

California drought eases as state increases water deliveries to cities, farms

Mercurynews.com, 01/26/23

In a major sign that California's drought conditions are easing after a series of huge storms earlier this month, state water officials on Thursday increased the amount of water that cities and farms will receive this summer from the State Water Project, a series of dams, canals and pumps that provides water to 27 million people from the Bay Area to San Diego.

The increased water deliveries — six times the amount promised on Dec. 1 — are made possible by rapidly filling reservoirs and a huge Sierra Nevada snowpack and likely will mean that many communities will ease or lift summer water restrictions if the wet weather continues through the spring.

“Thanks to the water captured and stored from recent storms, the state is increasing deliveries to local agencies that support two-thirds of Californians — good news for communities and farms in the Bay Area, San Joaquin Valley and Southern California,” said Gov. Gavin Newsom. “We’ll keep pushing to modernize our water infrastructure to take advantage of these winter storms and prepare communities for the climate-driven extremes of wet and dry ahead.”

The State Water Project was approved by voters in 1960 and is a key legacy of former Gov. Pat Brown. It moves billions of gallons of water from Northern California to the south by taking melting snow from the Sierra Nevada and transporting it hundreds of miles from Lake Oroville in Butte County through the Sacramento-San Joaquin River Delta to Bay Area communities and all the way to the Los Angeles Basin. In addition to supplying drinking water to two out of three Californians, it also irrigates about 750,000 acres of farmland.

On Thursday, Karla Nemeth, director of the Department of Water Resources, said her agency expects to deliver 30% of requested State Water Project supplies in 2023, up from the initial 5% allocation it announced on Dec. 1.

Nemeth said the amount is likely to increase if wet conditions continue this spring. Thursday's increase is the largest January allocation announcement since 2017 when the 29 agencies that have contracts were told they would receive 60% of their requested amounts. The rain continued, reservoirs filled, and that year, by April, they received 85%.

When asked if California's drought, which parched the state for the past three years, was ending, Nemeth said different areas are experiencing different conditions. Reservoirs are 100% full along the coast, in places such as Marin, Santa Cruz and Santa Barbara counties, where storms hit hardest. But there are still depleted

groundwater basins in the Central Valley, she noted, and Southern California depends heavily on the Colorado River, which has seen 20 years of relentlessly dry conditions. In the coming months if rains continue, Newsom is likely to remove some areas from his emergency drought declaration, Nemeth said, based on rainfall amounts and local water supply conditions. But there's no guarantee the rain will continue. Last December was wet, and almost no rain fell in January, February and March.

"We had an incredible three weeks in California," Nemeth said. "Ultimately California will either emerge from this drought completely or we will have continued erratic conditions."

"It's really too soon to tell," she added.

Nine atmospheric river storms drenched the state starting in late December, causing flooding and storm damage and killing at least 21 people. The deluges marked the wettest series of storms in five years.

The rainfall totals have been nothing short of amazing.

From Dec. 26 to Jan. 15, 17 inches fell in downtown San Francisco, making it the Bay Area's wettest three-week period since the Civil War in 1862.

The storms also brought massive amounts of snow. On Thursday, the Sierra Nevada snowpack, the source of nearly one-third of California's water supply, was 216% of its historical average.

Most reservoirs across California are at or near historical averages. The largest, Shasta Lake, near Redding, was 55% full Thursday — 87% of its historical average for that date. The second-largest, Lake Oroville, was 63% full — or 110% of its historical level. Both were less than a third full last month.

Among the agencies most affected by Thursday's increased water deliveries are the Santa Clara Valley Water District, in San Jose, which provides drinking water to 2 million South Bay residents and relies on the State Water Project for 20% to 30% of its normal annual supply. Also benefitting: the Alameda County Water District, which serves 360,000 people in Fremont, Newark and Union City; and the Zone 7 Water Agency, which serves Livermore, Pleasanton and Dublin.

"It's the best news since the drought started 3 years ago," said Rick Callender, CEO of the Santa Clara Valley Water District.

But Callender said water-supply challenges in Silicon Valley will remain because the district's largest reservoir, Anderson, near Morgan Hill, was ordered drained two years ago by federal officials for a major earthquake retrofit project that will last until 2031.

Meanwhile, a growing amount of California's land — including Santa Cruz and Monterey counties and coastal portions of San Luis Obispo, Santa Barbara, Ventura and northern Los Angeles counties — is no longer in drought, according to Thursday's U.S. Drought Monitor, a weekly report issued by the federal government.

