Oklahoma Monthly Climate Summary

JULY 2011

OKLAHOMA CLIMATOLOGICAL SURVEY

Fueled by exceptional drought and a seemingly impenetrable heat-dome, July roared through Oklahoma's legendary heat waves of the past to become the state's hottest calendar month on record. According to data from the Oklahoma Mesonet, the July statewide average temperature finished 7.5 degrees above normal at 89.1 degrees, smashing the previous record of 88.1 degrees set back in July 1954. Statewide averages date back to 1895. The news was equally grim on the rainfall side of the ledger. The statewide average rainfall total was 0.70 inches, more than 2 inches below normal and the fourth driest July on record. Combined, the 2011 June-July period was the hottest and driest on record statewide, an ominous achievement with another month of summer yet to go. Through seven months, 2011 ranked as the eighth warmest and second driest January-July period on record.

July 2011 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	114°F	Alva, Freedom	9
Low Temperature	60°F	Boise City	3
High Precipitation	5.58 in.	Newkirk	--
Low Precipitation	0.0 in.	Burneyville, Walters	--

TEMPERATURE

Oklahoma City's average temperature of 89.2 degrees topped the previous record of 88.7 degrees in August of 1936 to become its warmest month since records began in 1890. Oklahoma City experienced 27 days in July with a high temperature of at least 100 degrees, once again the most for any month in its history. Oklahoma City's average high temperature of 102.5 degrees beat July 1980's previous mark of 102.4 degrees to set another milestone. Similar records were matched at many locations throughout drought-ravaged western Oklahoma. Grandfield was the warmest spot in the state during July with an average temperature of 93 degrees and continued to lead the state with 68 days at or above 100 degrees through. That site and three others have seen triple-digit highs for 40 consecutive days through July 31. Kenton's July average of 81.6 degrees marked it as the coolest spot in the state. The highest temperature of the month, 114 degrees, was recorded at Alva and Freedom on July 9.

PRECIPITATION

Of the 120 Oklahoma Mesonet stations, 93 recorded less than an inch of rainfall for the month. Two sites, Walters and Burneyville, recorded no precipitation at all. Newkirk and Kenton led the way with 5.58 inches and 3.66 inches, respectively. Only five stations recorded more than 2 inches of rainfall. Southwestern Oklahoma received less than a quarter-inch of rainfall, on average. The lack of precipitation continues to take a terrible toll on Oklahoma, mired in drought since last fall. An average of 16.41 inches of precipitation has fallen across the state since October 1, 2010, nearly 14 inches below normal and the driest such period on record. Boise City received a scant 3.8 inches of rainfall over that period while Grandfield recorded 5.6 inches. The latest U.S. Drought Monitor map released on July 28 indicates more than half of Oklahoma is experiencing exceptional drought, the worst designation possible.

July 2011 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2011)
Month (July)	89.1°F	7.5°F	1st Warmest
Season-to-Date (Jun-Jul)	86.3°F	7.2°F	1st Warmest
Year-to-Date (Jan-Jul)	61.4°F	2.2°F	8th Warmest

Precipitation

	Average	Depart.	Rank (1895-2011)
Month (July)	0.70 in.	-2.04 in.	4th Driest
Season-to-Date (Jun-Jul)	1.88 in.	-5.12 in.	1st Driest
Year-to-Date (Jan-Jul)	11.92 in.	-9.97in.	2nd Driest

Depart. = departure from 30-year normal

JULY DAILY HIGHLIGHTS

JULY 1-7: A hot and mostly dry starting week to July was interrupted by occasional showers and storms. Most areas of the state registered triple-digit highs during this period. The showers and storms did not provide much rainfall, but they did generate frequent microbursts. A fireworks stand was blown over near Newkirk on the second due to strong winds. Severe

winds also damaged homes and businesses in Oklahoma County on the fourth. Several areas reported power outages during the storms. A cool front on the seventh helped keep northern Oklahoma out of triple-digit territory in the upper 90s.

JULY 8-11: A weak cold front was moving through the state on the eighth, generating a few showers in central Oklahoma. The state's highest temperatures for the month, 114 degrees, were recorded at Alva and Freedom. While there were a few showers during this four-day period, heat continued to rule the day. High temperatures were mostly into the triple-digits each day.

JULY 12-14: An upper-level low moving over the state and a slow-moving front produced some decent rains over north central and central Oklahoma. Areas of Kay and Osage counties had between 2-5 inches of rain. Nearby areas had more than an inch, as well as did parts of central Oklahoma. Severe weather struck with the rain on the 12th. Winds of up to 70 mph were reported in Stillwater, 73 mph in Muskogee and 75 mph near Fort Cobb. Lots of power poles and trees were destroyed with the severe winds across the state. Despite the rain, highs still managed to rise into the 90s and 100s across the state on the 13th. By the 14th, highs had returned to the triple-digits.

JULY 15-20: A very hot and dry six days, highs rose into the 100s after lows in the upper 70s and lower 80s.

JULY 21-26: A bit of a rainy period in such a hot and dry month, these six days saw a few areas with half an inch to an inch of rainfall. The period was still hot with highs mostly in the 100s after lows in the 70s and 80s. A few of the storms were severe, especially in northwestern Oklahoma. A 75 mph wind gust was recorded at the May Ranch Mesonet site on the 22nd with one particular storm, but that could not top the 90 mph gust at Freedom on the 24th. A storm near Weatherford on the 25th produced wind gusts estimated at 80-90 mph. Widespread power line and tree damage was reported around Weatherford. Storms in eastern Oklahoma flipped a horse and buggy on the 24th near Choteau, injuring one person. Several barns were destroyed near Pryor in another storm. A microburst in Turpin produced damage to a trailer and a church there. Lots of tree damage was also reported from this storm.

