

Snow levels in the Sierra drop to among the lowest on record

By Peter Fimrite

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Photo: Michael Macor / The Chronicle

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Frank Gehrke, the state's chief of snow surveys (right), collects snow samples with help from Michelle Stern a hydrologic technician with the USGS during the monthly snow survey at Phillips Station.

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Chicken Littles they are not, but California water officials are fretting a bunch over the weather.

They are concerned about the fact that nothing at all is falling from the sky and the precious snowpack in the Sierra is dropping like a rock in a Central Valley well.

The troublingly clear skies and disturbingly gleaming sun over the past month have combined to reduce the California snowpack to 25 percent of normal for this time of year, on par with some of the worst years on record. But it was even worse last year at this time when the snowpack statewide was 14 percent of normal.

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Snow surveyors with the [California Department of Water Resources](#) tromped around Thursday near Echo Summit trying to measure the thickness and water content of the snow. The survey results, which are combined with electronic measurements taken from as many as 130 places around the Sierra, are used to calculate California's drinking water supply for the rest of the year.

The problem was, the surveyors couldn't find any snow in many places. The big early December storms dropped a lot of rain, but merely dusted the Sierra, leaving the state with only half of what was normal on New Year's Day. Things have gotten worse across the Sierra since then. Just 2.3 inches of snow were found at Echo Summit. That's 12 percent of the long-term average.

"It's a dismal result, and it continues the dry period that California has been in for three years now," said [Doug Carlson](#), a Department of Water Resources spokesman. "We have pretty much flatlined as far as winter precipitation is concerned."

What it means is that California is moving headlong into a fourth year of drought, which will likely force more rationing and intensify the ongoing battles among farmers, environmentalists and fishermen.

The dry weather is being caused by persistent high pressure over the Pacific Ocean that is diverting storms from the West Coast to the north. Warm winters in the West often mean cold weather on the East Coast — thus, the recent freeze back there. Last year was the warmest calendar year in California since record keeping began in the 1800s.

Meanwhile, January is likely to go down as the driest in California history. San Francisco did not see any rainfall this month, making it the driest January in the city since records began in 1850. Sacramento is also poised to set a record with no rain in January, the first time that has happened since 1878. Only 0.02 of an inch of rain has fallen on San Jose this month, also a record low.

Experts say precipitation this season needs to be 50 percent more than the average for California to make up the deficit caused by the past three years of drought. [Jan Null](#), a meteorologist for [Golden Gate Weather Services](#), said rainfall since July 1 is actually above normal throughout most of California, thanks to the December storms, but it is not enough to fill the reservoirs.

What is needed is snow, and the supply of that is diminishing. There currently is half as much snow in the Sierra as there was a month ago.

"The trend is clear to anyone who is looking at the numbers," Carlson said. "It's exactly the opposite of what you'd need to get out of the drought."

Snow makes up 60 percent of the water that is captured in California's reservoirs when it melts in the spring. The snowmelt makes up 30 percent of the state's overall water supply during a normal year, 80 percent of which is held behind Shasta and Oroville dams. That water is used to irrigate 8 million acres of farmland and quench the thirst of most of the state's 38 million people.

It's still early in the year, but reservoir levels are well below the average. Shasta Lake, the state's largest reservoir, has only 65 percent of what it normally holds at this time of year. The lake is 44 percent full. Lake Oroville, the second

largest reservoir and the most important source for the State Water Project, is carrying 62 percent of what it normally holds at this time of year. It stands at 41 percent of capacity.

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