California drought: Sierra Nevada snowpack falls below average after dry January

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Like the 49ers fourth-quarter lead in Sunday's NFC Championship game, California's once-impressive Sierra Nevada snowpack is steadily shrinking.

Only a month ago on New Year's Day, after big atmospheric river storms in October and December, the statewide Sierra snowpack stood at an impressive 168% of normal for that date, boosting hopes that the state's severe drought might be ending.

But on Monday, the magnificent became mediocre: The snowpack had fallen to just 93% of its historical average.

The reason is obvious to anyone who has gone to the beach or done yardwork in recent weeks: January has been exceptionally dry. The last time the Lake Tahoe area received snow was Jan. 7. The Bay Area hasn't had significant rain for 27 days. And dry, sunny weather is forecast statewide for at least the next two weeks.

"This is the thing that a lot of us had feared," said Andrew Schwartz, lead scientist at UC Berkeley's Central Sierra Snow Lab, at Donner Summit near Lake Tahoe. "After those wonderful storms in December, the faucet just turned off. Whenever we were asked if those storms would end the drought, we said, 'Yes, if we keep getting precipitation.' But so far we haven't."

Weather forecasting models show unusually dry conditions are expected to continue across California for at least the next two weeks, with no rain or significant snow through Valentine's Day.

"That's going to put us in an pretty extended period of dry weather—about six weeks," said Roger Gass, a meteorologist with the National Weather Service in Monterey. "It's typical for us to have a dry period in the winter, but this is definitely longer than we normally have."

A persistent ridge of high pressure over the Pacific coast has diverted storms heading for California northward all month. As a result, Juneau, Alaska, just recorded its wettest January since 1939 when records began,

and the Northern Sierra, which is the watershed for many of California's largest reservoirs, has seen just 1.3 inches of precipitation in January, or 14% of normal.

One bright spot: The big storms in December dumped 17 feet of new snow at Donner Summit, and boosted reservoir levels around the state. Lake Oroville, California's second-largest reservoir, in Butte County, has risen 118 feet since early October and is now 46% full—about 80% of normal for this time of year.

The bad news? As state water officials prepare for their monthly snow survey Tuesday at Phillips Station near Sierra-at-Tahoe, California only has two months left in its winter rain and snow season, and everything from wildfire danger to summer water restrictions is riding on how many more storms—if any—are coming between now and April 1.

"Those storms made a huge difference," said Jay Lund, co-director of the UC Davis Center for Watershed Sciences. "It would be really awful if we hadn't had a wet October and December. January has been one of the driest Januarys on record."

What are the chances of strict water restrictions this summer? Too soon to tell, Lund said.

"It could go either way at this point," he said. "A lot of the urban reservoirs are in fairly good shape. They've done pretty well this winter. I expect that urban water agencies probably won't do a lot of summer water rationing at this point. But if February and March are as dry as January, you could easily see more restrictions coming to some local areas."

It's not just the snow. Rainfall totals in cities around the state, which had been impressive a month ago, today are coming back to Earth after four

dry weeks.

On New Year's Day, San Francisco had received 191% of its historical average rainfall for that date in the winter season. But Monday, that was down to 134%. Oakland fell from 219% to 152%. San Jose fell from 157% to 97%. And it was the same story in Southern California, where Los Angeles went from 257% of normal on Jan. 1 to 147% Monday.

Still, after the two driest years since 1975-77, many Bay Area water agencies have seen their water conditions improve this winter.

Both the East Bay Municipal Utility District, which serves 1.4 million people in Alameda and Contra Costa counties, and the San Francisco Public Utilities Commission, which serves 2.7 million in San Francisco, San Mateo, Santa Clara and Alameda counties, have asked their customers to reduce water use 10%.

East Bay MUD's customers cut water use 10% in December compared to December 2020, said district spokeswoman Andrea Pook. And the district's reservoirs are 68% full.

The Santa Clara Valley Water District, which serves 2 million people in and around San Jose, asked its customers to cut water use by 15% from 2019 levels. In November, the most recent month available, they cut by 20%.

But Santa Clara County is in worse shape than many other counties because its largest reservoir, Anderson, near Morgan Hill, is drained for earthquake repairs ordered by federal dam safety regulators. As a result, the 10 reservoirs in Santa Clara County operated by the Santa Clara Valley Water District on Monday were just 26% full.

The district has been purchasing water from farmers in the Sacramento

Valley, pushing conservation and pumping more groundwater to make ends meet.

"We're still in bad shape," said Gary Kremen, chairman of the Santa Clara Valley Water District board. "I believe we are going to have continued water restrictions in the South Bay. We are in a different situation than other Bay Area water agencies. This Anderson thing is really problematic."

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