

State of Water

Calls to Conserve Water

State of Water in California 2021

- 88% of California is in extreme or exceptional drought
- Less rain & snow fell in the Sierra this winter than in any year since 1976-77 (23" vs. avg of 52")
- CA major reservoirs are at very low levels – (listed as % capacity):
 - Lake Shasta at 31%
 - Lake Oroville at 24% (shut down is hydroelectric plant due to low water levels for first time since built in 1976)
 - San Luis at 19%
 - SCVWD 9 reservoirs are at combined 13% total capacity/ 35% restricted capacity mainly because the largest reservoir, Anderson(90,000 ac ft) , is empty
- Two of Americas' largest reservoirs, Lake Powell and Lake Mead, are at historic lows (30%). CO River authority has mandated cuts of water supply to AZ, NV & Mexico starting Jan, 2022, first time in , is empty 86 year history
- River flows into Sacramento –San Joaquin river delta are so low there is danger of salt water intrusion into the delta, which might require to shutoff pumps to the CA aqueduct feeding central valley and So Cal

Water Demands Increasing

- Increasing population;
 - CA is nations most populace state with almost 40M
 - 2nd place TX at 29M and 3rd place FL at 22M
 - Between 1900 – 2000 CA skyrocketed from 2M to 34M
 - Over past 20 yrs growth has slowed, especially last 10 yrs grew only 6.5% / 2.4M
- Increasing agriculture;
 - CA has the highest Ag receipts in the US
 - Almond orchards grew from 870k acres in 2014 to 1.6m in 2020
 - CA wine sales to US & exports were 275.6M cases/ \$49.6M increasing every year for last 25 years at 2% supplying 90% of American wine supply. - 880k acres of vineyards.
In 2019 growers left fruit unpicked due to oversupply and estimate need to pull 30k acres to balance market

Increasing demand vs limited supply

- Demand from population growth, Ag and industrial keeps increasing
- Limited infrastructure and decreasing snow & rainfall
 - 10 largest reservoirs in CA were all built between 1927 and 1979
 - Shasta in 1945, Oroville in 1968, San Luis in 1969, New Melones was most recent in 1979
- CA has given out water rights to 5x as much as water as rain & snow produced in an avg year – 370M ac ft vs 70M ac ft
- Increasing historic wildfires are consuming limited water supplies as well.

Conservation & Recycling

- At same time water conservation has come a long way, LA and San Jose use same amount of water as 30 yrs ago despite significant population growth
- SCVWD saved 74,00 acre-feet in FY20 program (baseline year is 1992)
- SCVWD Water recycling has increased significantly
 - SCVWD commissioned the Silicon Valley Advanced Water Purification Center (SVAWPC) in 2014 producing 8M gal/day or 8,950 ac-ft/ year
 - Produced year-to-date through July 2021 = 8,877 acre-feet
 - SCVWD has plans to increase recycling to 24,000 ac-ft (8B gals) / year by 2025 which would meet 10% of county water demands.

Need to Conserve

- On June 9, 2021, the SCVWD Board called for a 15% reduction in water use compared to 2019,
- And limiting irrigation of landscape to a max 3 days /week
- Their water use January - June 2021, water was ~11% greater than the same time period in 2019;
- June 2021 water use is approximately the same as June 2019 water use, indicating the community is responding to Valley Water's drought resolution

NAMWCo Users Need to conserve

- For NAMWCo we are using more, our usage is:
 - 2020 vs 2019: we used 3.875M gal /9.6% more than previous yr
 - Jan-May 21 vs 20: we used 1.25M gal/ 9.4% more
- 2020 vs 2019: 37 users (33%) used less and 75 (67%) used more
- Jan-May '21 vs '20: 52 users (46%) used less and 60 (54%) used more
- **We are calling for users to conserve water/ cut back usage by 15% even if means letting some landscape die.**
- If not, we are prepared to invoke a 3 tier pricing next spring (Mar/ Apr) if water use does not decrease as incentive:
 - 0-35 units @ \$3.00
 - 36-70 units @ \$3.84 (+28%)
 - 71+ units @ \$4.90 (+28%)
 - Current rates are 0-100 @ \$3.00, 100+ @ \$3.84

Next year and the future

- Groundwater tables are sufficient to get us thru this year
- If we have don't have a wet winter this coming year, there will not be enough water next year to meet basic needs
- The cost of water is expected to double over the next decade
- Community members who want to replace high-water using landscapes with drought-resilient ones can now receive an increased rebate (up to \$3,000) from Valley Water. Learn about all our rebate programs, conservation tips and how to get free water-saving tools at: [waters https://www.valleywater.org/water-conservation-programs](https://www.valleywater.org/water-conservation-programs) [avings.org](https://www.valleywater.org/water-conservation-programs).

