

Sierra Nevada snowpack hits historic low

Peter Fimrite, San Francisco Chronicle, 3-28-15

The abominable snowpack in the Sierra Nevada reached an unprecedented low this week, dipping below the historic lows in 1977 and 2014 for the driest winter in 65 years of record-keeping.

Electronic surveys show the water content of the snow throughout the Sierra is a shocking 8 percent of the historical average for this time of year, by far the driest it has been since 1950, the year record-keeping began, because of the lack of rain and snowfall and the exceedingly high temperatures. It is a troubling milestone that water resources officials say is bound to get even lower as the skies remain stubbornly blue.

“It’s certainly sobering when you consider that the snowpack in a normal year provides about 30 percent of what California needs in the summer and fall,” said Doug Carlson, the spokesman for the California Department of Water Resources. “What this suggests is that we will have very little water running off. It accentuates the severity of the drought and emphasizes the importance of people cutting back on their water use.”

The department is planning to conduct its monthly snow survey on April 1, the date water resources officials use as a benchmark because it is when the snowpack normally begins to melt and fill up the state’s reservoirs. Meteorologists see nothing on the horizon that could pull the state out of its increasingly frightful drought.

The snowpack is already far below the historic low, which happened in 1977 and again last year, when the snowpack was 25 percent of normal on April 1.

The surveyors measure the depth and water content of the snow in 230 places, called snow courses, in the mountains stretching from north to south. 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.

The state has been publishing statewide snowpack measurements in the Sierra since 1950, but there are several places where measurements go back as far as 1926. At Phillips Station, near the Sierra-at-Tahoe resort, an average of 66.5 inches of snow is normally on the ground on April 1. “We don't expect to find any snow up there on Wednesday,” Carlson said Friday. “It's pretty spooky.”

The snow in the Sierra has been declining since the first seasonal snow survey Dec. 30, when electronic readings found the statewide snow water content was 50 percent of normal for that date. That survey followed several storms in December.

But the readings plummeted to 25 percent of average on Jan. 29 and 19 percent of average on March 3.

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.

Curiously, California's biggest reservoirs have managed to hold steady despite the dismal snowpack. Shasta Lake, the state’s largest reservoir, has 74 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 67 percent of what it normally holds at this time of year.

Shasta and Oroville carry 80 percent of the state's reservoir supply. The water is used to irrigate 8 million acres of farmland and quench the thirst of close to 30 million people.

The problem, experts say, is that the reservoirs will not be getting much additional supply from snowmelt, a crucial source in California's dry Mediterranean summer climate.

Meanwhile, the reservoirs that serve farming communities are wretchedly low. Pine Flat Dam on the Kings River is only 32 percent of normal, and Exchequer, or McClure Dam, on the Merced River stands at only 16 percent of normal. Some of the smaller reservoirs are in real danger of going completely dry this summer.