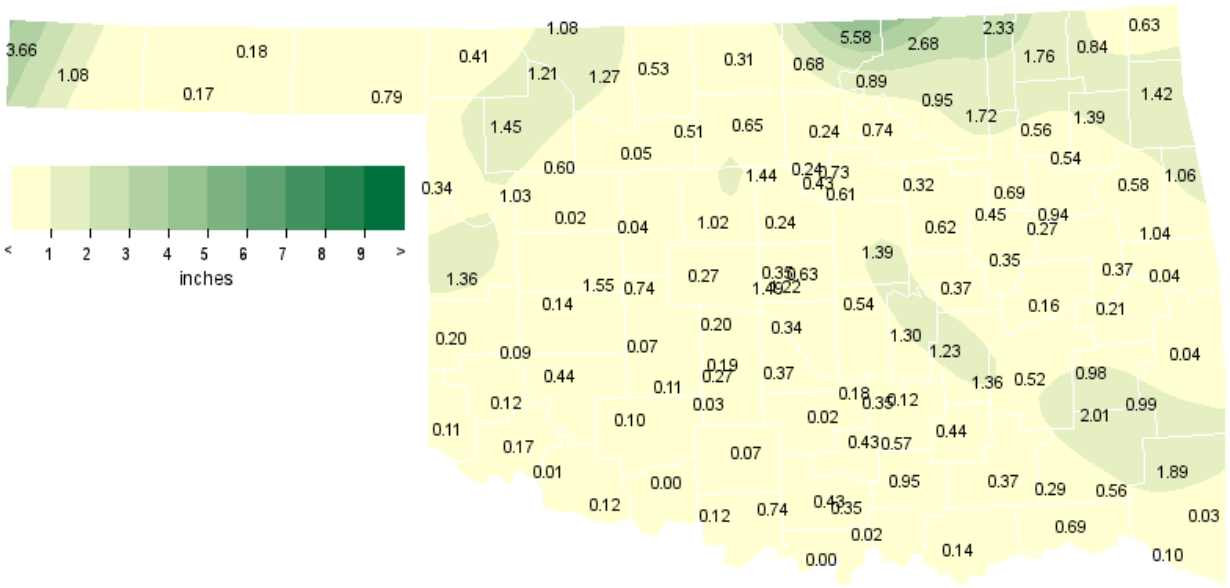
JULY 27-31: A very hot end to the month, highs were once again in the triple digits for the most part. A few outflow boundaries and a stalled front produced some showers and storms from time to time, but amounts were mostly light.

JULY 2011 SEVERE WEATHER

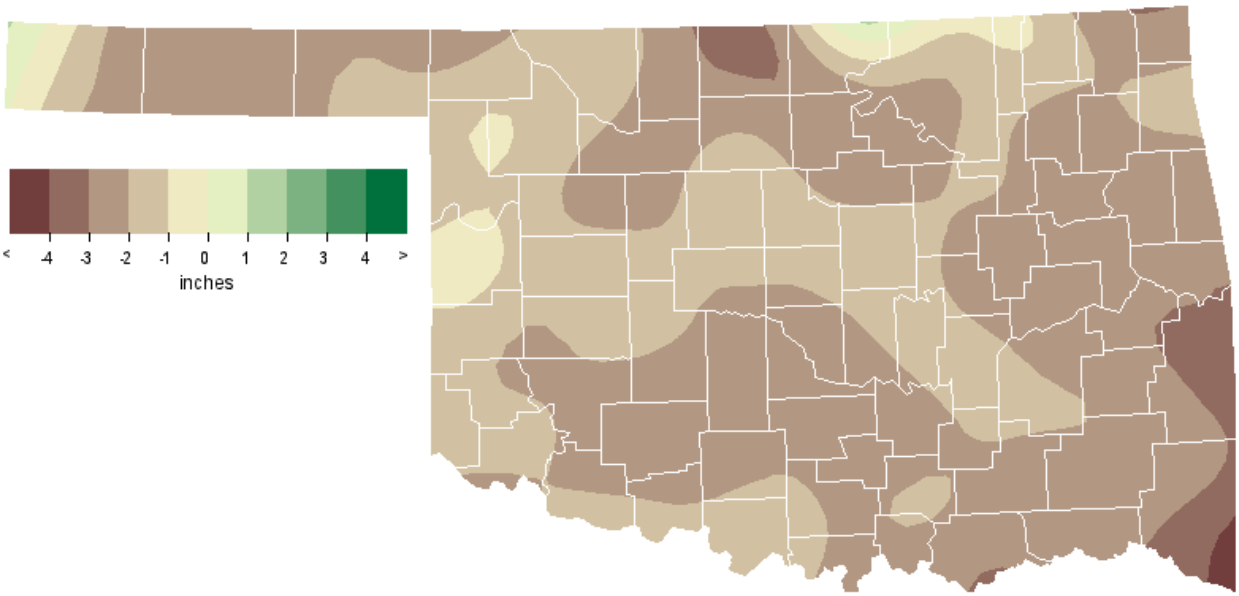
Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
72	1 NE Will Rogers Airport	Oklahoma	12
70	Stillwater	Payne	12
75	1 W Kingfisher	Kingfisher	12
73	1 E Summit	Muskogee	12
75	7 SSW Fort Cobb	Caddo	13
75	16 NNE Freedom	Woods	22
90	3 SSW Freedom	Woodward	24
90	Weatherford	Custer	25
77	4 SSE marshall	Logan	30

