



SANTA CLARA VALLEY WATER DISTRICT

# NON-AGENDA

## October 8, 2021

**Board Policy EL-7 Communication and Support to the Board**  
*The BAOs shall inform and support the Board in its work.*

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<b>10</b>	Memo from Don Rocha, DAO, to Rachael Gibson, CEA, dated, 9/29/21, regarding Congressional Delegation Letter to Federal Energy Regulatory Commission re: Temporary Storage in Anderson Reservoir.
	<b><u>INCOMING BOARD CORRESPONDENCE</u></b>
<b>24</b>	<b>Board Correspondence Weekly Report: 10/08/21</b>
<b>25</b>	Email from Harvey Sherback, to the Board of Directors, dated 9/30/21, regarding Solar Panels and Water (C-21-0155).
<b>26</b>	Email from Brian Barnhorst, to the Board of Directors, dated 10/2/21, regarding Homeless Activity along Los Gatos Creek (C-21-0156).
<b>27</b>	Email from Rebecca Yun Lee, to the Board of Directors, dated 10/2/21, regarding Homeless Activity along the Creeks (C-21-0157).
<b>29</b>	Email from Chris Demers, to the Board of Directors, dated 10/2/21, regarding Valley Water Residential Building Guidance (C-21-0158).
<b>32</b>	Email from Doris Livezey, to Director LeZotte, dated 10/4/21, regarding Homeless Activity along Saratoga Creek (C-21-0159).
	<b><u>OUTGOING BOARD CORRESPONDENCE</u></b>
<b>36</b>	Letter from Chair Estremera, to Senator Padilla, dated 9/30/21, regarding Invite to serve as the keynote speaker for the virtual 2021 Drought Summit that the Santa Clara Valley Water District (Valley Water) is convening on Saturday, October 23, 2021
<b>37</b>	Email from Director Hsueh, to Danessa Techmanski, dated 9/30/21, regarding Balancing Water with Development in The West Bay Area (C-21-0147).
<b>42</b>	Email from Director Varela, to Bernard Mulligan, dated 9/30/21, regarding new Septic Systems on Lots that Face the Lake, or Anderson Reservoir, on Manzanita Drive (C-21-0149).
<b>44</b>	Email from Director Varela, to Pastor Goldstein, dated 10/4/21, regarding Thompson Creek Trail Extension & Completion (C-21-0151).

Board correspondence has been removed from the online posting of the Non-Agenda to protect personal contact information. Lengthy reports/attachments may also be removed due to file size limitations. Copies of board correspondence and/or reports/attachments are available by submitting a public records request to [publicrecords@valleywater.org](mailto:publicrecords@valleywater.org).

# **CEO BULLETIN**

# CEO BULLETIN



**To: Board of Directors**  
**From: Rick L. Callender, CEO**

## Weeks of September 24 – October 7, 2021

Board Executive Limitation Policy EL-7:

*The Board Appointed Officers shall inform and support the Board in its work. Further, a BAO shall 1) inform the Board of relevant trends, anticipated adverse media coverage, or material external and internal changes, particularly changes in the assumptions upon which any Board policy has previously been established and 2) report in a timely manner an actual or anticipated noncompliance with any policy of the Board.*

Item	IN THIS ISSUE
<u>1</u>	<b>37th California Coastal Cleanup</b>
<u>2</u>	<b>Safe, Clean Water Grant Closeout: City of Campbell's Los Gatos Creek Trail Interpretive Signage and Receptacle Expansion Project</b>
<u>3</u>	<b>Sustainable Groundwater Management Act (SGMA) Compliance Update</b>
<u>4</u>	<b><u>Kremen</u> Staff is to Provide Director Kremen with a copy of the first draft of the various financial schedules that will be included in the FY21 Annual Financial Report. I-21-0006</b>

### 1. 37th California Coastal Cleanup

Valley Water, in partnership with the Creek Connections Action Group (CCAG), hosted the 37<sup>th</sup> annual Coastal Cleanup Day on Saturday, September 18, 2021 in Santa Clara County.

This year, the CCAG came together to host a hybrid effort, with Valley Water organizing in-person sites near the creeks as well as independent neighborhood cleanups where volunteers took to the streets using the CleanSwell app to track their own clean-up efforts. A total of 913 volunteers cleaned 99.5 miles of creeks and streets, removing approximately 28,085 pounds of trash, which included 1,347 pounds of recyclables. Some of the most interesting items that volunteers picked up included the following: sewing machine, unopened bag of golf tees, cell phone, firecrackers, piano, ceramic lawn ornaments, rubber duck, Christmas ornaments, toilet, and polaroid camera.

Valley Water will continue to leverage the momentum from the event to encourage volunteers to sign up for the Adopt-A-Creek Program and other Valley Water volunteer efforts, such as National River Cleanup Day in May of next year.

The CCAG is a consortium of public agencies and non-profit organizations that share a goal of protecting Santa Clara County's waterways. These agencies include Valley Water (Chair), Santa Clara County Parks and Recreation, the City of San José (Parks Recreation and Neighborhood Services, Environmental Services Department), City of Santa Clara, City of Palo Alto, City of Sunnyvale, City of Milpitas, City of Cupertino, West Valley Clean Water Program (City of Campbell, City of Monte Sereno, City of Saratoga, and the Town of Los Gatos), City of Morgan Hill, City of Gilroy, and City of Los Gatos.

For further information, please contact Marta Lugo at (408) 630-2237.

