

Earth Log: Sierra snowpack looks better, but we need a six-pack of these storms

By Mark Grossi



PG&E hydrographers conduct a snow survey in the Sierra in 2013, taking a core sample of snow to determine the water content. This site is called Blackcap Basin.

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I was in Southern California over the weekend, listening to the media analysis of the storm last week and cringing at a goof that was repeated over and over.

The storm brought the Sierra snowpack up to 41% of average, an improvement worth celebration. But let's be clear, it does not mean we're 41% of the way back to average for a whole season – which is what the reports sounded like.

[The 41% applies to the average expected by mid-December.](#) This is still a puny snowpack.

Take a closer look at the state's website and see that the snowpack is now really only 10% of the April 1 average.

That figure should be well into the double digits by now. Weather forecasts this week make me optimistic that the number will climb over the next few days and give us more to celebrate.

But, truth is, we need about a six-pack of these storms in the Sierra.

While we're on the subject, let's talk more about those percentages. They come from automated stations on snow courses in high-elevation meadows. Someone also goes out to physically measure the snowpack at these meadows each month.

These meadows are fairly flat, and a lot of the Sierra isn't. So there might be a lot more snow elsewhere – or less.

The Sierra has wildly slanted terrain, not just meadows. There are canyons, peaks, glacially sculpted domes, benches and valleys. Blizzards sometimes pile snow in places nobody can reach. In the future, the state needs more precision in snow measurement, especially in drier times.

Down in Southern California, folks were talking about snow depth. That's fine, but the state's snowpack numbers refer to the weight of the snow, meaning the amount of water within the snowpack.

Look closely again [at the state website](#), and you can see how it would be deceiving. There are numbers in inches, but they do not refer to depth. Instead, they are the "average snow water equivalent."

That's how much water each region would get if the snow melted out right now.

On many years, more than half of California's water is on ice in the Sierra, waiting for spring thaw. There's a lot at stake for cities, farms, industries and hydroelectric power generation. So, while it's good to follow rainfall totals, it's even more important to keep your eye on the Sierra snowpack.

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