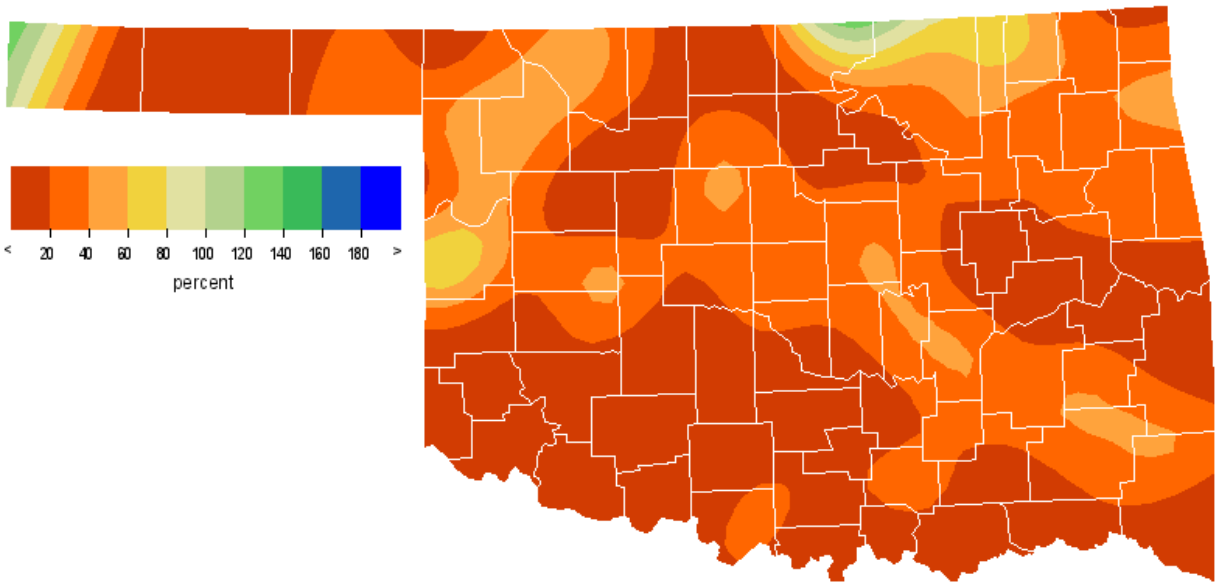
JULY 2011 OBSERVED PRECIPITATION



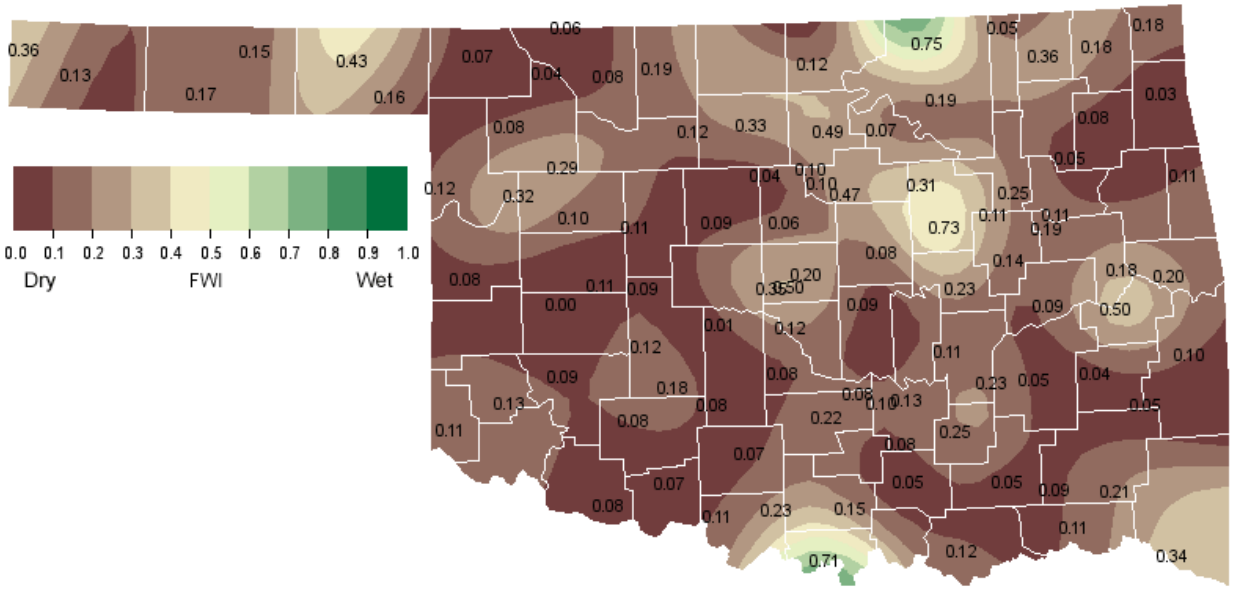
JULY 2011 DEPARTURE FROM NORMAL PRECIPITATION



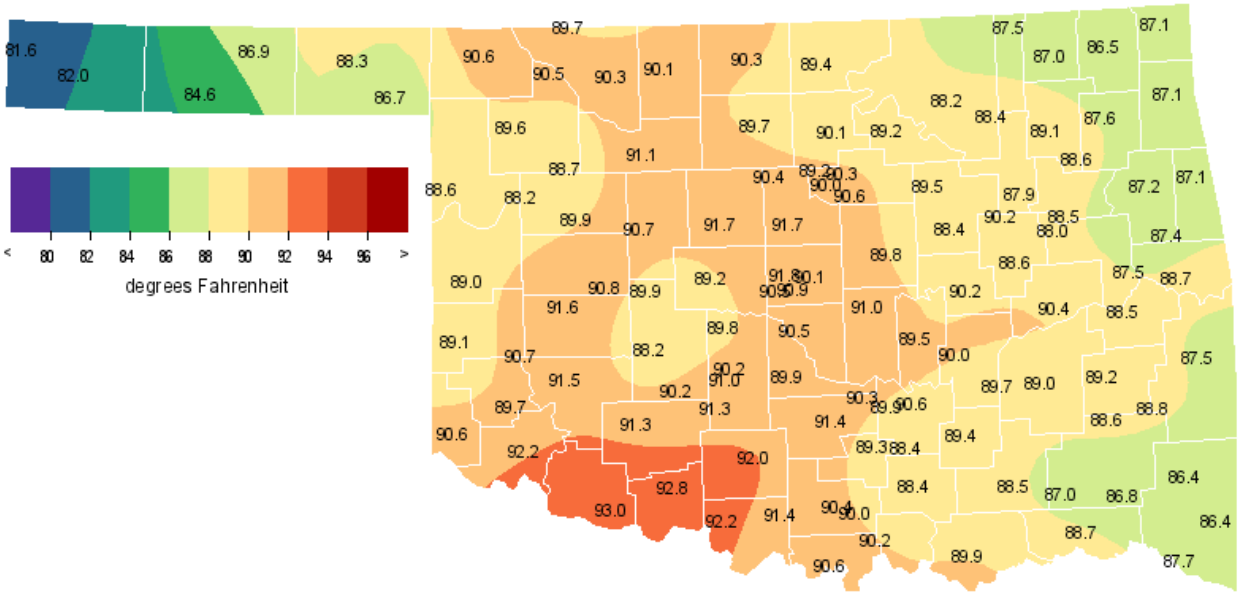
JULY 2011 PERCENT OF NORMAL PRECIPITATION