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### 2. Safe, Clean Water Grant Closeout: City of Campbell's Los Gatos Creek Trail Interpretive Signage and Receptacle Expansion Project

In Fiscal Year 2018, Valley Water awarded the City of Campbell (Grantee) a \$33,731.28 Safe, Clean Water Program B7 Grant for their Los Gatos Creek Trail Interpretive Signage and Receptacle Expansion Project. The Grantee completed the Project in August of 2021 and provided the closeout materials in September of 2021.

The City of Campbell partnered with the Town of Los Gatos to install ten environmental outreach stations along the Los Gatos Creek Trail, adjacent to the Los Gatos Creek and percolation ponds. These stations included educational interpretive signage with environmental stewardship messages about litter and the health of riparian corridors. The Grantee installed pet waste and refuse/recycling stations next to the signs to encourage litter disposal to prevent stormwater pollution. The Grantee also conducted a month-long survey to track how community members utilize the trail and engage with the signage.

#### Key Outcomes:

- Installed 10 environmental outreach stations across 6.3 miles of the Los Gatos Creek Trail in Campbell and Los Gatos.
- Collected 12.25 tons of trash and 7.28 tons of recyclable materials a year after installation.
- Conducted a month-long survey with responses from 82 trail users:
  - 34% used the trail multiple times a week.
  - 76% of participants utilized the trash or recycling cans.
  - 73% of participants have noticed a reduction in trash and pet waste along the trail since August 2020.

For further information, please contact Marta Lugo at (408) 630-2237.

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### 3. Sustainable Groundwater Management Act (SGMA) Compliance Update

The Sustainable Groundwater Management Act (SGMA) requires that a groundwater sustainability agency managing a medium- or high-priority basin adopt and implement a groundwater sustainability plan or prescribed Alternative. Valley Water's comprehensive 2016 Groundwater Management Plan for the high-priority Santa Clara and Llagas subbasins was approved by the Department of Water Resources as an Alternative in 2019. In accordance with SGMA, a five-year update of the Alternative is due to the state by January 1, 2022.

Valley Water plans to post the draft 2021 Groundwater Management Plan on October 8, 2021 for public review at the following website: <https://www.valleywater.org/your-water/where-your-water-comes/groundwater/sustainable>. An overview of the draft 2021 Groundwater Management Plan, including notable changes from the 2016 plan, will be provided at Valley Water's Water Conservation and Demand Management Committee meeting scheduled for October 25, 2021. The final 2021 Groundwater Management Plan is expected to be brought to the November 23, 2021 Board of Directors meeting for public hearing and plan adoption.

For further information, please contact Greg Williams at (408) 630-2867.

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4. **Kremen**

**Staff is to Provide Director Kremen with a copy of the first draft of the various financial schedules that will be included in the FY21 Annual Financial Report.**

**I-21-0006**

On October 1, 2021, Valley Water provided Director Kremen with an excel file that contains a draft version of the various schedules to be incorporated into the Fiscal Year 2021 Annual Financial Report. A copy of the file can be obtained by contacting the Clerk of the Board.

For further information, please contact Darin Taylor at (408) 630-3068.

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## Outlook as of October 1, 2021

The U.S. Drought Monitor classifies Santa Clara County as being in an extreme to exceptional drought. After two consecutive dry years and due to low imported water allocations, end of 2021 groundwater storage is projected to be in Stage 2 (Alert) of the Water Shortage Contingency Plan without additional water use reduction. Valley Water has secured emergency water supplies and ramped up water conservation programs and outreach. Valley Water will rely more on imported water and water conservation in the next 10 years while Anderson Reservoir storage is unavailable due to the Federal Energy Regulatory Commission (FERC) order to drain the reservoir. The Board of Directors adopted a resolution on June 9, 2021, declaring a water shortage emergency condition and calling for water use restrictions of 15% relative to 2019. Many cities and retailers have enacted water use prohibitions to encourage every property in Santa Clara County to become drought ready.

### Weather

- Rainfall in San José:
  - » Month of September, City of San José = 0.00 inches
- Month of September, San José average daily high temperature = 82.4 degrees Fahrenheit

### Local Reservoirs

- Total October 1 storage = 19,187 acre-feet
  - » 26% of 20-year average for that date
  - » 11.5% of total unrestricted capacity
  - » 31% of restricted capacity (166,140 acre-feet total storage capacity limited by seismic restrictions to 62,362 acre-feet)
- Approximately 240 acre-feet of imported water delivered into Calero Reservoir during September 2021
- Approximately 20 acre-feet of water released from Anderson Reservoir during September 2021. Since the FERC order to drawdown Anderson Reservoir was issued on February 20, 2020, cumulative release from Anderson is approximately 30,680 acre-feet. Majority of released water was for water supply
- Total estimated releases to streams (local and imported water) during September was 2,590 acre-feet (based on preliminary hydrologic data)

### Groundwater

- Groundwater levels and storage continue to decline due to the extreme drought conditions. Total storage at the end of 2021 is projected to be in Stage 2 (Alert) of Valley Water’s Water Shortage Contingency Plan.

