

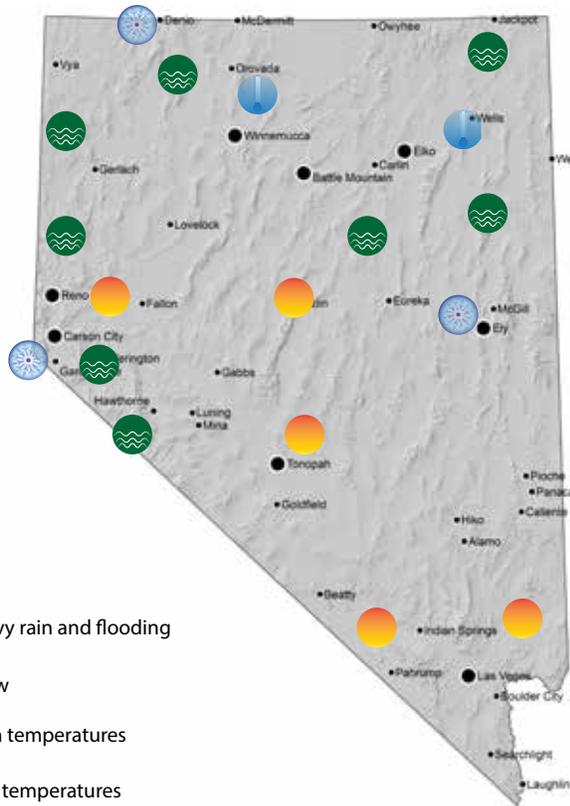


Photo by B. Hatchett

**Quarterly Report and Outlook**  
*Informe Trimestral y Pronóstico en línea*  
[www.unr.edu/climate/climate-summary](http://www.unr.edu/climate/climate-summary)

**January - March 2017**

## Notable Weather and Climate in Nevada



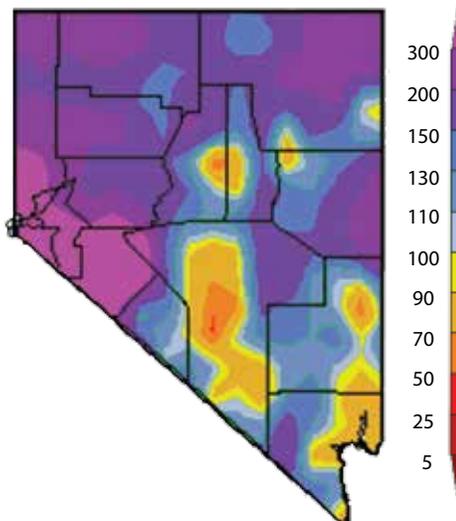
Most Nevadans got to pull the rain coats and galoshes out of the closet this winter. Of 49 weather stations in the state with complete records for the winter, only five had less than normal precipitation. It rained A LOT. Seven stations has at least 5" more rain than normal during the winter. Twenty-five weather stations that have been in operation since the late 1980s set seasonal records.

The skiers had a pretty good winter, too. Three stations set maximum January - March snowfall records. Dagget Pass received 187.6", Nevada's second highest snowfall total recorded for this season (behind 251.5" at Glenbrook in 1911).

The copious rain and snow mitigated drought. At the beginning of the year, 63% of Nevada was Abnormally Dry (D0) or in Drought (D1-D4). As of late February, only 6% of the state was dry (D0), and there was no D1 or greater drought. This is the first time the latter has happened since late 2011. Unfortunately, there has also been a lot of flooding, particularly in the playas.

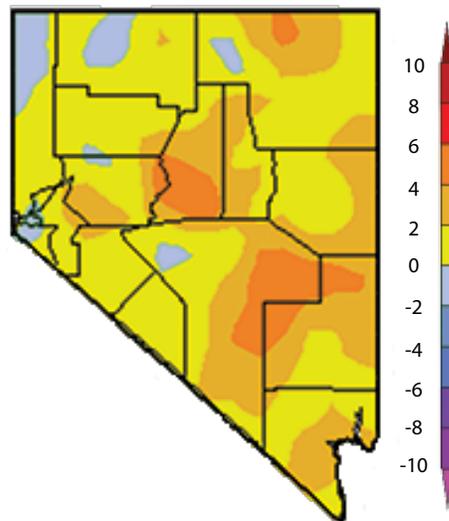
Temperatures were generally unremarkable, but there were some record high night-time temperatures over the full three-month period and over individual days in March, as well as a couple of cold daytime temperature records.