Just 32% of California is in severe drought now, down from 42% last week and 80% a month ago, the report concluded. Most of the rest of the state, including the Bay Area, has been downgraded over the past few weeks to "moderate drought."

THIS PAGE
INTENTIONALLY
LEFT BLANK

Why California, other western states face growing pressure to reduce water consumption

Thehill.com, 01/30/23

The major storms that hit California earlier this winter dumped more than 32 trillion gallons of water on the state, helped boost some of the region's reservoirs and increased snowpack in key mountains throughout the West.

But despite this temporary reprieve, the region will need to work on water conservation and reducing demand given climate change.

Global warming has worsened aridification in the West. Coupled with growing demand from a rising population, it is depleting the Colorado River, which supplies water to seven states and helps feed the nation's two largest reservoirs, Lake Powell and Lake Mead.

"If we want to have a stable Colorado River system going forward, we have to reduce consumptive use, there's no way around it," said Eric Balken, executive director of the Glen Canyon Institute.

"We can't increase the supply and so the only part we have control over is the demand part of the equation. And it's a tall order."

Climate change brings warmer and unpredictable weather that is a threat to the once reliable supply of snowpack melting into rivers. Warmer temperatures increase evaporation from reservoirs and compound a host of other factors that jeopardize the west's water supply.

Reducing demand is the "big knob that we have on the system and ultimately, we may put ourselves in a position where we don't have a choice," said Adrian Harpold, an associate professor of mountain ecohydrology at the University of Nevada, Reno.

The seven states that draw water from the Colorado River are working to reach an agreement by the end of the month to conserve 2 million acre-feet or more of Colorado River water in 2023.

That's in addition to cuts that already took effect in Arizona this month, first announced last August by the Bureau of Reclamation. The cuts reduced Arizona's supply by 21 percent, Nevada's by 8 percent, and Mexico's by 7 percent.

Should the states fail to come up with an agreement by Jan. 31, the federal government will step in.

"There's been an overallocation of water from the Colorado River for certainly the last 30 years, if not longer," said Jay Lund, co-director of the Center for Watershed Sciences and professor of civil and environmental engineering at the University of California, Davis.

Decades ago, some states were not using their full allocations. But demands and allocations have been higher than inflows over the last 20 to 40 years, Lund explained.

“Unless we get an unexpected deluge, we’re going to have to actually reduce water use in the Lower Colorado River Basin by a substantial amount, probably by 20 or maybe even 30 percent,” Lund said. “Reducing water use is the only way to get our way out of this.”

To meet the growing water crisis in the West, some proposed partial solutions include increasing desalination efforts, but the process is costly and requires lots of energy.

Increasing managed aquifer recharge projects, or helping surface water seep into aqueducts more efficiently, is also an option for some regions.

But the main problem for the Lower Colorado River Basin is that there’s no water to recharge, Lund said.

Around 80 percent of the Colorado River’s water goes toward agriculture. Over the years, a number of farmers have already adjusted to the growing shortages.

Some have switched to growing less water intensive crops, while others have implemented new irrigation techniques to cut down on water waste.

Still, more is needed.

“When we talk about conservation, urban conservation is good, it’s fine. But even if you just dried up all the cities and made everybody move away, you would still not have reduced water enough to avoid the shortfall,” said Lund, pointing to the importance of agricultural cuts.

Going forward, land fallowing, or setting aside arable land for one or more years before it’s cultivated again, would conserve a significant amount of water, although some growers would prefer to avoid this option.

Choosing to grow different crops and singling out the best areas suited for agriculture can also help the sector conserve water.

However, any future cuts will ultimately need to weigh the demands of rural agricultural areas and those in more urban regions.

“We really need to think about the economic impacts of these decisions in a way that really considers people’s socioeconomic standing and vulnerable populations,” said Harpold.

For those hit the hardest, turning to alternative economic bases could be an option. If cuts are imposed at the federal level, the government could allocate some money to communities to help them transition.

The Inflation Reduction Act passed last year includes \$4 billion in funding for water management and conservation efforts in the Colorado River Basin and other areas facing similar drought levels.

Overall, “we have to be rethinking the way we manage water in the West,” said Balken. “We can’t let a good winter stop that important work.”

THIS PAGE
INTENTIONALLY
LEFT BLANK