	Santa Clara Subbasin		Llagas Subbasin
	Santa Clara Plain	Coyote Valley	
September 2021 managed recharge estimate	3,000	1,100	1,400
YTD managed recharge estimate	21,800	9,100	12,000
YTD managed recharge as % of 5-year average	46%	69%	75%
August 2021 pumping estimate	8,500	1,600	5,100
January to August pumping estimate	56,300	8,700	27,400
January to August pumping as % of 5-year average	132%	120%	103%
Current index well groundwater levels compared to September 2020	14 Feet Lower	8 Feet Lower	17 Feet Lower

All volumes are in acre-feet; All data is for 2021 except where noted; YTD = Year-to-date

## Imported Water

- 2021 State Water Project (SWP) and Central Valley Project (CVP) allocations:
  - » 2021 SWP allocation of 5%, which provides 5,000 acre-feet to Valley Water
  - » Valley Water received conditional approval for a 2021 CVP allocation of 71,500 acre-feet, based on Valley Water's public health and safety needs. However, the availability of the allocation is subject to hydrological and other system limitations
- Statewide reservoir storage information, as of October 3, 2021:
  - » Shasta Reservoir at 23% of capacity (39% of average for this date)
  - » Oroville Reservoir at 22% of capacity (36% of average for this date)
  - » San Luis Reservoir at 12% of capacity (25% of average for this date)
- Valley Water's Semitropic groundwater bank reserves are at 91% of capacity, or 318,954 acre-feet, as of August 31, 2021
- Estimated SFPUC deliveries to Santa Clara County:
  - » Month of August = 4,771 acre-feet
  - » 2021 Total to Date: 32,513 acre-feet
  - » Five-year annual average = 48,700 acre-feet
- Board Governance Policy No. EL-5.3.3 includes keeping the Board informed of imported water management activities on an ongoing basis. No imported water agreements have been executed under EL-5.3.3 since the last Water Tracker update

## Treated Water

- Below average demands of 9,301 acre-feet delivered in September
- This total is 80% of the five-year average for the month of September
- Year-to-date deliveries are 74,882 acre-feet or 95% of the five-year average

## Conserved Water

- Saved 74,198 acre-feet in FY20 through Valley Water's long-term conservation program (baseline year is 1992)
- Long-term program goal is to save nearly 100,000 acre-feet by 2030 and 110,000 acre-feet by 2040
- On June 9, 2021, the Board called for a 15% reduction in water use compared to 2019, for the public to limit irrigation of ornamental landscapes with potable water to a maximum of three days per week, and for retailers, cities and the County to implement local water restrictions
- The community has continued to increase its drought-related conservation from June 2021, with August 2021 water use approximately 9% less than August 2019 water use

## Recycled Water

- Estimated September 2021 production = 1,750 acre-feet
- Estimated year-to-date through September = 13,530 acre-feet or 97% of the five-year average
- Silicon Valley Advanced Water Purification Center produced an estimated 1.6 billion gallons (4,864 acre-feet) of purified water in 2020. Since the beginning of 2021, about 4,268 acre-feet of purified water has been produced. The purified water is blended with existing tertiary recycled water for South Bay Water Recycling Program customers

## Alternative Sources

- As of December 10, 2019, Valley Water's wastewater contract right from Palo Alto/Mountain View remains at 10,000 acre-feet/year

## CONTACT US

To find out the latest information on Valley Water projects or to submit questions or comments, email [info@valleywater.org](mailto:info@valleywater.org) or use our **Access Valley Water** customer request system at <https://deliver.com/2yukx>.



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# **BOARD MEMBER REQUESTS and Informational Items**



**Report Name: Board Member Requests**

Request	Request Date	Director	BAO/Chief	Staff	Description	20 Days Due Date	Expected Completion Date	Disposition
I-21-0006	10/01/21	Kremen	Callender	Taylor	Provide Director Kremen with a copy of the first draft of the various financial schedules that will be included in the FY21 CAFR.	10/21/21		

**TO:** Rachael Gibson, Chief of External Affairs**FROM:** Don Rocha, Deputy  
Administrative Officer**SUBJECT:** Congressional Delegation Letter to Federal  
Energy Regulatory Commission re:  
Temporary Storage in Anderson Reservoir**DATE:** September 29, 2021

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Attached to this memorandum is a letter dated September 27, 2021, from the Santa Clara County Congressional delegation to the Federal Energy Regulatory Commission (FERC) supporting Valley Water's request to temporarily store additional water in Anderson Reservoir. Valley Water submitted the request to FERC on September 24 for permission to store up to 20,000 acre-feet of water in Anderson on a temporary basis (for one year) to deal with the unprecedented drought emergency. That request is also attached after the delegation's letter.



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Don Rocha  
Deputy Administrative Officer  
Office of Government Relations

Congress of the United States  
Washington, DC 20515

September 27, 2021

David Capka, P.E.  
Director, Division of Dam Safety and  
Inspections  
Federal Energy Regulatory Commission  
888 First Street NE  
Washington, D.C. 20426

Frank L. Blackett, P.E.  
Regional Engineer, Division of Dam Safety  
and Inspections  
Federal Energy Regulatory Commission  
100 First Street, Suite 2300  
San Francisco, CA 94105

Dear Mr. Capka and Mr. Blackett,

We write to bring attention to Valley Water's attached concurrence request for a temporary variance to increase, through November 2022, Anderson Reservoir's drawdown level from 488 feet to 544 feet. Our understanding is that this measure would allow Valley Water to better manage limited water supplies as Santa Clara County continues to face extreme to exceptional drought conditions.

As you know, nearly all of California is currently in the "severe" drought category or worse. In fact, the State has experienced significant drought conditions in 13 of the last 22 years. That is 60 percent of the past two decades.


