



This farm near Mark Twain Lake was one of those hard-hit by the 2012 drought.  
Photo credit: Linda Geist, MU Cooperative Media Group

## The Beginning Of 2013 Brings Drought Relief To Missouri

### COLUMBIA, MO.

Last year's high temperatures and long-term drought conditions left Missouri with a major soil-moisture and surface-water deficit. But as the adage goes, "Don't like Missouri weather, just wait and it will change."

At the beginning of the year there were worries that 2013 could be Missouri Drought – The Sequel. That might have been the case, but everything changed at the end of January.

"We saw a pattern change toward the end of January, with widespread precipitation that affected our state," said Pat Guinan, climatologist for University of Missouri Extension. "That put a pretty good dent in the drought situation across our state."

Even though many areas saw 1-2 inches rain, we still had a way to go in surface-water recovery. Then came February.

"We saw two major winter storms impact our state with a lot of snow; 15 to 20 inches of snow fell over most of northern and central sections, which was water in the bank," Guinan said.

It wasn't just snow. It was wet, heavy snow. While these snowstorms caused major headaches for motorists, road crews and people affected by extended power outages, that dark cloud had a very bright silver lining. It brought much-needed water. Generally, 10 inches of snow equals about an inch of water. Guinan took core samples of these two snow events to determine the amount of water and found about 3 inches of liquid water.

February's snow also allowed many Missourians to experience a rare weather phenomenon: Thundersnow.

"Highly unusual to experience one thunder-snow event, so for two to occur in a five-day period is something I've never seen before," Guinan said. "We had the right dynamics. All the ingredients were in place for some heavy snow, and the instability associated with those storms led to thundersnow."

Then there was another 1-1.5 inches of rain in early March, Guinan said. This continued to improve the soil-moisture levels and surface-water supplies in Missouri.

The timing of the precipitation also helped improve the soil-moisture deficit. Because these

events occurred before the arrival of spring, there have been minimal evaporative rates.

"We're in the winter season, so vegetation is still dormant, temperatures are not so high and day lengths are not as long as they are during the summer," Guinan said. "So anything that has fallen has helped to recharge those moisture supplies, both above and below the ground."

All this rain and snow has been a boon for much of the state, but not all of Missouri shared the bounty.

"When it comes to the drought situation, the southeastern third of the state has seen some significant improvement. But northwestern parts of Missouri have been missing out on some of these heavy precipitation events," Guinan said. "Outside Missouri there still drought problems. West of Missouri things deteriorate quickly across the Plains from South Dakota to Texas."

Looking ahead, it appears that March will be a bit wetter and cooler than normal. This is certainly a different scenario from last year.

"March 2012 was a March that acted like the month of May. We saw record warmth in March of 2012," Guinan said.

All this snow, rain, low temperatures and lack of evaporation means parts of Missouri are heading into the spring drought-free.

"At least according to the Drought Monitor map, about the southeastern two-thirds of the state is already drought-free," Guinan said. "With more forecasted precipitation events on the horizon, we're going to see even more improvement across the state."

#### Weather resources on the Internet:

- Missouri weather information from the National Weather Service: [www.nws.noaa.gov/view/states.php?state=mo&map=on](http://www.nws.noaa.gov/view/states.php?state=mo&map=on)
- Latest weather data from around the state: [agebb.missouri.edu/weather/stations](http://agebb.missouri.edu/weather/stations)
- Missouri Agricultural Weather: [agebb.missouri.edu/weather](http://agebb.missouri.edu/weather)
- Missouri Historical Agricultural Weather Database: [agebb.missouri.edu/weather/history](http://agebb.missouri.edu/weather/history)
- U.S. Drought Monitor: [droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

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