Late September Rains Provide Drought Relief Gary McManus Associate State Climatologist Oklahoma Climatological Survey October 02, 2012

Hopes for drought relief were starting to fade as September wound down, only to be saved by a slow-moving soaker of a storm system during the month's last week. The storm system's prodigious moisture output was aided by a stationary front and in part by the remnants of Hurricane Miriam, spawned in the Pacific Ocean during the previous week. Totals of 2-4 inches were widespread across central and southern Oklahoma according to the Oklahoma Mesonet, mainly south of Interstate 40. The Mesonet site at Byars in Garvin County recorded 6.02 inches during the event. Unfortunately, not everybody shared in the drought-relieving moisture. Totals of less than an inch were common across the northern third of the state. Despite the attempted recovery at the end, September still finished nearly an inch below normal with a statewide average of 2.9 inches according to data from the Oklahoma Mesonet. The Mesonet site at May Ranch in Woods County had the lowest total with 0.74 inches during September while Byars in Garvin County led the state with 7.5 inches. When compared to normal, much of eastern and northern Oklahoma had deficits of 1-3 inches during September. The statewide average deficit for May-September climbed to more than 8 inches and ranked as one of the five driest such stretches on record, dating back to 1895.

The month was also on the warm side with an average temperature of 74.1 degrees, 1.7 degrees above normal. That ranks as the 36<sup>th</sup> warmest September on record. The highest temperature of the month, 111 degrees, came from the National Weather Service (NWS) site at Ralston on Sept. 4 and the lowest reading was a frigid 37 degrees recorded at Boise City and Kenton on Sept. 15 and 16, respectively. Oklahoma remains on course for its warmest year on record with a January-September statewide average temperature of 66.9 degrees, 4 degrees above normal. That bests the previous record of 66.3 degrees for the first nine months of the year from 1954 and keeps that year's record annual mark of 62.8 degrees within reach. September became the 25<sup>th</sup> month out of the last 30 to finish warmer than normal, a streak that began with April 2010.

Severe weather was a bit more widespread during September after a benign August, although tornadoes remained absent. According to preliminary data from the NWS, no tornadoes have touched down in Oklahoma since June 1. That's a record low total matched only by a similar June-September shutout in 2003. Accurate tornado statistics data back to 1950. Several instances of wind gusting to over 70 mph were reported during the month, including an 80 mph gust near Crowder on Sept. 26.

September ended with more than 42 percent of the state covered by exceptional drought in the latest U.S. Drought Monitor map. Exceptional drought is the worst such designation possible. More than 95 percent of Oklahoma was in the worst two drought categories, extreme and exceptional, and 100 percent remained in severe-to-exceptional drought. That will undoubtedly change once the rains of late September are factored into the next Drought Monitor map, scheduled to be released on Oct. 4. Most, if not all, of Oklahoma will still be covered by drought of some intensity, however.

Other than a few showers, very little is expected in the way of rainfall over the next several days according to NWS forecasts. There will be a greater chance of rain over the weekend with the arrival of a cold front that is expected to bring some of the coolest air of the season to Oklahoma. The October temperature and precipitation outlooks from the NWS' Climate Prediction Center hold few clues on what to expect for the next month. Most of the state is given equal chances for above-, below- or near-normal rainfall and temperatures, although the eastern half of the state is given slightly increased odds for cooler than normal weather. That's similar to the winter outlook (December 2012 –February 2013) from the CPC, except for slightly increased odds of above normal temperatures across northeastern Oklahoma.