Valley Water asserts that the increase in safety risk associated with the temporary variance is minimal and would outweigh the adverse public health and safety impacts of this unprecedented drought. If the Federal Energy Regulatory Commission (FERC) believes that Valley Water's request presents undue risk to the public, then we would expect the request to be denied. If, however, the request does not pose undue risk to the public, we would ask that FERC fully examine and consider Valley Water's proposal. Valley Water has indicated to us that they would be eager to meet with the Division of Dam Safety and Inspections to discuss the proposal in greater detail, should that be useful.

Thank you for your consideration of this request and for FERC's ongoing commitment to this project and the safety of our constituents.


Sincerely,




ZOE LOFGREN  
Member of Congress



ANNA G. ESHOO  
Member of Congress



RO KHANNA  
Member of Congress



JIMMY PANETTA  
Member of Congress

September 24, 2021

David Capka, P.E.  
Director, Division of Dam Safety and Inspections  
Federal Energy Regulatory Commission  
888 First Street Northeast  
Washington, DC 20426

Frank L. Blackett, P.E.  
Regional Engineer, Division of Dam Safety and Inspections  
Federal Energy Regulatory Commission  
100 First Street, Suite 2300  
San Francisco, CA 94105

Reference: Project No. 5737-CA  
NATDAM ID No. CA00294

Subject: Anderson Dam Seismic Retrofit Project  
**Request for Temporary Variance from Reservoir Drawdown Level during Current Drought Year**

Dear Mr. Capka and Mr. Blackett:

The Santa Clara Valley Water District (Valley Water) seeks concurrence by the Federal Energy Regulatory Commission's (FERC) Division of Dam Safety and Inspections (D2SI) with a temporary variance from the Anderson Reservoir drawdown level, allowing for additional storage of up to 20,000 acre-feet (corresponding to a maximum reservoir Elevation 544 feet) for a limited period, through November 2022, to enable Valley Water to better manage its limited water supplies in the current, unprecedented drought in California.

#### **Valley Water Complied with Ordered Draining of Primary Local Water Storage**

FERC's directive from February 20, 2020 (FERC Order) ordered Valley Water to begin lowering Anderson Reservoir no later than October 1, 2020, from Elevation 565 feet to Elevation 488 feet (*i.e.*, to a deadpool of storage of about 3,000 acre-feet) and to expedite construction of the new low-level outlet, which has been defined as the Anderson Dam Tunnel Project (ADTP). The FERC Order also stated that Valley Water should attempt to secure alternative emergency water supplies and work with FERC staff, and federal, state, and local resource agencies to minimize environmental impacts. Valley Water has complied with the FERC Order and has maintained the reservoir at Elevation 488 feet since mid-December 2020; started the ADTP construction; secured emergency imported water purchases and transfers, including takes from a groundwater storage bank; and identified a variety of environmental impact avoidance and minimization measures, including releases of imported and local water during ADTP construction to continue sufficient groundwater recharge and reduce impacts to aquatic and groundwater-dependent species and habitats in Coyote Creek during the construction period.

#### **Public Safety Considerations - Extremely Low Risk of Exceedance**

Valley Water is seeking D2SI's input on the final proposed elevation for the variance and has performed analysis detailing the risks associated with various proposed elevations corresponding to water storage ranging from 10,000 acre-feet to 20,000 acre-feet (enclosed technical memorandum describing the hydrologic analysis). Should the upcoming rainy season 2021-22 be very wet, which we believe to be

unlikely, the hydrologic analysis shows that the risk of spilling or exceeding the seismic safety restriction at Elevation 592 feet, which was imposed by the California Department of Water Resources' Division of Safety of Dams (DSOD) on May 8, 2017, is only slightly higher if additional storage is allowed versus storage to a maximum Elevation 488 feet (*i.e.*, deadpool). Based on the analysis presented in the enclosed technical memorandum, Valley Water believes that the reservoir, when maintained to various elevations below 544 feet, would have a 91 to 96 percent chance of not increasing the seismic safety risk at all as compared to maintaining the current Elevation 488 feet restriction for any given water year. For the majority of remaining 4 to 9 percent of water years (which are the wettest years), water levels are predicted to exceed the DSOD restriction anywhere from zero to three weeks during the year. This equates to a 0.28 percent to 0.59 percent chance on any given day that water exceeds the DSOD restriction when operating at various proposed elevations below 544 feet, versus a 0.17 percent chance when operating at the current FERC-imposed Elevation of 488 feet. Valley Water believes this slight increase in the percentage of time during the 4 to 9 percent of water years that the reservoir elevation would exceed the DSOD restriction should be acceptable, particularly when considering the very slim chance that 2021-2022 will be a wet year, and the very small chance that a large earthquake would occur at the very same time that the DSOD restriction is exceeded.

#### **Temporary Variance Needed for Critical Public Health, Safety, and Environmental Needs**

The requested variance through November 2022 would provide the following critical public health, safety, and environmental benefits.

