pumping as a result of drought conditions, reduced imported water allocations, and the loss of Anderson Reservoir as a surface water storage facility. It is essential that action be taken now to conserve Valley Water's limited water supply to meet future water demands for consumption, sanitation and fire protection and not wait until water supplies become unavailable or severely limited.

As shown in Attachment 4, if water use continues at current levels, groundwater storage for the end of 2021 is projected to be about 308,000 AF (lower end of Stage 1) assuming Valley Water is able to secure targeted emergency supplies and withdraw 31,500 AF from the Semitropic Groundwater Bank. If these supplies cannot be obtained, groundwater storage is projected to fall to 258,000 AF, the lower end of Stage 2 (Alert). This "worst case" scenario would represent about 80,000 AF reduction in local groundwater reserves by the end of 2021. This large annual drop in groundwater reserves is similar to what was observed in 2014, which prompted significantly enhanced drought response by Valley Water. While this large drop is concerning (particularly without the water supply buffer provided by Anderson Reservoir), conditions will be far worse in 2022 if the drought continues and no action is taken.

Assuming drought conditions continue next year, local and imported supplies will continue to be extremely limited, and emergency imported supplies are not expected to be available. If water use continues at current levels, under the "best case" scenario, groundwater storage at the end of 2022 is projected to be 238,000 AF, which falls into Stage 3 (Severe). This storage is similar to what was observed in 2014/2015, when groundwater levels in North County approached thresholds established to minimize the risk of resumed land subsidence and Valley Water received reports of over a dozen domestic wells going dry. In the "worst case" scenario for 2022, groundwater storage is projected to be 138,000 AF, which falls into Stage 5, or the Emergency Stage. This low level of groundwater storage greatly increases the risks for resumed land subsidence in northern County and wells going dry, particularly in southern County where groundwater is the only potable water supply.

The Santa Clara Valley is one of six major areas of subsidence in California (Borchers and Carpenter, 2014) but is unique because it is both extremely vulnerable to land subsidence and densely populated. Due to historic groundwater overdraft, the greater San José metropolitan area and heart of Silicon Valley had up to 14 feet of permanent subsidence, which resulted in seawater intrusion, increased flood risk, and widespread damage to infrastructure.

The human health and safety concerns associated with subsidence are widespread across Silicon Valley. Because of the subsidence bowl that formed from historical overdraft, residential communities, major business campuses, and wastewater treatment facilities are currently below sea level and now protected from flooding by a levee system. If not for the levees at bay shore and bordering streams, about 19 square miles of Silicon Valley would be under water (Borchers and Carpenter, 2014). For example, the San José-Santa Clara Regional Wastewater Facility is below sea level and receives and treats wastewater from more than 1.5 million people and serves a business sector with more than 17,000 main sewer connections. Sewer lines, storm drains, and associated pumping stations can be compromised by subsidence. Similarly, water supply pipelines, supply wells, and other health and safety infrastructure, including levees, roads, bridges, railroad alignments, hospitals, schools, and the power grid are all susceptible to damage if subsidence were to resume.

The economic costs associated with subsidence are substantial in Silicon Valley. The historic damage to infrastructure and associated construction and repair was well over \$756 million (in 2013 dollars), which is likely a very conservative number (Borchers and Carpenter, 2014). This is equivalent to about \$947 million in 2021 dollars (escalated based on the U.S. Bureau of Labor Statistic (BLS) Consumer Price Index for the SF-Oakland-Hayward, CA Metropolitan Statistical Area from 2013 to 2021). Valley Water's subsequent investments to prevent subsidence have been equally enormous. For example, the Water Utility Enterprise's 2021-2022 operations and capital budget is \$580 million, which directly supports Valley Water's conjunctive water management and operations to create sustainable groundwater conditions that prevent subsidence.

Maintaining groundwater elevations near or below subsidence thresholds for extended periods of time increases the risk of resumed subsidence and associated damage to facilities and infrastructure -a process that is not instantaneous but rather likely occurs over the timescale of years if left unchecked. The Fall 2020 land surveys indicated that most of the benchmark sites in northern Santa Clara County had land surface compaction between 2019 and 2020, which is an early warning sign of the onset of subsidence if water levels continue to decline. If this trend of land surface compaction continues, it could result in permanent subsidence.

