

Sierra snowpack one-third of normal despite one of the area's wettest Decembers

Lisa M. Krieger, Bay Area News Group, 12-31-14

All that December precipitation? It didn't fall where we most needed it.

Even as the Bay Area stays soggy, surveyors who tested snow in the Sierra Nevada on Tuesday found disappointing news: the snowpack is only one-third of the average for this time of year.

While that's better than last December's results, it shows the state has a long way to go to recover from the drought.

"Although this year's survey shows a deeper snowpack than last year, California needs much more rain and snow than we've experienced over the past two years to end the drought in 2015," said Department of Water Resources director Mark Cowin.

And this week's weather isn't helping much because it is so dry. There's no precipitation -- rain or snow -- in the New Year's holiday forecast for the entire northern two-thirds of the state.

The reason for our big-rain, low-snow pattern in December, according to Stanford University's Daniel Swain, "simply has to do with temperature."

The ocean is unusually warm, so the coast has gotten more precipitation than the mountains, he said. And air has also been warm -- until recently -- so we've seen rain, not snow. Rain is always welcomed, of course. It means we don't have to water our gardens and wash our cars, and it helps fill local reservoirs.

But snowpack, dubbed California's "frozen reservoir," is what gets us through our long, dry summers and autumns, as melting snow fills lakes for gradual release through the dry months.

The first snowpack measure of the year has become an anxiously watched rite in drought-stricken California.

Trailed by news cameras, snow surveyor Frank Gehrke on Tuesday hiked through 2 feet of snow along a granite ridge on Lake Tahoe's 6,800-foot-high Echo Summit, drove aluminum tubes into the snow to measure depth, then weighed the samples to gauge water content.

He found it contained four inches of water, or 33 percent of normal for this time of year. Measurements are also taken statewide using 105 electronic sensors in the Sierra. They detected a snow water equivalent of 4.8 inches, 50 percent of the multiyear average for Dec. 30.

That's far better than last year's 20 percent -- a fact that buoyed spirits at ski resorts.

"We are very pleased with the start," said Bob Roberts of the California Ski Industry Association. "The product is surprisingly good. There's the snow and the coverage, and our riders and skiers are coming up."

Tuesday's snow flurries added a few more inches to the 2-foot base at Donner Ski Ranch, said owner Janet Tuttle. "We do have snow -- so far, not an abundance -- but it is a good season, so far. The recent storms added a little bit of powder on the cake."

December will go down in the record books as among the wettest in history in the Bay Area and Sacramento regions, said Swain, of the Department of Environmental Earth System Science at Stanford University.

That's not surprising since ocean temperatures are three to five degrees above normal, he said. "It increased the amount of moisture available, although a lot of water was 'rained out' in the Bay Area before reaching the Sierra," he said.

And warmer air -- particularly at night -- meant that much of December's precipitation that made it to the Sierra's lower elevations fell as rain, not snow, he said. It's far too early to predict what any of this means for the drought, one of the worst in more than a century of record-keeping, said Doug Carlson, a state Department of Water Resources spokesman.

The most accurate assessment won't come until the end of February, after what are usually the two wettest months of the year, he said.

But the state needs much more precipitation than normal in 2015 to overcome three consecutive years of below-average snow and rain, he said. By the end of the rainy season, we would need 75 inches of snowpack to restore depleted reservoirs -- far above the normal 50 inches.

"Once we have had two or three solid months of the wet season, then we'll be in a better position to know," he said.

"We want to give it a good opportunity to produce precipitation."