- **Mitigation against the current drought combined with reservoir drawdown:** Capturing any surface water runoff into Anderson Reservoir during the 2021-22 rainy season, however minimal, would benefit groundwater recharge and water supply for the residents of Santa Clara County in the spring and summer of 2022 when imported water availability is expected to be worse than in 2021. Storing up to 20,000 acre-feet in Anderson Reservoir would provide much needed additional emergency water supply during the current drought.
- **Mitigation against extremely bad water quality conditions in San Luis Reservoir:** Water levels in San Luis Reservoir, which is located in Merced County and serves as the conduit for our imported water, are very low due to reduced CVP and SWP deliveries from the Sacramento-San Joaquin River Delta. When the reservoir's levels drop below the threshold of 300,000 acre-feet, as they have in past droughts and on August 23 of the current year, increased algae in the water significantly impair water quality. This same low point scenario at San Luis Reservoir is expected to repeat itself in 2022. Evacuating some of Valley Water's share in San Luis Reservoir before low point conditions occur and storing the water temporarily in Anderson Reservoir would provide a safer, high-quality source of supply that meets drinking water standards.
- **Mitigation against emergency power outage and pipeline failure on the San Felipe Division system of the CVP:** Should the San Felipe Division system of pumps and pipelines experience an unplanned outage due to electric power loss or a pipe leak, an emergency pool in Anderson Reservoir would allow for immediate releases into Coyote Creek for continued managed groundwater recharge and for regulatory mandated in-stream flows during the outage. Recharge operations in Coyote Creek support the Coyote Valley, the Llagas Groundwater Subbasin, and southern San José where residents and businesses depend solely on groundwater pumping for their drinking water supply. Also, the protected species in Coyote Creek depend on maintaining the flow of water in the stream. For prolonged emergencies like a power outage or pipe leak, Anderson Reservoir is the only local source of water capable of supporting the water supply and groundwater recharge needs of the County's residents and sensitive species and habitats.

In addition, Valley Water has discussed the situation with the Santa Clara Congressional delegation, led by Congresswoman Zoe Lofgren (CA-19), and they have expressed support for approaching FERC with a temporary variance request due to the water shortage emergency condition now affecting the region, provided it does not affect the safety of the downstream community.

### **All Public Health and Safety Considerations Point to 20,000 Acre-Feet of Storage**

As illustrated in the attached technical memorandum (Table 3), a variance buys critical time to mitigate the impacts of the worsening drought during Anderson Reservoir drawdown, including San Luis Reservoir low point conditions, pumping plant failure, or pipeline outages, while minimally increasing risk in the event of an earthquake.

A variance allowing Valley Water to store up to 20,000 acre-feet of water in Anderson Reservoir would offer 17,000 acre-feet of usable storage, which would allow for:

- i. weathering the impacts of San Luis Reservoir low point conditions for about 75 days in summer 2022 by supporting the water treatments plants with about 65 million gallons per day (MGD); and
- ii. releasing 10 cubic feet per second (cfs) in Coyote Creek to sustain groundwater recharge and regulatory mandated in-stream flows for 100 days in case of an imported water pipe emergency.

Storage levels below the 20,000-acre-foot threshold would also be used to support needed in-stream flow of 10 cfs to the extent feasible, but the level of support for that flow level would be incrementally reduced as storage levels drop. Allowing for a temporary storage of 20,000 acre-feet in Anderson Reservoir would have the most benefit for mitigating both water supply and environmental impacts of the drought.

### **Public Health and Safety Impacts Due to Extreme Water Scarcity**

California is in the second year of an unprecedented drought, and the U.S. Drought Monitor Report currently classifies most of Santa Clara County as being in extreme drought conditions and part of the county is in exceptional drought. 2019-20 and 2020-21 are the driest consecutive water years since 1977, severely limiting available imported and local water resources and impacting our county in the following ways.

- Imported water allocations to Central Valley Project (CVP) and State Water Project (SWP) contractors, including Valley Water, have been significantly reduced. Half of Santa Clara County's water supply normally comes from this imported water, so reduced allocations have a significant impact on our local water supply.
- The current storage in all 10 reservoirs is only 12 percent of total combined capacity and about 25 percent of the 20-year average for September. Not including Anderson Reservoir, the remaining nine reservoirs currently hold only half of their normal 20-year average storage for September. The extreme water scarcity has made it incredibly challenging for Valley Water to secure sufficient alternative emergency sources of water supply, per the FERC Order.
- Deliveries to Valley Water's three drinking water treatment plants, where water is treated and served for potable use to the majority of the 1.9 million residents of Santa Clara County, have been impacted due to a lack of supply and impaired water quality resulting from low reservoir conditions on both the SWP and CVP sides.
- Managed recharge operations, which help maintain adequate groundwater storage to augment water supply, prevent subsidence, and support in-stream flows and groundwater-dependent ecosystems, have been drastically reduced throughout Santa Clara County. Managed recharge in Coyote Creek has been prioritized while Anderson is offline; however, due to the cuts to

imported water allocations, combined with reduced water storage in Coyote Reservoir and lack of water storage in Anderson Reservoir, managed recharge in Coyote Creek is 20 percent of normal for summer months and portions of the percolation zone are drying back as groundwater is pumped faster than it can be replenished.

**Swift, Aggressive Actions by Valley Water Hindered by Deepening Drought**

Valley Water has taken swift action to respond to these conditions, but potentially dire conditions in 2022 threaten to deepen the crisis. On June 9, 2021, the Valley Water Board of Directors declared a water shortage emergency condition and called for a 15 percent reduction in water use compared to 2019. Valley Water has initiated an aggressive campaign to educate residents and promote water conservation, but these efforts cannot offset the shortfall in supply. Valley Water is also trying to secure additional emergency imported water supplies, but ongoing State-ordered water right curtailments and deepening drought conditions significantly hinder those efforts. Additionally, the National Oceanic and Atmospheric Administration predicts La Niña conditions through the 2021-22 winter season, indicating a strong likelihood that the exceptionally severe drought conditions will persist through next year.

