

Snowpack

Snowpack above normal, at least for now

Experts hopeful, but say later reports will tell tale

Capital Press staff report

Oregon

PORTLAND — Oregon's snowpack looks good as February unfolds, but the hydrologist who tracks it says anything can happen in the next couple months.

Thanks to heavy rain, snow and chilly weather through January — normal Oregon winter weather, in other words — the snowpack draped upon the state's mountains is well above average for this time year.

Even the dry southeast corner is 140 percent of normal, said Julie Koeberle, a hydrologist with the USDA's Natural Resources Conservation Service in Portland. The only region lagging is Mount Hood and the Willamette River basin, but even it is near or at normal levels for this time of year, Koeberle said.

February is typically a heavy snowfall month, and March and April storms can add more stored water, so at first glance the state is in good shape, Koeberle said.

Trouble is, there are no guarantees.

"There's a lot left than can happen," she said. Snow could continue to accumulate, but an unusually warm February or a heavy rain that melts snow could flip the situation. "We could lose some of our snowpack," Koeberle said.

Long-range forecasts indicate somewhat warmer weather over the next couple months, but they lack detail and a good snowstorm could pop up as well, she said.

"February is crucial because so much can happen," she said.

Washington

MOUNT VERNON, Wash. — An abundance of rain could shorten the duration of lower elevation Cascade Mountain snowpack, Washington's snowpack expert warns.

There's been a lot of rain on top of snow up to the 4,500-foot level and that's a concern because it takes less energy to melt snow that's saturated with water, said Scott Pattee, water supply specialist of the Washington Snow Survey Office of the USDA Natural Resources Conservation Service in Mount Vernon.

Water-saturated snow heightens the potential for earlier and faster melting than desired, Pattee said.

When low-level snowpack melts too early irrigators are forced to turn to reservoir water earlier than they want which is what happened in last year's drought.

"Right now things look pretty good, but we need temperatures to keep from going too high and damaging our snowpack," Pattee said.

Rain and melting cycles, typical of El Nino weather patterns, have "hampered" the snowpack below 5,000 feet, he said.

The statewide snowpack was 109 percent of normal on Feb. 1, down from 120 percent a month ago but much better than 38 percent on Feb. 1 a year ago and 55 percent two years ago.

Five water reservoirs serving the Yakima Basin are 117 percent of average for this time of year.

February and March weather will be key in whether the snowpack remains good enough to stave off any localized irrigation water shortages.

"For the most part we are past the cold part of winter. The outlook for more snow is

