

A July To Remember
August 1, 2014

Sometime around the third week of May, with wildfires scorching the state and drought continuing to intensify, Oklahomans were in search of a miracle. The spring rainy season at that point seemed like a figment of Mother Nature's imagination amongst one of the driest January-May periods in state history. Finally, the miracle did arrive in the form of an upper-level low pressure system that brought the state some of its most substantial moisture since the previous fall. That system turned on the spigot and the moisture has continued largely unabated since that point. It is not unusual for Oklahoma to see big rains during May and June. That is Oklahoma's rainiest part of the year, after all. It is a bit uncommon, however, for those rains to continue deeper into the summer, but that is exactly what has occurred. And for Oklahoma, a rainier summer generally means a milder summer. According to preliminary data from the Oklahoma Mesonet, Oklahoma experienced its third coolest and 15th wettest July on record. The first two months of climatological summer (June and July) finished as the 16th coolest and 15th wettest on record. The January-July temperature was similar with a ranking of 15th coolest, but long-term moisture deficits remained with a ranking of 38th driest, more than 4 inches below normal.

The statewide average temperature was 77.3 degrees, 4.3 degrees below normal and the statewide average precipitation came in at 4.68 inches, 1.94 inches above normal. Most Oklahomans will recall that just three years ago the state's July 2011 statewide average of 89.2 degrees broke the record for the hottest month – of any calendar month – ever recorded in any state. The coolest Oklahoma July occurred both in 1906 and 1950 with a statewide average of 76.4 degrees. The Mesonet site at Slapout recorded an October-like high of 62 degrees on July 17, the 12th coolest high temperature ever recorded in Oklahoma during July. Vinita reached a low temperature of 49 degrees on July 3, which is the normal low on October 19 for that part of the state. The month's highest temperature of 107 degrees was recorded at three separate locations.

The abundant July moisture led to relief of both short- and long-term drought impacts, and some of those July rainfall totals were quite impressive. The Mesonet site at Clayton led the state with 11.3 inches. Three Oklahoma City Mesonet stations recorded at least 9 inches of rainfall, although the official observing site at Will Rogers Airport recorded only 4.18 inches. A total of 43 Mesonet sites recorded at least 5 inches of rain during July. Beaver brought up the rear with only 1.6 inches, about an inch below normal. The final U.S. Drought Monitor map of the month portrayed 76 percent of the state in drought, although only 23 percent was considered in extreme-to-exceptional drought, the Monitor's worst two categories. Additionally, that final map did not consider heavy rains that fell in July's final few days.

Severe weather was sporadic during July with various reports of wind or hail damage and flash flooding. The most noteworthy event was the 106 mph wind gust recorded by the Burneyville Mesonet site late in the evening of July 30. A possible microburst was the culprit, and more than 3 inches of rain fell in just a few hours following the 106 mph gust. The reading tied a wind gust at Idabel on May 4, 2006, as the fourth highest ever recorded since the Mesonet began in 1994. The top two gusts of 151 mph and 131 mph were both associated with the May 24, 2011, EF5 tornado that brushed the El Reno Mesonet site. Preliminary numbers from the National Weather Service show 13 tornadoes for Oklahoma thus far in 2014. The 1950-2013 average for January-July is 48, and the annual average is 56. Only 1988 saw fewer tornadoes through July with 10. That year also ended with the lowest annual total of 17. The 2014 tornado totals are subject to change with further investigation from NWS personnel.

According to the 6-10 day outlooks from the NWS' Climate Prediction Center (CPC), another surge of cool air and moisture looked possible for early August. The CPC outlooks for the month of August saw increased odds of above normal precipitation across Oklahoma, but equal chances of above-, below- and near-normal temperatures. The August-October outlooks indicated similar forecasts. The U.S. Monthly Drought Outlook saw drought improvement or removal across all of Oklahoma by the end of August.