**SUMMARY: 20,000 Acre-Feet of Storage or Lower Amount**

In summary, the safety risks associated with the proposed increases in elevation only affects 4 to 9 percent of water years (i.e., the wettest years), and the risk only occurs if there is a large earthquake near the dam on the exact day that the reservoir elevation exceeds the DSOD safety restriction. Even then **the safety risk only increases slightly** during those years as compared to the safety risk associated with the current Elevation 488 feet. Because the very small increase in safety risk appears to be outweighed by the **adverse public health and safety and environmental effects resulting from Anderson Reservoir drawdown during this unprecedented drought**, Valley Water proposes to temporarily increase storage and maintain the reservoir to a maximum of Elevation 544 feet (storage of 20,000 acre-feet) from early October 2021 to early November 2022. We are also requesting D2SI to give their input and help select a different reservoir elevation if Elevation 544 feet is unacceptable. Anderson Reservoir would be lowered in November 2022 to reach deadpool in December 2022 and be ready for the winter season, should 2022-23 be a wet year.

The ADTP and Anderson Dam Seismic Retrofit Project (ADSRP) continue to be Valley Water’s highest construction priorities. Accordingly, Valley Water requests expedited D2SI review of the proposed operation plan, preferably by November 1, 2021, which just barely provides sufficient time to implement additional storage if the variance is approved. D2SI’s approval of this proposal will help Valley Water to continue with ADTP’s construction and ADSRP’s forward momentum, while minimizing the impacts of those projects on water supply and the environment.

Thank you for your consideration of this request. Valley Water would be pleased to meet with D2SI to discuss this proposal in greater detail if that would be useful. Please contact me at (408) 630-2017, or Deputy Operating Officer Chris Hakes at (408) 630-3796, at your convenience.

Sincerely,



Rick L. Callender, Esq.  
Chief Executive Officer

Enclosure:  
Technical Memorandum —Analysis of Potential Operations of Anderson Reservoir

Mr. Capka, Mr. Blackett  
Page 5  
September 24, 2021

cc:

Federal Energy Regulatory Commission – Headquarters

Jim McHenry, P.E., Senior Civil Engineer (james.mchenry@ferc.gov) [efile]

I.M. Idriss, Ph.D, Consultant (IMIdriss@aol.com) [email]

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Robert Jaeger, Ph.D., P.E., Supervising Engineer (robert.jaeger@water.ca.gov) [email]





# TECHNICAL MEMORANDUM

**PROJECT:** Anderson Dam / FERC Order **DATE:** September 20, 2021  
**SUBJECT:** Analysis of Potential Operations of Anderson Reservoir  
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## 1. PURPOSE

This technical memorandum analyzes potential risks by comparing reservoir elevations under six (6) operational rule curves for Anderson Dam by using two historical wet years (2017 and 1983), as well as by using stochastically generated inflow from a 100,000-year Monte Carlo Simulation<sup>1</sup> (MCS). The memorandum also includes information on how different variance levels impact water supply and the environment.

## 2. OPERATIONS

Six rule curves were analyzed:

- Anderson Dam targeting deadpool and Coyote Dam targeting the restriction imposed by the California Department of Water Resources' Division of Safety of Dams (DSOD). This is essentially the current operating rule.
- Anderson Dam targeting a water storage of 20 thousand acre-feet (TAF), 17.5TAF, 15TAF, 12.5TAF, and 10TAF, with Coyote Dam targeting the DSOD restriction. These are five potential proposed operating rules.

For all curves, Coyote Dam will attempt to fill up its volume to the DSOD restriction, after which it will release water.

## 3. RESERVOIR ELEVATION RESULTS

Overall results from the stochastic generation are shown in Table 1 and Figure 1. Risk is being quantified as the amount of time above the DSOD seismic restriction. Time above the spillway was not tabulated because the differences are extremely small<sup>2</sup> as seen in Figure 1.

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<sup>1</sup> Originally developed for the Anderson Dam Seismic Retrofit Project to assess interim dam reliability.

<sup>2</sup> This is an expected result as, by design, the time above the spillway would be limited in all cases due to the ability for the spillway to evacuate water much faster than the outlet pipe. This causes the probabilities above spillway to converge for all the possible proposed operation sets.

**TABLE 1: Days Exceeding DSOD Restriction for Various Operation Targets**

	<b>Deadpool</b>	<b>10TAF</b>	<b>12.5TAF</b>	<b>15TAF</b>	<b>17.5TAF</b>	<b>20TAF</b>
<b>% Days Exceeded*</b>	0.1739%	0.2853%	0.3408%	0.4077%	0.4880%	0.5862%
<b>Days Exceeded*</b>	63,469	104,122	124,378	148,798	178,133	213,976

\*Out of 36.5mm days simulated (100,000 years)

As expected, risk exposure for the Dam increases as the reservoir is operated closer to 20TAF and we see the percentage of days increase steadily. Interpreting Table 1 in terms of risk is difficult since the stochastic results are given as a percentage of days one would expect the reservoir to be at a given elevation and includes the summer dry season as well. To more easily conceptualize the meaning of the results, historical wet years were analyzed. Figure 2 outlines the expected reservoir elevations using historical inflow traces for two very wet years in the Coyote and Anderson watershed.

- For 2017, the set of possible proposed operations would add about one to three weeks of additional time where the reservoir would be above the DSOD restriction, compared to a deadpool target.
- For 1983, the set of possible proposed operations would yield identical risk to the deadpool target, yielding the same number of days where the reservoir would be above the DSOD restriction.