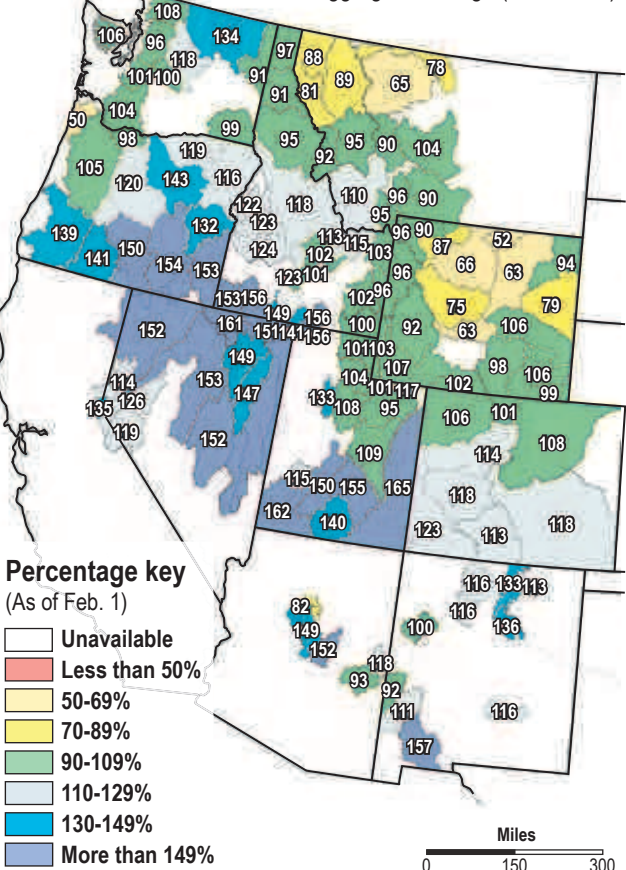


Dan Wheat/Capital Press

Bomber Cliffs, named for a B-24 bomber that crashed into them in 1944, tower above Bomber Run at Mission Ridge Ski Area south of Wenatchee, Wash. The ski area operates between 4,570 and 6,820 feet in elevation and has more snow than last year.

Western U.S. snow water equivalent

Basin-wide percent of 2016 snowpack compared to the aggregate average (1971-2010).



Source: USDA, Natural Resources Conservation Service

Capital Press graphic

a little vague. We want to keep the snowline down to 3,000 feet for another month to month-and-a-half. Then we should be able to breathe easy," said Pattee.

Snowpack below 3,500 feet is early irrigation water and was nonexistent last season, he said, adding he's not worried about higher elevation snowpack.

The five reservoirs serving the Yakima Basin — Keechelus, Kachess, Cle Elum, Bumping and Rimrock — total 57 percent of capacity on Feb. 1 at a combined 610,942 acre feet. Total capacity is 1,065,400 acre feet.

Precipitation was 83 percent of average in the Yakima Basin in January, said Chris Lynch, hydrologist for the U.S. Bureau of Reclamation's Yakima Project in Yakima.

Streamflows for April through September should be near to slightly above normal, Pattee said.

As of Feb. 1, the Spokane basin snowpack remained the lowest in the state at 91 percent of normal. The upper Columbia (Okanogan and Methow rivers) was 134 percent. The central Columbia (Chelan, Entiat and Wenatchee) was 118, the upper Yakima was 100 and the lower Yakima, 122. The Walla Walla was 122, lower Snake 99 and the lower Columbia was 104. South Puget Sound (from Cascade crest to lowlands) was 101, central Puget Sound was 96, north Puget Sound 108 and the Olympics, 106.

Idaho

BOISE — After a dry start to January, a stormy second half of the month helped to maintain strong mountain snowpacks

throughout Idaho.

A high-pressure ridge forced storms around Idaho from late December through Jan. 13, when weather patterns in the state became more active, said Ron Abramovich, Idaho water supply specialist with USDA's Natural Resources Conservation Service.

"In mid-January, the storms started coming back in," Abramovich said. "We actually ended up receiving 80 to 120 percent of average snowfall across the whole state, which isn't too bad given the way (the month) started."

Southern Idaho continues to have the state's best snowpacks. Oakley, located south of Burley, had an especially wet January, receiving 126 percent of normal precipitation for the month, and bringing the snowpack to 141 percent of normal for the season.

The Owyhee, Bruneau and Salmon Falls basins continue to have snowpacks of about 153 percent of normal, and snowpacks in the low-elevation mountains of southeast Idaho, including the Willow, Blackfoot and Portneuf ranges, remain at 114 percent of normal.

The Morris Creek snow survey site within the Boise Basin has 123 percent of average snowpack since 2006, Abramovich said.

In Central Idaho, the Big Wood basin maintained 122 percent of normal snowpack, but the Little Wood and Big Lost basins dropped to about normal following below-average January snowfall.

Abramovich has been fielding calls from residents of the Sun Valley area concerned about snow loads on their roofs, seeking the conversion to calculate pounds per square foot of snow to determine if they should shovel them.

January snowfall ranged from 85 to 95 percent of normal in Northern Idaho, bringing seasonal totals down to 97 percent of normal in the Panhandle and 95 percent in the Clearwater area.

In response to damage caused by severe storms in the region from Dec. 16-27, President Barack Obama signed disaster declarations Feb. 1 for Benewah, Bonner and Kootenai counties. Benewah County Clerk Deanna Bramblett explained heavy snow, combined with wet soil, caused trees to tip and power lines to fall, and commissioners requested the declarations in large part to help the utilities.

