OKLAHOMA WEATHER HISTORY Monthly Climatology Series By Howard Johnson Associate State Climatologist for Service The Oklahoma Climatological Survey 6/6/02

Monthly Climate of Oklahoma - June

June is Oklahoma's third warmest and second wettest month. Because of its temperature ranking, it is considered by climatologists to be the first of the three months of summer. The statewide-averaged temperature for the month is 76.9 degrees Fahrenheit, trailing only July and August, and exceeding the September value by four degrees. Most days are comfortable. The heat typical of Oklahoma's summers usually doesn't set in until late in the month. The statewide-averaged normal precipitation of 4.24 inches, although leading 10 other months, trails the May accumulation by 0.89 inch. Normal precipitation at most locations is less during June than it is in May; however, there are several places, mostly in the panhandle, where precipitation is greater during June than in any other month. Tornadoes are considerably less numerous in June than during April or May. June's average of 8.7 tornadoes ranks third among the months.

Summer-like heat usually settles in during the second half of June. This trend is most apparent in the major wheat growing areas of the state, where the progressing harvest replaces fields of waving grain with acres of stubble. Average temperatures across the state vary between 72.6 degrees at Boise City and 80.3 degrees at Waurika. Average daily maximum temperatures range from 84.1 degrees at Stilwell to 92.8 degrees at Chattanooga. Average daily minimum temperatures vary between 56.5 degrees at Boise City and 68.4 degrees at Ardmore and Waurika.

The observed temperature extremes for the month are 120 degrees, recorded at Tipton on June 27, 1994 and 34 degrees at Kenton on June 13, 1919. The warmest and coolest Junes, determined from statewide-averaged temperatures available from 1892 through 2001, occurred in 1953 (85.1 degrees) and 1903 (70.3 degrees), respectively. Buffalo and Mangum each warm to 100 degrees or more on an average of 5.2 days during June. Such temperatures are seldom reported in at locations like Stilwell or Kansas in extreme eastern Oklahoma. Temperatures reach 90 degrees or more an average of 21.6 days at Chattanooga, as compared to only 4.7 days at Kansas.

Precipitation generally declines from its May values during June, especially across central Oklahoma where a precipitous and remarkably consistent decline in rainfall occurs about mid-month. Precipitation patterns in the panhandle are linked to those of the nearby mountains and, hence, this region experiences a May-through-July wet season. The various reporting stations in the panhandle are about equally divided between those with a May maximum and those with a monthly maximum precipitation in June. Despite the relative trends, the panhandle is still drier than the rest of the state during June.

Normal monthly precipitation across the state during the month varies between 5.49 inches at Durant and 2.18 inches at Kenton.

Statewide-averaged precipitation in June, known since 1892, has included a greatest monthly total of 8.73 inches in 1908 and a smallest total of 0.46 inch in 1933. The state-record June rainfall accumulation at a regular reporting station is 18.87 inches, recorded in 1932 at Meeker. More than half of that total fell within nine hours overnight on the 2nd and 3rd. Stilwell receives measurable precipitation (0.01 inch or more) on an average of 10.3 days in June, nearly twice as often as Waurika (5.3). Although June is one of the wetter months in the panhandle, Kenton receives an inch or more of rain on an average of only 0.3 day during the month, compared to 2.1 days at both Lyons and Wewoka.

The severe thunderstorm with its various destructive weather elements is a potent force throughout the state in June. The month is marked by an average of 8.7 tornadoes with monthly totals since 1950 ranging from 28 in 1995 to none in 1987. Especially deadly tornadoes occurred on June 1, 1917 (killing 14 people in Coalgate), June 12, 1942 (killing 35 in southwest Oklahoma City), and June 8, 1974 (killing 14 in Drumright).

Hail storms are frequently a bane to the state's agricultural interests. All too frequently, a wheat farmer will lose a nearly-ready-to-harvest crop to big chunks of falling or winddriven ice. One such storm cut a 25 mile-by-10 mile swath west of Gage on June 14, 1938, "wiping out a mature wheat crop and killing many animals," according to the contemporary Weather Bureau summary. In 1993, a major hail-producing system that traversed the northern part of the state from Tyrone to Grove from the evening of June 2nd through the early morning of the 3rd, inflicted \$70 million of damage to the soon-to-be harvested wheat crop, alone. Hail stones up to six inches in diameter were reported in Enid, which, along with Blackwell, suffered the most urban damage.

Interests other than agriculture also suffer damage from severe thunderstorms. On June 14, 1957, hail fell on Woodward for a full hour, causing extensive damage to windows, signs, automobiles, roofs, and other real property. The 1993 storm mentioned above destroyed many new cars on lot in Blackwell. Hail stones the size of "hen eggs" pummeled a blimp stationed at the Oklahoma City airport on June 13, 1937, rendering it unable to remain aloft. Thunderstorm winds in Blaine County, as measured by a highway patrol trooper, reached 110 miles per hour on June 10th, 1967. More than 70,000 customers were left without electricity in Tulsa on June 21, 1998 as thunderstorm-generated winds clocked at 98 miles per hour raked the city.

Floods are a special hazard during June. Both rapidly rising waters from localized "cloudbursts" and widespread flooding along a river course both occur all too often. The 1932 flood in Oklahoma City and downstream on the North Canadian River, which killed nine people, resulted from a local deluge. Eleven people trapped in automobiles drowned near Hydro on the night of June 22, 1948, when rushing floodwaters from Deer Creek covered US-66. A so-called "bucket survey" of area farms indicated that as much as 20 inches of rain fell within 14 hours, although the nearest official rain gauge (at Geary) caught "only" 11.25 inches. Flooding was described as "unusually disastrous" on the

North Canadian, Arkansas, Cimarron, and Neosho rivers from June 7 through 11, 1923. Pauls Valley was inundated when the Washita River flooded in 1941. In 1957, after the Lake Texoma spillway was used for the first time in late May, the Red River remained above flood stage below the dam, all the way to the Arkansas border, throughout June. Waurika, Guthrie, and low-lying areas north and east of the Arkansas River, drained by the Verdigris and Neosho rivers, have been especially flood prone during Junes past.

The extensive droughts of the 1930s and 1950s were evidenced by a few notable June dust storms. Visibility at Goodwell was less than one mile on 11 days during June 1937, dropping to zero for about 10 minutes on the 4th. Rains were considered "adequate" at Kenton in 1939, but a so-called "black blizzard" reduced visibility to zero on the 9th. Another severe dust storm on June 16, 1957 led to a 12-car pile-up southwest of Hooker.

Most of Oklahoma's Junes are pleasant most of the time. The real heat of summer typically doesn't set in until late in the month (in many places, coinciding with the completion of the wheat harvest). Heat waves do happen, however. Temperatures have reached 110 degrees or higher during ten Junes since comprehensive record-keeping began in the 1890s, most recently on June 27, 1994 when an automated weather station of the Oklahoma Mesonet recorded a 120-degree temperature at Tipton to tie the all-time state record for any month. Two other stations (Hollis and Chattanooga) recorded 116-degree temperatures the same day. Only twice before had any Oklahoma reporting locations noted temperatures as high as 115 degrees in June: 115 degrees at Mutual on June 12, 1917 and 117 degrees at Hollis on June 14, 1953.

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