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# California

## Big snowpack may not be enough yet to fill reservoirs

By **TIM HEARDEN**  
Capital Press

SACRAMENTO — California's impressive early-winter snowpack may not be enough to fill reservoirs this summer if warmer rains or temperatures come along and wipe out the gains, experts say.

So far, many of the storms that have rolled into California this fall and early winter have been fed by a northern jet stream, bringing cold temperatures down from Canada and producing impressive levels of snow.

Even this week's El Niño-driven storms were expected to bring snow levels as low as 3,500 feet, according to the National Weather Service. But if storms warm up and only drop snow above 7,000 feet, the snowpack could still be in long-term trouble.

"If it's 5,000 feet, that's still safe" for maintaining healthy snowpack levels, said Michelle Mead, a National Weather Service warning coordinator in Sacramento. "It's really going to be individual storm dependent."

This week's active system



Courtesy of Calif. Dept. of Water Resources

Frank Gehrke, right, chief snow surveyor for the California Department of Water Resources, and DWR surveyor John King conduct the season's first manual snow survey Dec. 30 at a mountain station 90 miles east of Sacramento. So far, California's snow water content is above normal for this time of year.

comes after state snow surveys chief Frank Gehrke and others conducted the season's first manual snow survey of the season Dec. 30 at a mountain station about 90 miles east of Sacramento.

Gehrke found a snow depth of 54.7 inches — 16 inches more than the average depth measured there since 1965 — and 16.3 inches of water content, 138 percent of the Jan. 1

average for the site, according to the state Department of Water Resources.

But as of Jan. 5, California's statewide snow water content was 97 percent of normal for the date, down from 105 percent of normal on Dec. 30, according to the DWR's California Data Exchange Center.

"Clearly, this is much better than it was last year at this time, but we haven't had the full ef-

fect of the El Niño yet," Gehrke told reporters after conducting his survey. "If we believe the forecasts, then El Niño is supposed to kick in as we move through the rest of the winter. That will be critical when it comes to looking at reservoir storage."

The heavy snowfall so far this winter "has been a reasonable start, but another three or four months of surveys will in-

dicating whether the snowpack's runoff will be sufficient to replenish California's reservoirs by the summer," DWR director Mark Cowin said in a statement.

In any case, more than four years of drought have left a water deficit around the state that may be difficult to overcome in just one winter season, Gehrke said.

One or two warm storms wouldn't be enough to wipe out the snowpack, Mead said. The snow acts as a sponge and absorbs water that falls as rain until it's saturated, then it begins to melt.

"We do have a pretty good snowpack up there now," she said. "It's still at or just above average."

But warmer rainfall and temperatures typically start to melt the snow in the spring, which keeps the reservoirs flush with water in the summer months. If the snow melts earlier than normal, there may not be enough water left over this summer.

"With an El Niño year, we can't for sure say when that will happen," Mead said, referring to snow melt.

## California misses mark for saving water, again

By **SCOTT SMITH**  
Associated Press

FRESNO, Calif. (AP) — Residents of drought-weary California in November fell short of hitting a 25 percent water conservation mandate for a second month running, state officials say.

The monthly tally comes as a series of much-anticipated El Niño storms line up, expecting to drench the state for several days and boost the snowpack.

Felicia Marcus, chair of the State Water Resources Control Board, said California remains on course to beat its long-term goal through February. Marcus wouldn't reveal ahead of Tuesday's formal announcement exactly how much the state fell short of its target.

The numbers, however, reveal considerable savings over past years, said Marcus, adding that residents understand that it is too early to declare an end to a drought already spanning four years.

"Folks are continuing to be thoughtful about water use in the face of the El Niño," said Marcus, adding that she anticipated less saving during the winter months. "It's a smaller percentage, but it's still pretty good."

Gov. Jerry Brown issued a statewide order beginning in June to conserve water by 25 percent compared to the same period in 2013, the year before he declared a drought emergency.

Conservation efforts first hit a setback in October, when Californians missed the mandated target, posting 22 percent in savings. Regulators said at the time that since enforcement began, the state cut water use by a combined 27 percent, leaving some wiggle room.

## Citrus growers dodge freezes, proceed with abundant harvest

By **TIM HEARDEN**  
Capital Press

SANTA CRUZ, Calif. — Growers of navel oranges and other citrus fruit dodged several hard freezes in December and say they're still seeing a sweet and abundant crop.

The Sultana, Calif.-based Twin Girls Farms encountered the cold in its orchards in Fresno and Tulare counties in recent weeks, and it's too soon to tell if there was any damage, company salesman Robert Serna said.

But overall, the season has been going well, said Serna, who was selling organic navel oranges at a booth at a farmers' market here.

"With our oranges, the sugar levels came on early and everything's been nice," he said. "It's been good."

At Frog Hollow Farm in Brentwood, Calif., in the San Francisco Bay area, the winter season's citrus fruit appears unscathed by the cold winter temperatures, representatives said.

"Our citrus seems to be faring pretty well," sales associate Trinity Murchie said. "We've had trouble with (freezes) in the past, but it's doing pretty well this year."

In the San Joaquin Valley, growers took precautions against anticipated sub-freezing temperatures on Dec. 15, but a decent cloud cover in most cit-

rus-producing areas kept overnight temperatures in the upper 20s or low 30s, the Exeter-based California Citrus Mutual reported.

Another hard freeze was expected just after Christmas, prompting growers to run wind machines and water, but temperatures ranged in the upper 20s and lower 30s again, the trade organization noted.

Growers will typically start running wind machines on Mandarin varieties when temperatures fall to freezing, while more cold-tolerant orange and lemon varieties can withstand temperatures as low as 28 degrees, Citrus Mutual explained in a news release.



Tim Hearden/Capital Press

Robert Serna (right) of Twin Girls Farms in Sultana, Calif., sells organic navel oranges to a customer Dec. 30 at a farmers' market in Santa Cruz, Calif. Citrus growers dodged several hard freezes in December.



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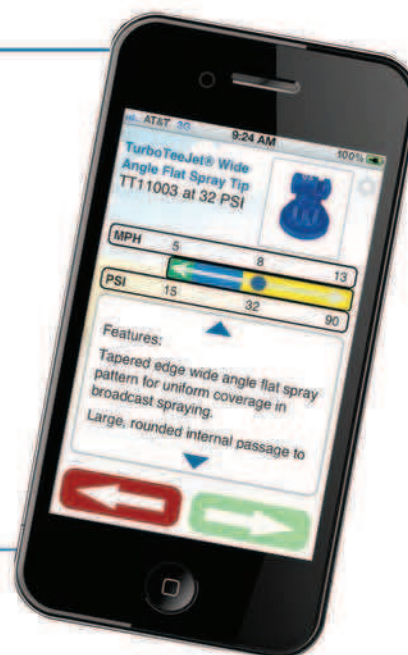
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