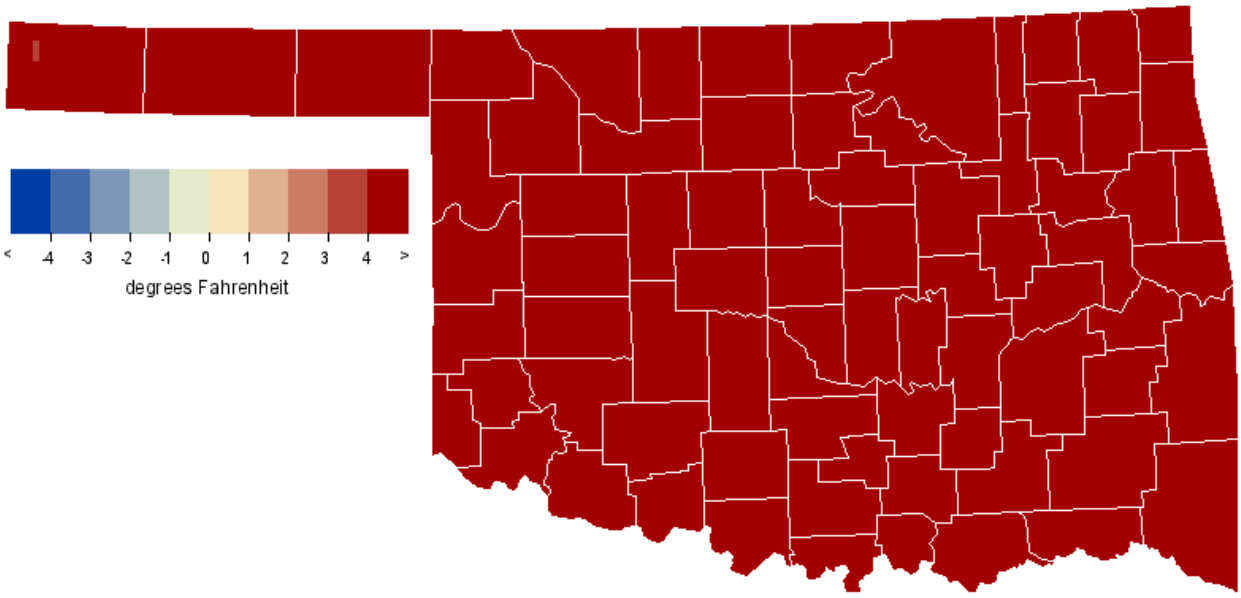
JULY 2011 AVERAGE SOIL MOISTURE AT 25CM



JULY 2011 AVERAGE TEMPERATURE



JULY 2011 DEPARTURE FROM NORMAL TEMPERATURE

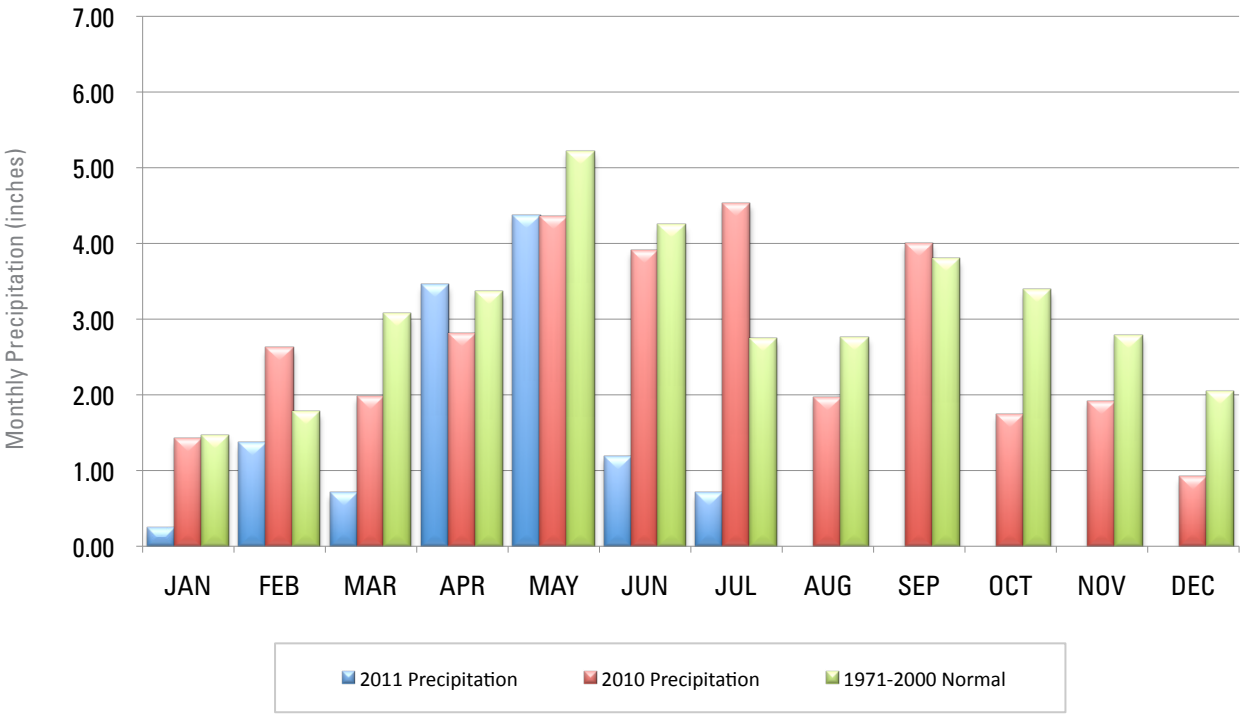


MESONET MONTHLY SUMMARY FOR JULY 2011

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	88.6	111	9	69	6	0	732	.34	.24	13
Beaver	88.2	112	9	62	4	0	721	*****	*****	***
Boise City	82.0	105	9	60	3	0	527	1.08	.54	23
Buffalo	90.6	113	9	65	4	0	793	.41	.16	3
NORTH CENTRAL										
Alva	90.2	114	9	69	4	0	783	1.27	.76	13
Blackwell	89.4	111	9	66	8	0	757	.68	.17	24
Breckinridge	89.8	111	9	70	8	0	768	.65	.19	30
Cherokee	90.1	112	9	69	8	0	779	.53	.29	3
Fairview	91.1	112	9	70	8	0	810	.05	.02	8
Freedom	90.4	114	9	67	4	0	789	1.21	.73	24
Lahoma	*****	***	***	***	***	****	****	.51	.38	12
NORTHEAST										
Bixby	87.9	105	24	70	1	0	711	.69	.56	24
Burbank	88.1	108	24	68	4	****	****	.89	.51	13
Claremore	89.2	109	24	71	4	0	749	.56	.42	13
Copan	87.5	108	10	70	4	0	699	2.33	.80	13
Foraker	*****	***	***	***	***	****	****	2.68	2.24	13
Inola	88.6	108	24	68	5	0	733	.54	.28	4
Jay	87.2	105	27	68	5	0	687	1.42	.62	4
Miami	87.0	105	10	68	9	0	683	.63	.44	13
WEST CENTRAL										
Bessie	91.6	111	9	71	4	0	824	.14	.13	25
Butler	90.3	111	9	70	4	****	****	.08	.05	29
Camargo	88.2	110	9	66	5	0	718	1.03	.75	13
Cheyenne	89.0	107	9	69	12	0	744	1.36	.95	3
Erick	89.2	111	9	68	5	0	749	.20	.14	12
CENTRAL										
Acme	91.3	110	9	68	4	0	815	.03	.03	1
Bowlegs	89.5	110	9	68	3	0	759	1.30	.80	24
Bristow	88.4	109	24	67	3	0	725	.62	.26	12
Lake Carl Blac	89.2	110	24	67	5	0	750	.24	.07	25
Chandler	89.8	110	9	71	5	0	769	1.39	.94	24
Chickasha	90.1	110	27	69	5	0	778	.19	.12	12
El Reno	89.2	111	9	67	4	0	750	.27	.11	12
Guthrie	91.6	111	9	73	5	0	825	.24	.17	25
Kingfisher	91.7	113	9	72	5	0	827	1.02	.69	12
Marena	90.0	110	9	70	5	0	775	.43	.20	24
Minco	89.8	109	9	71	5	0	768	.20	.16	12
Marshall	90.4	111	9	71	5	0	787	1.44	1.25	30
EAST CENTRAL										
Cookson	87.4	105	24	66	5	0	693	1.04	.56	12
Eufaula	90.4	109	24	71	1	0	786	.16	.12	4
Haskell	88.0	106	24	69	1	0	714	.27	.17	13
Hectorville	90.2	108	24	71	6	0	781	.45	.30	26
Holdenville	90.0	107	9	71	4	0	775	1.23	.85	13
McAlester	89.0	106	31	68	3	0	743	.52	.52	24
Okmulgee	88.6	108	9	68	1	0	731	.35	.23	12
SOUTHWEST										
Altus	92.2	112	9	72	12	0	844	.17	.10	13
Apache	90.2	110	9	69	4	0	782	.11	.11	13
Fort Cobb	88.2	107	7	69	4	0	720	.07	.05	3
Grandfield	93.0	112	9	71	5	0	868	.12	.07	12
Hinton	89.9	110	9	70	4	0	773	.74	.65	12
Hobart	91.6	110	9	72	4	0	824	.44	.43	13
SOUTH CENTRAL										
Ada	90.6	108	9	70	4	0	793	.12	.05	13
Ardmore	90.0	106	7	71	5	0	775	.35	.28	4
Burneyville	90.5	109	25	69	2	0	791	.00	.00	1
Byars	90.3	108	9	71	5	0	783	.18	.10	25
Centrahoma	89.4	108	9	70	3	0	756	.44	.44	13
Durant	89.9	106	31	72	3	0	772	.14	.11	5
Fittstown	88.4	106	24	68	1	0	724	.57	.29	6
Ketchum Ranch	92.0	110	9	72	5	0	837	.07	.04	4
Lane	88.6	106	31	70	3	0	731	.37	.37	5
SOUTHEAST										
Antlers	87.0	106	31	67	3	0	683	.29	.23	5
Antlers	*****	***	***	***	***	****	****	*****	*****	***
Broken Bow	86.4	106	31	64	1	0	663	.03	.02	26
Clayton	88.6	107	24	68	1	0	730	2.01	.92	26
Cloudy	86.8	107	31	67	1	0	677	.56	.28	26
Hugo	88.7	105	31	70	1	0	735	.69	.68	5