SCVWD Projects

- Anderson Dam seismic retro fit
- Other dam seismic retro fit studies
- Pacheco Dam project

Anderson Dam Seismic Retrofit Project

- Retrofit project started earlier this year with draining of reservoir and construction of a new, larger overflow which will take 3 years
- July 7 groundbreaking ceremony signaling the start of the tunnel project - 1,700-foot-long tunnel, 24-ft in diameter, increases ability to release water from the reservoir during an emergency
- Tear down and rebuilding of the dam will take 7 years.
- Total project will be completed by 2031/32
- Also commissioned project design for seismic retrofit of Calero Dam to be finished 2023 – Design and retrofit estimate. (9,740 ac ft capacity)
In meantime water to be kept 19 ft below spillway crest, 67% capacity
- Coyote Dam's seismic retrofit is currently being evaluated as part of Valley Water's Dam Safety Evaluation–Phase 1 Project. The study will take another two years to reach any conclusion as to feasibility and cost estimate for strengthening/retrofit. In meantime to be kept at 52% capacity (22,500 ac ft total capacity)

Lift restrictions while Anderson project is underway ?

We asked the following questions to Valley Water:

1. With our current reservoir levels so low, made worse by Anderson being empty and will remain so for the next 10 years, are you considering raising the restricted levels in our other reservoirs (like Coyote) to capture more water in the coming winters?
2. What will become of the water flowing into Anderson in the coming winters? Will you allow some storage (build a barrier around the bypass tunnel being constructed) at least until start dam demolition several years from now. Some storage (10- 25%) would be a lot compared to what the other reservoirs can hold.

The answer received from Bassan Kassab, Water Supply Operations Mgr;

1. The suggestion to fill up Coyote Reservoir is right on. In fact, in Feb 2021, I drafted a letter to the California Department of Water Resources, Division of Safety of Dams (DSOD), asking them to temporarily lift the seismic restriction on Coyote Reservoir and allow Valley Water to store more water. As you know, Coyote Reservoir has a permanent seismic restriction that limits water storage to 52% of the total reservoir storage capacity and is 2nd largest reservoir. My rationale was that Coyote Reservoir would provide additional water supply when imported water deliveries are down. Also, in case a large earthquake causes Coyote Dam to fail, Anderson Reservoir can capture the wave of water as long as Anderson Dam is in place in the next few years. (It'd be hard to argue for more storage in Coyote Reservoir after Anderson dam is removed later throughout part of the Anderson Dam Seismic Project.) However, DSOD met with us and rejected this ask on the ground of public safety. Currently, we are not allowed to store more than 11,843 acre-feet of water in Coyote Reservoir (the seismic restriction).
2. Regarding capturing winter runoff into Anderson Reservoir, Valley Water also tried to make this case with (FERC) that had ordered us to drain Anderson to deadpool. We did write to FERC asking for 20,000 to 30,000 acre-feet of storage for water supply. However, this ask was rejected too. I believe the Project team is planning to try again by adding the current drought as a reason to store some water if/when it becomes available next year.

I fully agree with you that some storage is better than nothing, but we cannot do anything without FERC's approval.

Pacheco Reservoir Expansion Project

- A collaboration between Valley Water, the San Benito County Water District and the Pacheco Pass Water District, the project will boost Pacheco Reservoir's operational capacity from 5,500 acre-feet to up to 140,000 acre-feet, enough to supply up to 1.4 million residents with water for one year
- Scheduled start: 2024; Finish 2032
- Cost: has doubled to \$2.5B total (\$500M funded by CA Prop 1, \$10M from Federal Safe Clean Water Program with additional funding TBD)

