

California snow levels reach historic lows

By Peter Fimrite

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Photo: Michael Macor / The Chronicle

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Frank Gehrke, Chief of the California Cooperative Snow Surveys Program, during the snow survey at Phillips Station, Calif., on Tues. March 3, 2015. The results showed that the snow pack contains less than one inch of water and the historical average at this location is at five percent of normal for this time of year.

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Frank Gehrke, chief of the California Cooperative Snow Surveys Program, discusses the snow levels' historic lows after measuring the snow at Phillips station.

Snow levels in the Sierra Nevada are at or below what they were during the driest years in California's recorded history, surveyors said Tuesday, dashing hopes that last weekend's storm would begin to pull the state out of its increasingly frightful drought.

The water content of the snow statewide stands at 19 percent of the average for this time of year, according to the third snow survey of the season by the [California Department of Water Resources](#).

That means California is neck and neck with 1977 and 1991 for the most parched winter since 1950, when the state began publishing measurements of the snowpack in the Sierra. California could set a new drought benchmark this year.

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"We're looking at historical lows," said [David Rizzardo](#), the chief of snow surveys and water supply forecasting for the Department of Water Resources. "You go into the winter hoping that (the drought) doesn't get worse, but I think it's undeniable at this point that it's going to be worse. You just can't recover at some point from how dry it has been."



Comparison with 1977, 1991

The worst snow year by most measures was 1991, which had 18 percent of the historic average for snowpack on March 1. That, however, was the year of the famous Miracle March, when a series of subsequent storms covered the mountains with snow and brought California back from the brink.



In 1977, which is considered the driest year on record, the snow level was 25 percent of normal at this time. Last year, California was at 31 percent of normal on March 1.

The dismal snowpack comes despite a storm over the weekend that dropped between 4 and 5 inches of snow in many places.

Rizzardo said the outlook is even more bleak when one considers the amount of snow detected by state surveyors on 230 measuring plots, or snow courses, over the past few days. The surveyors use metal tubes to measure the thickness and water content. Their results are combined with electronic measurements taken from as many as 130 places around the Sierra to calculate California's drinking water supply for the year.

Rizzardo said the snowpack was only 13 percent of the March 1 average on the snow courses, possibly because some of the measurements were taken before the bulk of the snow fell last weekend.

"However you slice and dice it, we're at or below the driest year," Rizzardo explained. "There doesn't seem to be any Miracle March in the forecast. It's extremely unlikely we will pull out of it this year."

The measurements are important because snow makes up 60 percent of the water that is captured in California's reservoirs when it melts in the spring and 30 percent of the state's overall water supply during a normal year.

2 'really good' storms

California's biggest reservoirs are holding steady despite the dismal snowpack. Shasta Lake, the state's largest reservoir, has 78 percent of what it normally holds at this time of year. Lake Oroville, the second-largest reservoir and the most important source for the State Water Project, is carrying 70 percent of what it normally holds at this time of

year.

Shasta and Oroville carry 80 percent of the state's reservoir supply. The state water is used to irrigate 8 million acres of farmland and quench the thirst of at least 25 million people.

The problem, Rizzardo said, is south of there, where the reservoirs serve mostly farming communities. Pine Flat Dam, on the Kings River, is only 30 percent of normal, and Exchequer, or [McClure Dam](#), on the Merced River, stands at only 16 percent of normal.

If not for the short but powerful storms in December and February, California would be in very serious trouble, Rizzardo said. As it is, he said, some of the smaller reservoirs are now in danger of going completely dry this summer.

"If it wasn't for those two storms, the reservoir situation would be much worse," Rizzardo said. "That's one silver lining. We had two really good storms, and the water project was able to capture that."

Water consumption back up

While the state dries up, Californians have increased their water use, according to the state [Water Resources Control Board](#). Water use was cut 22 percent in December compared with the year before, but urban residents slacked off after that, according to the water board.

California residents cut water use only 8.8 percent in January compared with the same month in 2014, water board statistics show. That's well short of the 20 percent conservation target that Gov. [Jerry Brown](#) asked residents to meet.

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