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	84.7	108	9	62	4	0	609	.17	.06	3
Hooker	86.8	109	9	65	5	0	677	.18	.10	23
Kenton	81.6	105	9	61	3	0	516	3.66	1.65	13
Slapout	86.7	110	9	63	4	0	673	.79	.25	3
May Ranch	89.6	113	9	67	4	0	764	1.08	.47	22
Medford	90.3	112	9	68	8	0	783	.31	.16	29
Newkirk	86.6	108	10	67	5	****	****	5.58	3.96	13
Red Rock	90.2	111	9	68	4	0	780	.24	.15	25
Seiling	88.7	109	9	68	5	0	735	.60	.48	14
Woodward	89.5	111	9	67	4	0	761	1.45	.49	22
Nowata	87.1	107	10	68	3	0	685	1.76	.58	13
Pawnee	89.2	108	24	70	3	0	750	.74	.51	13
Porter	88.4	106	7	70	5	0	726	.94	.62	26
Pryor	87.6	107	10	68	3	0	701	1.39	.62	25
Skiatook	88.4	108	10	69	4	0	725	1.72	.95	13
Vinita	86.5	107	10	68	9	0	666	.84	.39	13
Wynona	88.2	108	10	68	5	0	720	.95	.57	13
Putnam	89.9	110	9	71	4	0	773	.02	.01	14
Retrop	90.6	110	9	70	4	0	795	.09	.07	25
Watonga	90.7	110	9	72	4	0	795	.04	.02	13
Weatherford	90.9	111	9	72	25	0	804	1.55	1.55	25
Ninnekah	91.0	110	9	70	5	0	806	.27	.13	12
Norman	90.6	109	9	73	2	0	794	.34	.26	12
Oilton	89.5	109	24	68	5	0	760	.32	.16	30
OKC East	90.9	109	9	74	5	0	804	1.22	.42	12
OKC North	91.7	111	9	74	25	0	828	.35	.19	12
OKC West	90.4	108	9	72	12	0	789	1.49	.99	12
Okemah	90.2	110	9	72	1	0	780	.37	.34	12
Perkins	90.6	111	9	72	5	0	794	.61	.39	25
Shawnee	90.9	110	9	73	5	0	803	.54	.47	12
Spencer	90.1	109	9	73	4	0	777	.63	.43	25
Stillwater	90.4	110	9	72	6	0	787	.73	.26	12
Washington	89.8	111	9	66	2	0	770	.37	.36	12
Sallisaw	88.7	107	24	69	5	0	735	.04	.03	26
Stigler	88.6	108	31	68	5	0	731	.21	.18	26
Stuart	89.6	107	24	69	1	0	764	1.36	1.22	24
Tahlequah	87.2	106	24	68	5	0	688	.58	.33	4
Webbers Falls	87.6	104	31	70	5	0	699	.37	.24	12
Westville	87.1	104	24	69	5	0	687	1.06	.41	22
Hollis	90.5	111	26	70	12	0	791	.11	.11	12
Mangum	89.7	110	9	67	4	0	767	.12	.09	12
Medicine Park	91.4	109	9	73	4	0	818	.10	.07	25
Tipton	92.4	112	9	73	12	****	****	.01	.01	12
Walters	92.8	111	9	74	4	0	861	.00	.00	1
Madill	90.2	107	15	71	2	0	782	.02	.02	4
Newport	90.4	108	9	71	5	0	787	.43	.37	4
Pauls Valley	91.4	110	9	72	2	0	817	.02	.02	25
Ringling	91.4	109	9	73	4	0	819	.74	.74	29
Sulphur	89.2	107	9	68	2	0	751	.43	.18	13
Tishomingo	88.4	106	9	67	1	0	725	.95	.70	4
Vanoss	89.9	108	9	69	5	0	771	.35	.21	13
Waurika	92.3	110	27	72	4	0	845	.12	.04	4
Idabel	87.7	105	31	69	1	0	702	.10	.09	26
Mt Herman	86.3	102	24	66	1	0	662	1.89	1.02	28
Talihina	88.8	108	31	64	1	0	738	.99	.62	4
Wilburton	89.2	109	24	69	1	0	751	.98	.48	26
Wister	87.5	108	31	63	1	0	697	.04	.03	24