The Upper Snake region, which has had the best snowpacks in the state during the prior two years, is closer to normal this season, with 95 percent of average snowpack above Palisades Reservoir and 103 percent of normal in the Henry's Fork and Teton River basin.

Brian Olmstead, general manager with Twin Falls Canal Co., said the entire Upper Snake system above American Falls Reservoir increased from 89 percent of normal to its average snowpack during the final two weeks of January.

"With any kind of normal scenarios from here on out, we should have an adequate supply," Olmstead said.

The Upper Snake reservoir system has more than 630,000 acre feet less water than at this time last year, said John Hildreth, civil engineer with the Bureau of Reclamation.

"Where the snowpack is at right now, I'd say we probably wouldn't have enough water to fill the system," Hildreth said, estimating the chances that the system will fill at 50-50.

National Weather Service meteorologist Alex Desmet said current predictions call for mostly dry weather throughout

Idaho into mid-February. The long-term outlook slightly favors wetter weather in Southern Idaho and drier weather in Northern Idaho, he said.

California

SACRAMENTO — The season's second manual snow survey in the Sierra Nevada on Feb. 2 found a snowpack water content of 130 percent of normal for this time of year, state officials said.

Frank Gehrke, the California Department of Water Resources' snow surveys chief, and his team found a snow water equivalent of 25.4 inches — well above the average of 19.5 inches for the February survey — on a snow course 90 miles east of Sacramento.

The results were a marked contrast to February 2015, when Gehrke found just 2.5 inches of snow water content at the same testing station. Both the depth and water content this year were the highest since 2005, when a depth of 77.1 inches and a water content of 29.9 inches were recorded, state officials said.

However, while precipitation levels have improved this year, that doesn't mean the drought is over, Gehrke and other officials caution.

"Keep in mind these are snapshots in time and limited sampling," Gehrke told report-

ers, adding it's "probably more useful" to look at electronic readings that show California's snowpack was at 114 percent of normal levels as of Feb. 2 statewide.

"That's certainly an encouraging start" to the winter, he said. "Clearly we want to see this keep coming."

Each year, the DWR conducts five manual snow surveys with media present at the Phillips Station plot, whose elevation is 6,800 feet. Additional surveys will be held around the beginning of March, April and May.

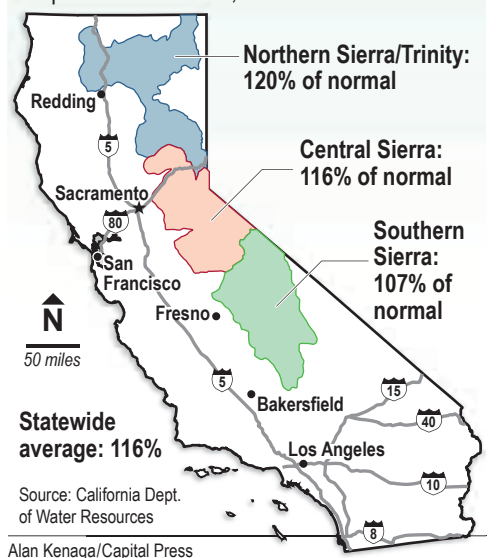
The survey comes as the State Water Resources Control Board announced that Californians have reduced their water use by 25.5 percent since June, continuing to meet Gov. Jerry Brown's mandate despite a decline in the statewide water-savings rate during the last three months of 2015.

In December the statewide conservation rate was 18.3 percent, down from 20.4 percent in November, compared to the same months in 2013, the water board stated. Officials noted the winter months offer fewer opportunities to conserve water, as its consumption is already at its lowest.

Reporters Eric Mortenson, Dan Wheat, John O'Connell and Tim Hearden contributed to this report.

California snow water equivalents

Percent of the historic average snow water equivalent for Feb. 1, measured in inches.



Source: California Dept. of Water Resources
Alan Kenaga/Capital Press

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