While Valley Water received about a dozen calls about wells going dry during the 2012 to 2016 drought, the very low groundwater storage projected under the worst case for 2022 would likely result in many more impacted wells. Of particular concern are domestic wells in South County, given the lack of other drinking water supplies and because domestic wells tend to be more shallow than public water supply wells. Valley Water is currently evaluating how many wells may go dry under this type of scenario.

Attachment 4 also shows reductions to treated water supplies, which is especially evident in the "worst case" scenario for 2022, with only 65,000 AF projected to be available for treated water deliveries. This is about 63% of the treated water delivered in 2020. It is unclear whether Valley

Water's eight treated water retailers would be able to make up lost treated water supplies by pumping groundwater or using another water source.

Water conservation is an important strategy to help alleviate these negative impacts. As shown in Attachment 4, achieving a 15% water use reduction compared to 2019 will dramatically improve the water supply outlook, particularly if the drought continues. Given the speed with which the drought has worsened, the high uncertainty in imported water supplies, the loss of Anderson Reservoir storage, and the concerning water supply projections for next year, it is prudent to act now.

State and Federal Drought Response Efforts

On May 17, 2021, the California Department of Water Resources (DWR) and Bureau of Reclamation (Reclamation) jointly filed a Temporary Urgency Change Petition (TUCP) regarding Sacramento-San Joaquin Delta water quality to the State Water Board, and it was approved on June 1. A TUCP is a formal request by a water right holder to temporarily deviate from the terms of their right to address drought-related needs. The TUCP will modify Delta outflow requirements and salinity requirements on the Sacramento River in order to preserve water in upstream storage for salmon temperature management later in the year. This action does not increase the amount of water available for export.

DWR submitted a Clean Water Act Section 401 Water Quality Certification for the 2021 Emergency Drought Salinity Barrier Project. This is an application to install an emergency drought salinity barrier to reduce saltwater intrusion into the Delta. The State Water Board issued a certification for the project on May 28. The temporary rock barrier will be installed by July at West False River and is designed to protect the quality of water received by Valley Water and further preserve water in storage for salmon temperature management. This action does not increase the amount of water available for export.

The State Water Board recently released a proposed methodology for determining water unavailability in the Delta watershed and held a workshop on the subject on May 21 to seek public input. The State Water Board is likely to issue notices of water unavailability to all post-1914 water right holders in the Delta and warnings to all riparian and pre-1914 water rights holders in the Delta as early as mid-June. Valley Water participated in a panel at this workshop alongside other State Water Contractors. Valley Water's comments focused on how we are responding to the drought locally, the importance of protecting our transfer supplies especially given the current unavailability of Anderson Reservoir as a surface water storage facility, and a request that the State Water Board focus on enforcement of unauthorized diversions. The State Water Board is working on incorporating comments now and will add clarifying language and support for voluntary solutions.

DWR, Reclamation, and the three state and federal fish and wildlife agencies are meeting regularly to coordinate and plan an integrated strategy which includes the TUCP, salinity barrier, Sacramento River Temperature Plan, a Drought Contingency Plan, and notices of water unavailability. Valley Water is monitoring these activities and will keep the Board apprised of significant developments.

Valley Water's Drought Response

Due to extremely limited surface water supplies, Valley Water will implement operational changes including significant reductions in managed recharge and reduced treated water deliveries. Valley

Water is working to minimize water shortage risk by recommending adoption of a resolution that declares a water shortage emergency condition, calls for water use restrictions, and urges the County of Santa Clara to proclaim a local emergency. Valley Water also performs long-range planning efforts, and a public hearing to adopt a revised Urban Water Management Plan and Water Shortage Contingency Plan will be conducted on June 8, 2021. Valley Water is also increasing conservation messaging and incentives, pursuing emergency imported water supplies, and withdrawing from the Semitropic Groundwater Bank.