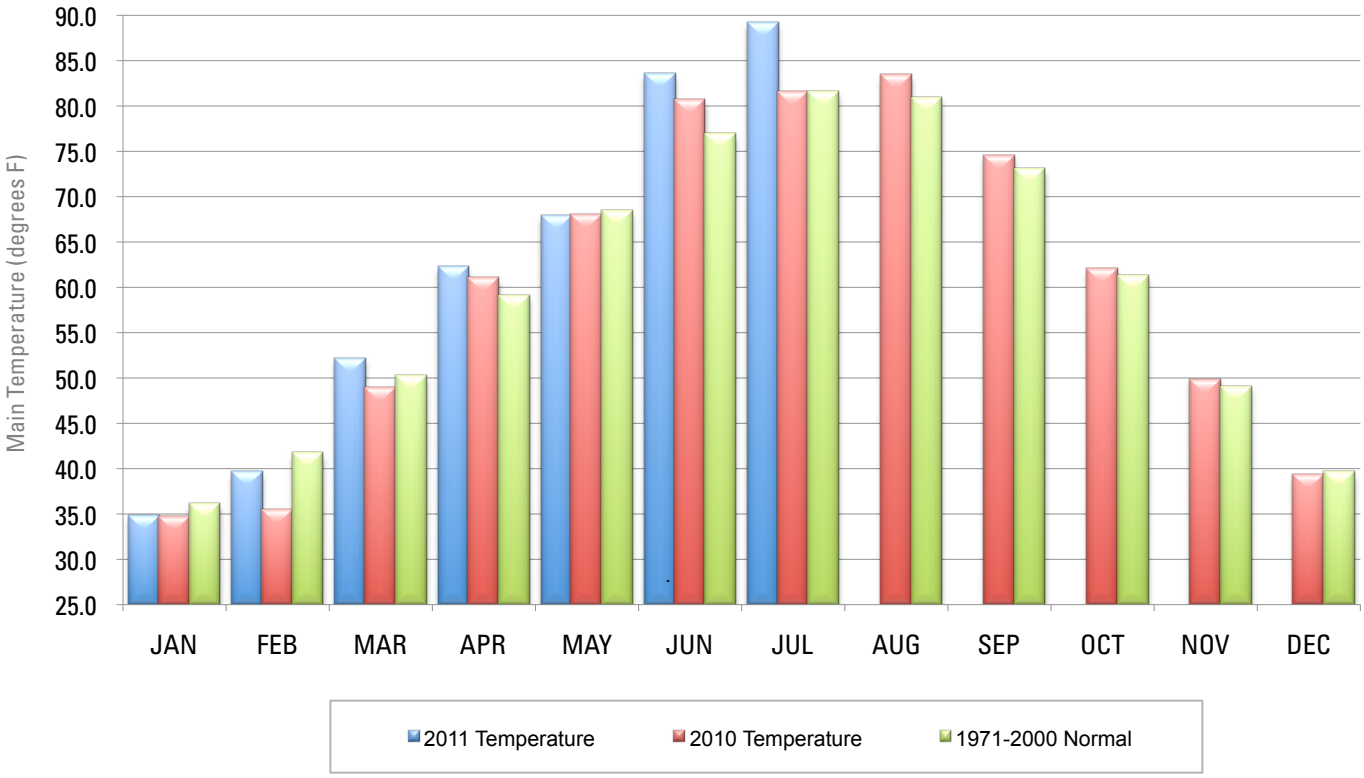
2010 AND 2011 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



July 2011 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jul-10
Panhandle	0.95	-1.57	12th Driest	9.79 (1950)	0.37 (1935)	1.83
North Central	1.09	-1.89	15th Driest	9.06 (1950)	0.13 (1983)	4.73
Northeast	1.21	-1.95	27th Driest	9.31 (1959)	0.00 (1914)	5.16
West Central	0.55	-1.58	12th Driest	7.21 (1950)	0.05 (1936)	5.82
Central	0.61	-1.96	7th Driest	10.17 (1950)	0.16 (1980)	4.77
East Central	0.59	-2.39	8th Driest	10.15 (1950)	0.17 (1930)	4.37
Southwest	0.18	-2.00	4th Driest	7.35 (2010)	0.03 (1980)	7.35
South Central	0.31	-2.23	6th Driest	8.45 (1950)	0.08 (1998)	3.81
Southeast	0.76	-2.82	7th Driest	13.02 (1950)	0.00 (1930)	4.11
Statewide	0.70	-2.04	4th Driest	9.26 (1950)	0.41 (1980)	4.60

2010 AND 2011 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



July 2011 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jul-10 (F)
Panhandle	86.2	6.6	1st Warmest	85.4 (1980)	73.2 (1906)	80.3
North Central	90.0	7.8	1st Warmest	89.6 (1954)	75.8 (1950)	81.9
Northeast	87.9	7.0	2nd Warmest	89.2 (1954)	75.0 (1906)	82.3
West Central	90.0	8.3	1st Warmest	88.1 (1954)	75.8 (1906)	80.9
Central	90.3	8.3	1st Warmest	88.6 (1954)	75.8 (1906)	82.1
East Central	88.6	7.3	2nd Warmest	88.7 (1954)	75.9 (1906)	82.6
Southwest	90.9	7.7	1st Warmest	89.1 (1980)	77.9 (1906)	82.1
South Central	90.2	7.5	1st Warmest	89.1 (1998)	77.2 (1906)	82.5
Southeast	87.7	6.8	1st Warmest	87.5 (1954)	76.4 (2004)	82.0
Statewide	89.1	7.5	1st Warmest	88.1 (1954)	75.9 (1906)	81.9

RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
Daily Maximum Temperature	4	McAlester	102	102	1957
Daily Maximum Temperature	7	Oklahoma City	108	106	1996
Daily Maximum Temperature	7	Tulsa	104	103	1917
Daily Maximum Temperature	9	Oklahoma City	110	106	1964
Daily Maximum Temperature	9	McAlester	106	105	1954
July Daily Maximum Temperature	9	Oklahoma City	110	110	1996
Daily Maximum Temperature	10	Oklahoma City	105	105	1998
Daily Maximum Temperature	10	Tulsa	107	105	1933
Highest Minimum Temperature	10	McAlester	83	81	2009
Highest Minimum Temperature	11	Tulsa	86	83	2009
Daily Rainfall	12	Oklahoma City	2.91 inches	1.80 inches	1926
Highest Minimum Temperature	18	McAlester	79	79	1954
Highest Minimum Temperature	20	Tulsa	82	82	2006
Highest Minimum Temperature	21	McAlester	80	80	1954
Highest Minimum Temperature	26	Tulsa	81	81	1999
Daily Maximum Temperature	27	Oklahoma City	107	105	1986
Daily Maximum Temperature	27	Tulsa	107	106	1936
Highest Minimum Temperature	27	Tulsa	83	81	1999
Highest Minimum Temperature	27	McAlester	79	78	1998
Highest Minimum Temperature	28	Oklahoma City	80	78	1939
Highest Minimum Temperature	28	McAlester	81	78	1957
Highest Minimum Temperature	31	Tulsa	82	82	2006
Warmest July		Oklahoma City	89.2	88.3	1934/1980
Warmest Month		Oklahoma City	89.2	88.7	1936
Warmest Month		Statewide	89.1	88.1	July 1954

MESONET EXTREMES FOR JULY 2011

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	113	9th	Buffalo	60	3rd	Boise City	3.66	Kenton	1.65	13th	Kenton
North Central	114	9th	Freedom	66	8th	Blackwell	5.58	Newkirk	3.96	13th	Newkirk
Northeast	109	24th	Claremore	68	9th	Vinita	2.68	Foraker	2.24	13th	Foraker
West Central	111	9th	Bessie	66	5th	Camargo	1.55	Weatherford	1.55	25th	Weatherford
Central	113	9th	Kingfisher	66	2nd	Washington	1.49	Oklahoma City West	1.25	30th	Marshall
East Central	109	24th	Eufaula	66	5th	Cookson	1.36	Stuart	1.22	24th	Stuart
Southwest	112	9th	Altus	67	4th	Mangum	0.74	Hinton	0.65	12th	Hinton
South Central	110	9th	Ketchum Ranch	67	1st	Tishomingo	0.95	Tishomingo	0.74	29th	Ringling
Southeast	109	24th	Wilburton	63	1st	Wister	2.01	Clayton	1.02	28th	Mt Herman
Statewide	114	9th	Freedom	60	3rd	Boise City	5.58	Newkirk	3.96	13th	Newkirk

AUGUST OUTLOOK

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.