The results behave as expected, and the analysis above shows how much variability storm patterns and timing can have on how much each operational target can have on additional time above the DSOD restriction, even during two historically very wet winters.

To explore and help quantify the analysis further, each stochastically generated year was analyzed individually and the number of additional days above the DSOD restriction (from deadpool to 10, 12.5, 15, 17.5, and 20TAF) was recorded. Years with similar increases in risk (days above restriction) were binned together, out to a maximum increase of 78 days.

Out of the 100,000 years generated in the MCS, the annual exceedance probability for having an increase in days above DSOD restriction varies between 8.9% to 4.4% between deadpool operation and various proposed operations (Table 2). Figure 3 breaks down the number of additional days in a density plot, from a minimum of one (1) day to a maximum of 78 days.

**TABLE 2: Various Proposed Operations – Likelihood of Additional Days Above DSOD Compared to Current Deadpool Operation**

	<b>Annual Exceedance Probability</b>				
	<b>20TAF</b>	<b>17.5TAF</b>	<b>15TAF</b>	<b>12.5TAF</b>	<b>10TAF</b>
<b>0+ Days</b>	8.9%	8.9%	8.9%	5.2%	4.4%
<b>7 Days</b>	7.1%	7.0%	7.0%	4.0%	2.5%
<b>14 Days</b>	4.9%	4.5%	3.8%	1.3%	0.6%
<b>21 Days</b>	2.5%	2.0%	1.7%	0.5%	0.1%
<b>28+ Days</b>	1.1%	0.9%	0.7%	0.1%	0.01%

#### 4. VARIANCE IMPACTS ON WATER SUPPLY AND ENVIRONMENT

Table 3 illustrates how different variances impact water supply and the environment during drought conditions, including San Luis Reservoir low point conditions, pumping plant failure, or pipeline outages.

**TABLE 3:** Water Supply and Environmental Impacts of Different Variances

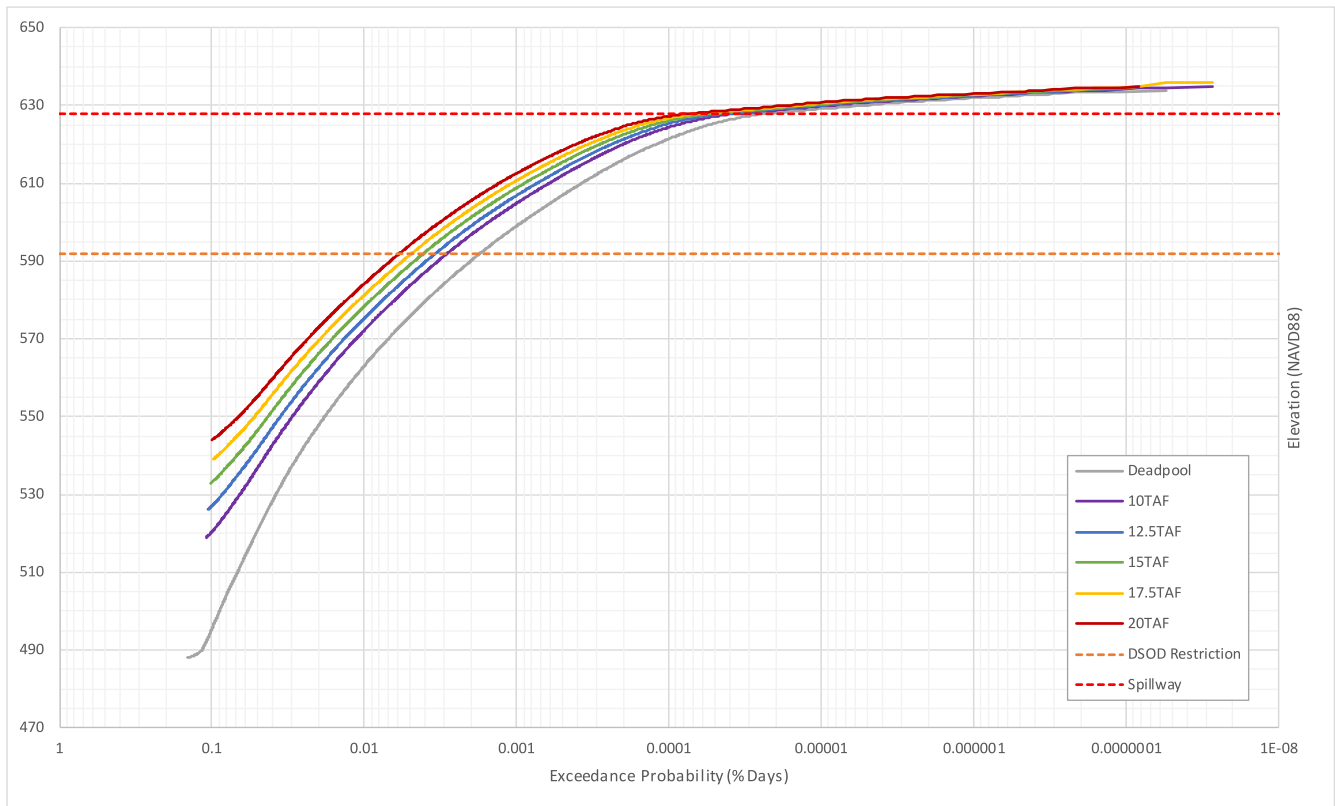
<i>Requested storage, acre-feet (AF)</i>	<i>Usable storage above deadpool (AF)</i>	<i>Volume of water (AF) to be sent to water treatment plants (WTPs) during SLR Low Point (at a flow of 100 cfs or 65 MGD as a limit due to landslide issue)</i>	<i>Water for managed recharge (and environmental benefit) in Coyote Creek during Pacheco Pumping Plant outage or unplanned pipe leak</i>	<i>Length of time to support WTPs (days)</i>	<i>Length of time to support releases into Coyote Creek (minimal releases of 10 cfs to keep Cold Water Management Zone wet) (days)</i>
20,000 AF	17,000 AF	15,000 AF	2,000 AF	75 days (suitable period for a typical SLR low point)	100 days
17,500	14,500	12,500	2,000	62	100
15,000	12,000	10,000	2,000	50	100
12,500	9,500	7,500	2,000	37	100
10,000	7,000	5,000	2,000	25	100
Current FERC restriction (3,000 of deadpool)	0	0	0	0	0