Declaration of a Water Shortage Emergency Condition, Calling for Water Use Restrictions, and urging the County of Santa Clara to proclaim a local emergency

As Santa Clara County groundwater storage may drop rapidly and significantly if drought conditions continue, a resolution declaring a water shortage emergency condition calling for water use restrictions, sometimes referred to as mandatory water conservation measures, has been attached for Board consideration (Attachment 3). Pursuant to Water Code Section 350 a “governing body of a distributor of a public water supply, whether publicly or privately owned and including a mutual water company, shall declare a water shortage emergency condition to prevail within the area served by such distributor whenever it finds and determines that the ordinary demands and requirements of water consumers cannot be satisfied without depleting the water supply of the distributor to the extent that there would be insufficient water for human consumption, sanitation, and fire protection.” The Board may adopt this resolution to conserve the limited water supply of Valley Water for the greatest public benefit with particular regard to public health, fire protection and domestic use without threatening local land subsidence. In addition, the District Act permits Valley Water “to do any and every lawful act necessary to be done that sufficient water may be available for any present or future beneficial use or uses of the lands or inhabitants within the district...”

Valley Water does not have the authority to proclaim a local emergency, and as such urges the County of Santa Clara to do so. Proclamation of a local emergency would support Santa Clara County being added to the governor’s drought emergency proclamation and further alert the public to the water shortage emergency condition.

Valley Water has called for water use reductions between 20 to 30 percent since 2014, prompted by a historic, multiyear drought from 2012 to 2016. On April 27, 2021, the Board voted to call for a voluntary 25 percent water conservation (as compared to 2013 water use). The resolution currently for consideration by the Board includes a call for a water use reduction target equal to 15% of 2019 water use. As water savings in 2019 was 21% of 2013 water use, the call for a 15% reduction of 2019 water use is equivalent to a water use reduction target of 33% of 2013 water use. This resolution would replace the Board’s previous call for a 20% voluntary water conservation on June 13, 2017 (Resolution 17-43, Attachment 2).

Additional Water Conservation Efforts and Public Outreach

In addition to the call for water use reductions, Valley Water has ramped up efforts to expand its many conservation programs. 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 to \$2.00 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. The new online Shopping Cart is an incredibly popular tool that allows County homes and businesses to easily order free water-efficient tools like efficient showerheads and faucet aerators.

The current and planned public outreach emphasizes being drought-ready and promotes Valley Water's many conservation programs. Valley Water's multilingual spring water conservation campaign includes digital ads, print advertorials in community newspapers, social media posts, videos, and radio ads. Staff is developing a new summer campaign utilizing focus groups and market research to further encourage water conservation. In addition, staff is providing water conservation messaging for directors to present as part of Speakers Bureau engagements. Staff is developing a BeHeard interactive webpage on drought conditions and Valley Water's water conservation efforts. Staff will also work with the Water Retailer Communications Subcommittee to share messaging.

Water Imports and Groundwater Bank Withdrawal

Valley Water has secured agreements for over 32,000 AF of emergency transfer supplies in 2021 at a cost of approximately \$23 Million and is working to develop additional purchase agreements. However, given the extreme drought conditions throughout the state, there is a chance that potential changes to transfer partners' water allocations and challenging conveyance conditions may jeopardize our emergency transfer supplies.

Emergency transfer supplies would help meet demands in 2021 and would likely be partially "carried over" in San Luis Reservoir for use in 2022 as well. Valley Water is also actively pursuing opportunities for the purchase of supplemental supplies in 2022. As a start, an agreement executed in 2021 also includes the first right of refusal to negotiate a separate agreement for the purchase of up to 20,000 AF in 2022.

Valley Water intends to maximize withdrawals from the Semitropic Groundwater Bank, targeting a minimum of 31,500 AF delivery to Santa Clara County through January 2022. Latest projections indicate that over 38,000 AF may be recovered for Valley Water during this timeframe as long as it can be supported by operations on the SWP. However, given that there is some uncertainty regarding the ability to secure this water, staff is evaluating scenarios in which only half of the anticipated amount is returned while closely coordinating with DWR on banked water recovery operations.

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 (WUE) reserves 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. A budget adjustment from WUE reserves for these additional resource needs will be brought to the Board in FY 2021-22.

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 physical change in the environment.

ATTACHMENTS:

- Attachment 1: Notice of Public Hearing
- Attachment 2: SCVWD Resolution No. 17-43
- Attachment 3: Resolution
- Attachment 4: Water Supply Scenarios, 2021-2022
- Attachment 5: PowerPoint

UNCLASSIFIED MANAGER:

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