Temperature

Mean	80.9 degrees
Hottest August	1936, 87.2 degrees
Coolest August	1915, 73.2 degrees
Hottest location	Waurika, 84.1 degrees
Coolest location	Boise City, 75.3 degrees
Hottest recorded	120 degrees, Poteau, August 10, 1936 Altus, August 12, 1936
Coldest recorded	41 degrees, Goodwell, August 15, 1915

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 87.2 degrees. This is the second highest statewide-averaged monthly temperature (all months) recorded in Oklahoma during the 111 years with comprehensive records. The state's record daily maximum temperature of 120 degrees was equaled at Altus and Poteau on August 12 and 10, 1936, respectively. Relatively cool weather prevailed during August 1915, when the state recorded its lowest August statewide-average monthly temperature, 73.2 degrees. The lowest daily minimum temperature of 39 degrees was recorded at Dacoma on August 26, 1910.

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 0.14 inch during the droughty summer of 2000. The greatest August precipitation recorded by any reporting station was 15.15 inches at Holdenville in 1906. A 10.34-inch deluge at Carter Tower in northern McCurtain County on August 28, 1947 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.

Precipitation

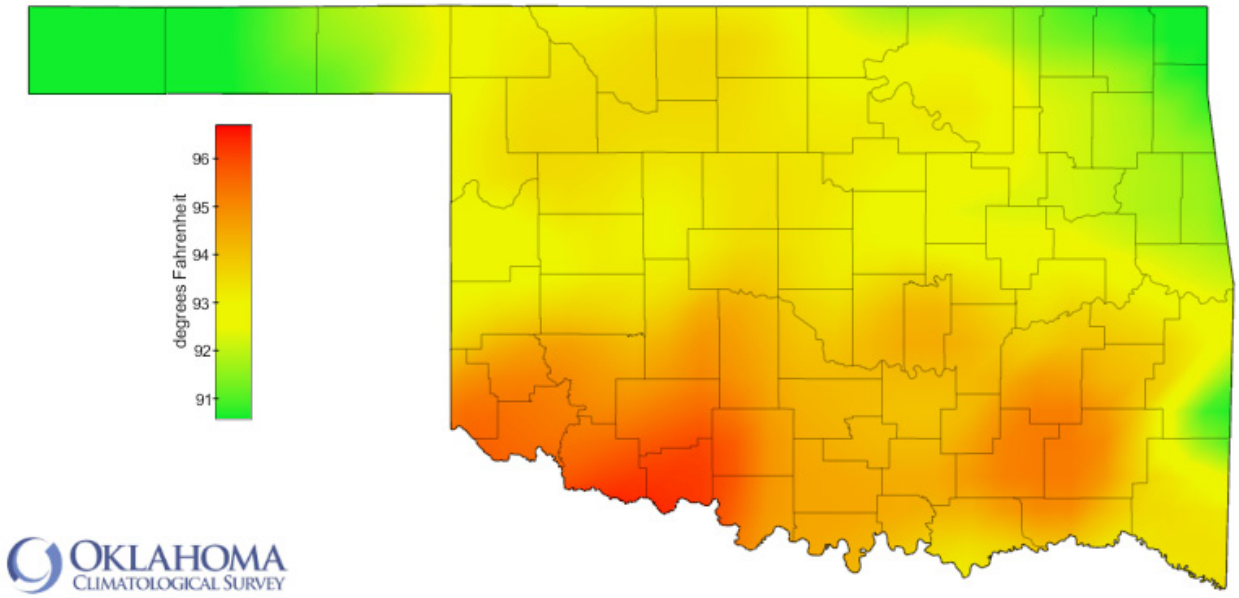
Mean	2.84 inches
Wettest year	1906, 6.54 inches
Driest year	2000, 0.14 inches
Wettest location	Pawnee, 3.76 inches
Driest location	Meeker, 1.93 inches
Most recorded	15.15 inches, Holdenville, 1906

Tornadoes

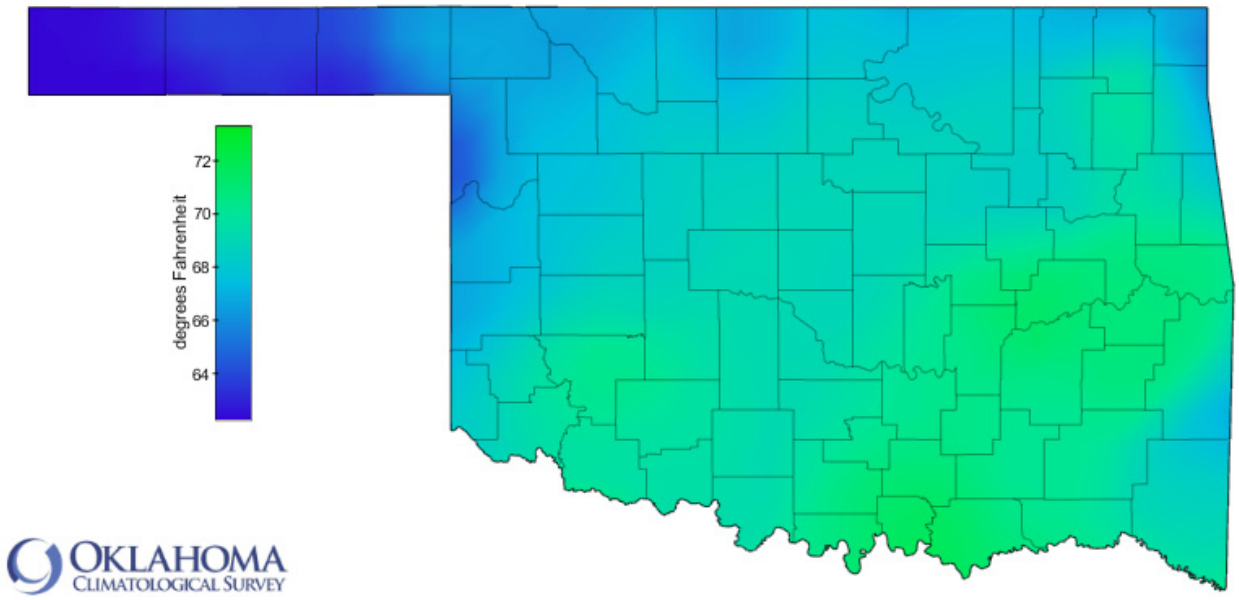
Average August Tornadoes	2
Most	13 (1979)

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. The average number of tornado for the month of August is 1.4. Of the 80 August tornadoes reported in the state between 1950 and 2003, 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 22 of the 54 years with comprehensive statistics.

