

OKLAHOMA WEATHER HISTORY
Monthly Climatology Series
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Monthly Climate of Oklahoma – August

NORMAN - According to published daily normal temperatures, the hottest period of the long Oklahoma summer extends from mid-July through mid-August. The gradually shortening days and the occasional arrival of cooler weather from the North frequently bring the state modest relief from the heat by late August. Overall, August, the third and final month of the climatological summer, is Oklahoma's second hottest, fifth driest, and least windy month. Tornado frequency is at its lowest of the March-through-October warm season. Lightning deaths are more frequent in August than during any other month.

The normal statewide monthly temperature is 80.9 degrees Fahrenheit. Oklahoma's hottest August, according to National Weather Service records that date from 1892, occurred in 1936 when the state's average monthly temperature was a scorching 87.9 degrees. This is the second highest statewide-averaged monthly temperature (all months) recorded in Oklahoma during the 110 years with comprehensive records. The state's record daily maximum temperature of 120 degrees was equaled by two reporting stations (Altus and Poteau) on August 12, 1936. Relatively cool weather prevailed during August 1915, when the state recorded its lowest August statewide-average monthly temperature, 73.9 degrees, and lowest daily minimum temperature, 38 degrees at Bartlesville on the 31st.

Normal August monthly temperatures across the state range from 84.1 degrees at Waurika to 75.3 degrees at Boise City. Across the state, normal daily maximum temperatures vary between 97.3 degrees at Chattanooga and 89.6 degrees at Stilwell. The range of normal daily minimum temperatures is from 71.6 degrees at Eufaula and Waurika to 60.2 degrees at Boise City. Temperatures reach 100 degrees or higher at Chattanooga on an average of 13.1 days in August. The average occurrence of triple-digit temperatures descends elsewhere to a low of 0.8 days at Boise City. Stilwell averages only 17 days during August with high temperatures of 90 degrees or greater, as compared to 27.4 such days at Chattanooga.

Isolated or widely scattered thunderstorms provide most of the state's August precipitation. As a result, little systematic variation can be seen in the statewide precipitation pattern. At 3.76 inches, Pawnee has the greatest normal precipitation for the month. Meeker, near the center of the state, has the lowest normal monthly accumulation, 1.93 inches. Statewide-averaged monthly precipitation during August has ranged from 6.54 inches in 1906 to a dismal 0.18 inch during the droughty summer of 2000. The greatest August precipitation recorded by any reporting station was 15.15 inches at Holdenville in 1906. An 8.68-inch deluge at Garber on August 10, 1974 is the greatest daily precipitation recorded at a regular observing station during August. Precipitation is observed (.01 inch or more) on an average of as many as 7.8 days at Stilwell and as few as 3.5 days at Bixby. Daily rainfall events of

two inches or greater are no more than an every-other-year occurrence everywhere in the state.

Severe weather appears in the state during August, but its effects are more notable anecdotally than they are apparent in statistics. The exception is that August has presented the state with more lightning deaths (21) than any other month since such record-keeping began in 1959. Only July among the months accounts for more total casualties (deaths and injuries) from lightning strikes. Of the 79 August tornadoes reported in the state between 1950 and 2001, no fatalities and only three injuries (1 in 1959 and 2 in 1982) resulted. Oklahoma's August tornado totals include a high of 13 in 1979. No tornadoes were observed during 20 of the 52 years with comprehensive statistics.

On August 17, 1994, one of the state's most spectacular severe hailstorms swept a path of destruction from Manchester, near the Kansas border, to Minco in central Oklahoma. The Oklahoma Mesonet site at Lahoma recorded a peak wind of 113 miles per hour before the anemometer was broken under an assault of baseball-sized hailstones driven by the strong winds. Large hail fell, including one chunk of ice found near Okarche that "measured 4.5 inches by 6.5 inches and was said to 'look like a football'" (as published by the National Climatic Data Center in that month's issue of *Storm Data*). Many structures and vehicles were damaged or destroyed and several domestic animals were killed. Another hailstorm on August 22, 1930 destroyed crops on 70,000 acres across Cotton and Jefferson counties. That storm killed an estimated 3,000 turkeys and 6,000 chickens. Enid was struck by a hailstorm the night of August 5-6, 1944. Contemporary reports state that every roof in town was damaged and water ran over four feet deep along several streets as storm drains were filled with debris.

Although everyday wind speeds are less in August than at other times and the classical severe thunderstorm is relatively rare, thunderstorm-generated winds have created havoc from time-to-time. High winds destroyed over 150 boats, resort cabins, and dock facilities at Lake Texoma on August 6, 1961. On August 9, 1963, instruments at the Stillwater airport recorded a peak gust of 138 miles per hour during a violent thunderstorm. Winds in downtown Oklahoma City on August 22, 1955, estimated at 75-to-80 miles per hour, seriously injured a flagpole sitter.

The remnants of a tropical storm traversed western Oklahoma from the Red River northward on August 2nd and 3rd in 1995. Reported precipitation included an officially recorded two-day total of 12.07 inches of rain at the Great Salt Plains Dam. Residents at nearby Hawley reported as much as 16 inches of rain from the same storm. Extensive flooding occurred along the Salt Fork River from western Grant County to the river's confluence with the Arkansas River near Ponca City. Flooding also was reported along the Cimarron, Canadian, and Washita rivers. Ironically, that event provided the only significant precipitation across most of western Oklahoma until the following spring. The drought that was introduced resulted in one of Oklahoma's smallest winter wheat crops.

Heat is usually the August weather story. August 1934 (Oklahoma's second hottest August) followed on the heels of the state's second hottest July to destroy virtually all the state's summer-grown crops. Fortunately, the drought and heat wave were broken during the final third of the month. The average daily maximum temperature during August 1936

was 103.6 degrees. Perhaps the most miserably hot week in state history occurred that month when daily maximum temperatures across the state averaged over 110 degrees from the 9th through the 15th. During August 1954, every station's monthly high temperatures was 102 degrees or greater. In fact, temperatures reached 100 degrees or more somewhere in the state every day that month. Also during August 1954, river gauges on the Arkansas at Tulsa and the Cimarron at Perkins established record low monthly average stream flows and the North Canadian River stream gauge at Wetumka recorded no flow for the first time since 1900.

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