January - March Precipitation  
Percent of Normal

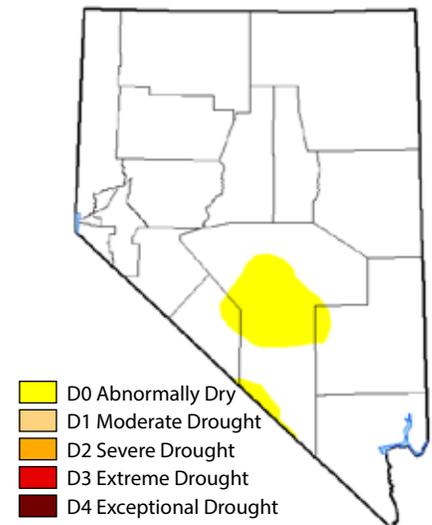


<http://www.hprcc.unl.edu/maps.php?map=ACISClimateMaps#>

January - March Temperature  
Difference from Normal



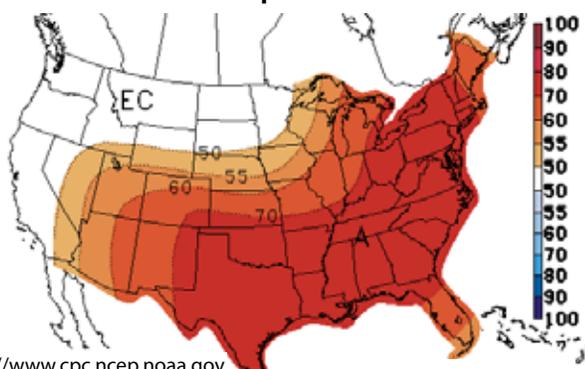
March 28 Drought Monitor



<http://droughtmonitor.unl.edu>

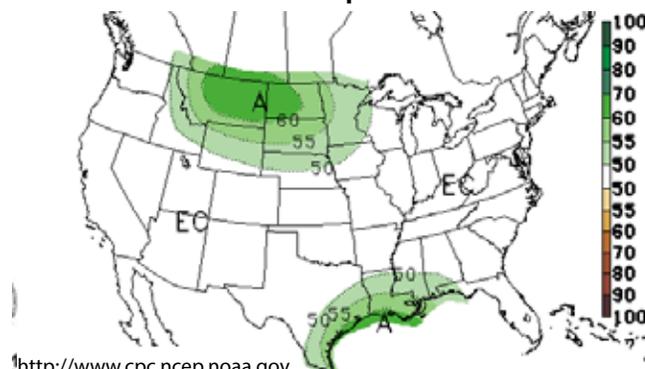
## Three-month outlook

### Temperature



<http://www.cpc.ncep.noaa.gov>

### Precipitation



<http://www.cpc.ncep.noaa.gov>

Much of eastern Nevada has a better than 50-50 chance of being warmer than normal this spring, while western Nevada has equal chances of being warmer or cooler than normal. The state, like much of the U.S. Southwest this year, has equal chances of wetter and drier conditions this spring. Spring, when the jet stream makes a jerky trip north, is a challenging season to forecast under the best of circumstances. With little going on in the tropical Pacific, there's even less to go on in forecasting conditions across the western U.S.

## In depth

### How do we know it's spring?



After a fairly wet winter across much of the state, many of us are probably ready for spring. *But how do we know that spring has arrived?*

On the one hand, this is a simple answer. Astronomically, it's spring once the vernal equinox has happened. The vernal equinox is the day in March when every place on earth experiences 12 hours of daylight and 12 hours of night. This year that happened on March 20. Meteorologists and climatologists don't use the vernal equinox. They define spring as the months of March, April and May, so by that reckoning, spring starts on March 1 (and it's been spring for a month already).

But those definitions of spring are not always the ones that align with our perceptions. Gardeners might think of the last night-time frost as the start of spring. That varies substantially depending on where you are. In Las Vegas (at the airport, anyway) the last frost usually happens in mid-February. In Reno, the last frost typically doesn't occur until May, and in Elko, you'd have to wait, on average, until June 12. Others might choose different starts to the growing season, like the last time the night-time low drops to 28°F, or when the average daily temperature is consistently above 40° or 50°F. Of course, there's always that one neighbor

whose yard is in a warm spot and can get their tomatoes in a full week earlier than everyone else.

Others recognize spring when a certain flower blooms, when a particular shrub leafs out or when animals wake up from hibernation. These kinds of clues fall into the realm of *phenology, the study of predictable seasonal ecological changes.*

These are the kinds of clues behind the extended spring index that *The National Phenology Network* (<https://www.usanpn.org/data/spring>) uses to track the start of spring, as in the map below. It shows red over much of the eastern U.S. where spring started early this year, but blue in the Washington and parts of the SW, where spring was a tad late. No color? That's where we don't expect spring before early April. Personally, I know it's spring when I buy a whole case of tissues and an extra-large box of Claritin. Sniff. Sniff.