#### 5. DISCUSSION

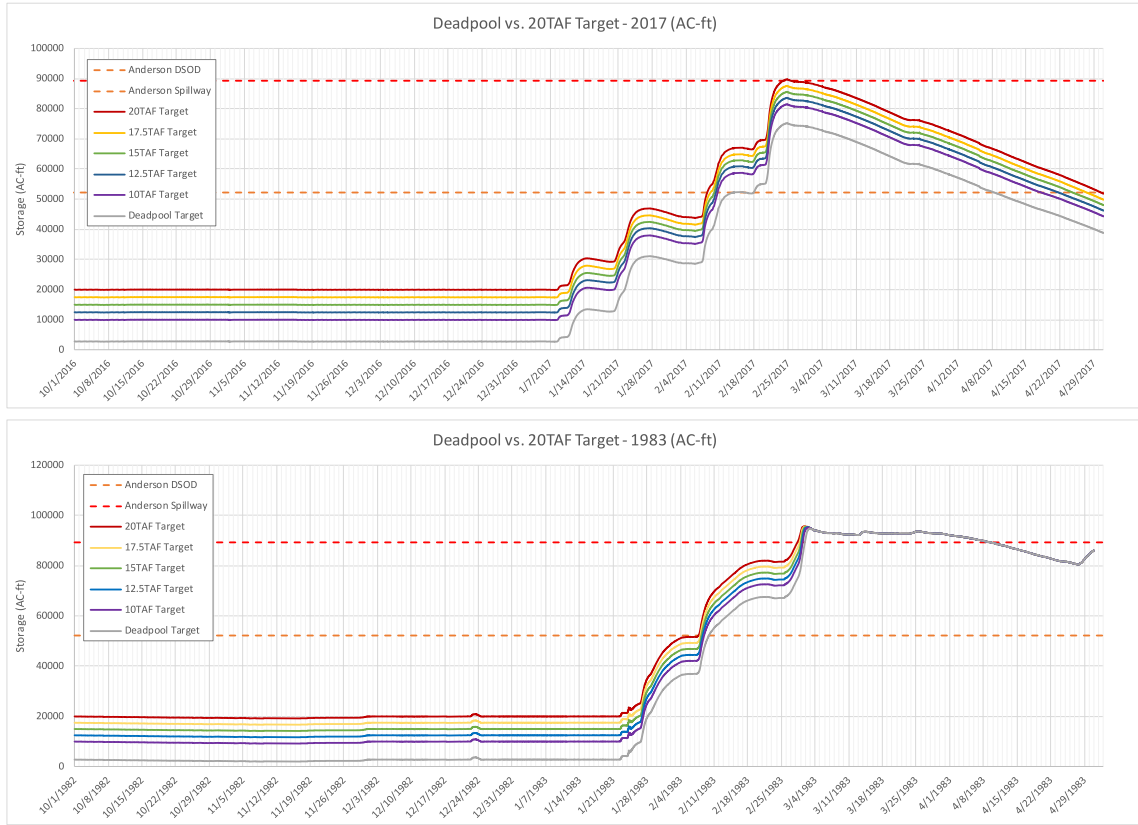
The density plots in Figure 3 and percentage breakdowns in Table 2 show that from 20TAF to 15TAF operation targets, there is very similar risk in terms of additional time spent above the DSOD restriction as compared to the deadpool operation. The red, yellow, and green traces all move to less risk, but in relatively small amounts. However, the 12.5TAF and 10TAF operations show larger jumps. In the 10TAF scenario, we can see that most of the additional days (around 90%) are limited to under 2 weeks, the 12.5TAF scenario limited to under 3 weeks, and the 15TAF - 20TAF scenarios are closer to 4 weeks (Figure 3). In addition, the annual chance that the operations would make a difference as compared to deadpool is around 8.9% until the storage target drops to 12.5TAF, where the chance drops to around 5.2% (Table 2).

Depending on risk tolerance, it is recommended that either 10TAF, 12.5TAF, or 20TAF target be under consideration, since the 15TAF and 17.5TAF offer little additional risk reduction as compared to the 20TAF scenario.

**FIGURE 1:** Anderson Dam Elevation Exceedance Probability for Various Operation Targets



**FIGURE 2: Reservoir Elevations for Historical Inflows**



**FIGURE 3:** Distribution of Additional Days above DSOD Restriction Compared to Deadpool Operation by using Stochastic Data

