

# It snowed 5.7 trillion gallons of water in California this January

Jason Samenow, *Washington Post*, 1-30-17

*Correction:* The original version of this post stated it had snowed the equivalent of 570 trillion gallons of water. That was off by a factor of 100. The correct number is 5.7 trillion gallons of water.

How do you seriously dent a drought? You blast it with the equivalent of trillions of gallons of water. That's exactly what happened in California in January.

Twenty feet of snow buried parts of northern California in just two weeks, with up to 30 feet in some ski areas. For the month, the Sierra Nevada witnessed 120 percent of its annual snowfall.

The January snow output by itself eliminated 37 percent of a five-year (2012-2016) snow water deficit, according to University of Colorado-Boulder [Center for Water, Earth Science, and Technology \(CWEST\)](#).

All of the water contained in that new snow represents a volume of 17.5 million acre feet, CWEST said in a news release. That's enough to fill up Utah's Great Salt Lake (15 million acre feet of water), with room to spare. The water volume is also equivalent to 5.7 trillion gallons, meaning it could fill up about 8.5 million Olympic-size swimming pools.

The [drought in northern California is over](#) thanks to the snow (and low elevation rain), the U.S. Drought Monitor indicated earlier in the month.

[Drought conditions have improved markedly over the rest of the state](#), but persist because of the remaining snow water deficit and compromised groundwater reserves.

"When the snow stopped falling five years ago, the state had to tap into its groundwater reserves to keep up," said Noah Molotch, director of CWEST. "One snowy winter won't be able to entirely reverse that, but there is, at least, some cautious optimism."

The snow has come as phenomena known as "atmospheric rivers" bombarded the Golden State. These are narrow plumes of rich tropical moisture, often originating near Hawaii, that blast affected areas like a fire hose.

A typical atmospheric river transports a quantity of water — in the form of vapor — equivalent to 26 Mississippi Rivers. As much as half of the rain and snow that falls in West Coast states comes from these rivers.

While denting the drought, [an atmospheric river event in early January caused serious flooding](#). There is concern that another big atmospheric river event could bring another round.

"Reservoirs across the Sierra foothills are now relatively full and if we get another intense atmospheric river with warmer air temperatures, the risk for rain-induced flooding is considerable," Molotch said.

Weather models show the potential for another atmospheric river event in northern and central California Thursday and Friday this week. But it is not expected to be as intense as several of the events in January.

Forecasters at the National Weather Service in Reno are calling it a weak to moderate atmospheric river and think flooding, if any, should be minor.