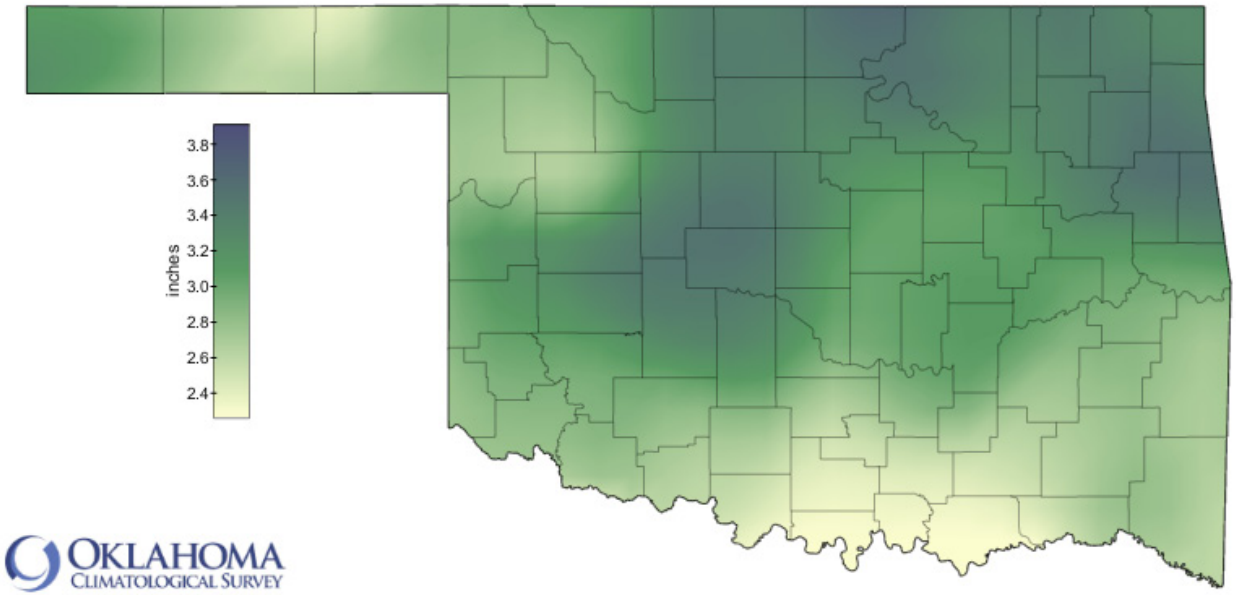
AUGUST NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



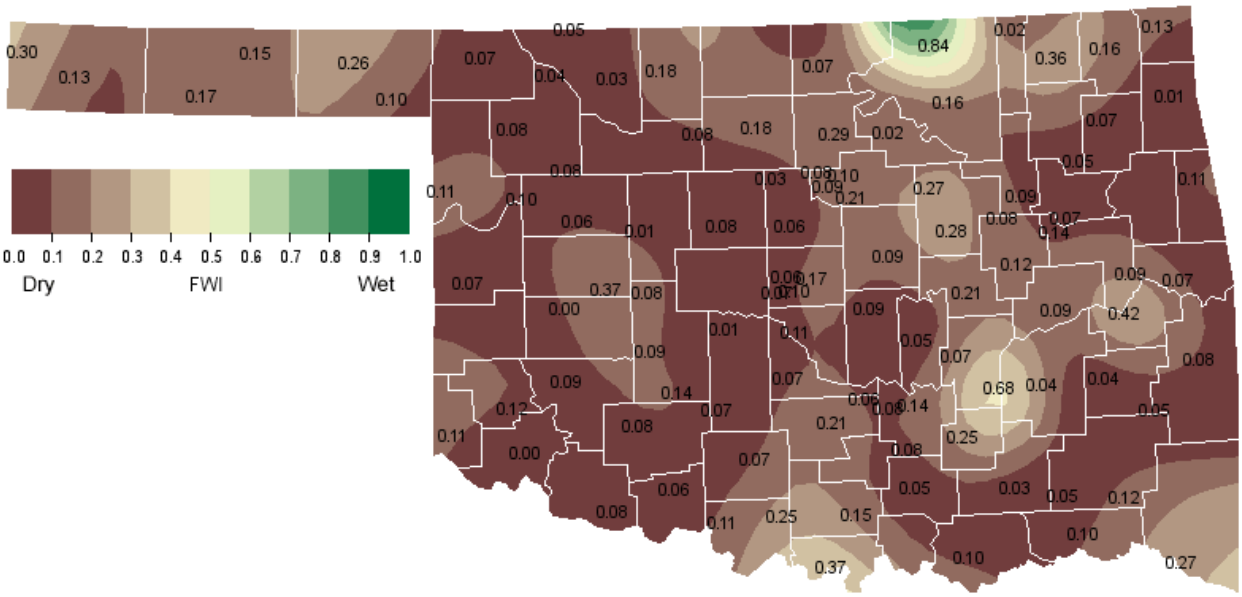
AUGUST NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



AUGUST NORMAL PRECIPITATION (1981-2010)



AUGUST 1, 2011 SOIL MOISTURE CONDITIONS AT 25CM



AUGUST 2011 DROUGHT INDICES

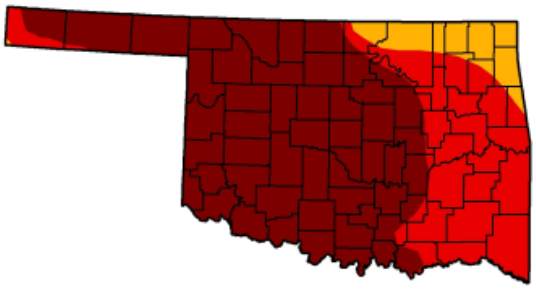
U.S. Drought Monitor

August 9, 2011
Valid 7 a.m. EST

Oklahoma

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	100.00	92.88	64.70
Last Week (08/02/2011 map)	0.00	100.00	100.00	100.00	88.10	64.30
3 Months Ago (05/10/2011 map)	22.11	77.89	69.69	61.23	40.19	15.14
Start of Calendar Year (12/28/2010 map)	13.82	86.18	47.90	1.50	0.00	0.00
Start of Water Year (09/28/2010 map)	66.28	33.72	4.21	0.00	0.00	0.00
One Year Ago (08/03/2010 map)	85.46	14.54	4.27	1.34	0.00	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

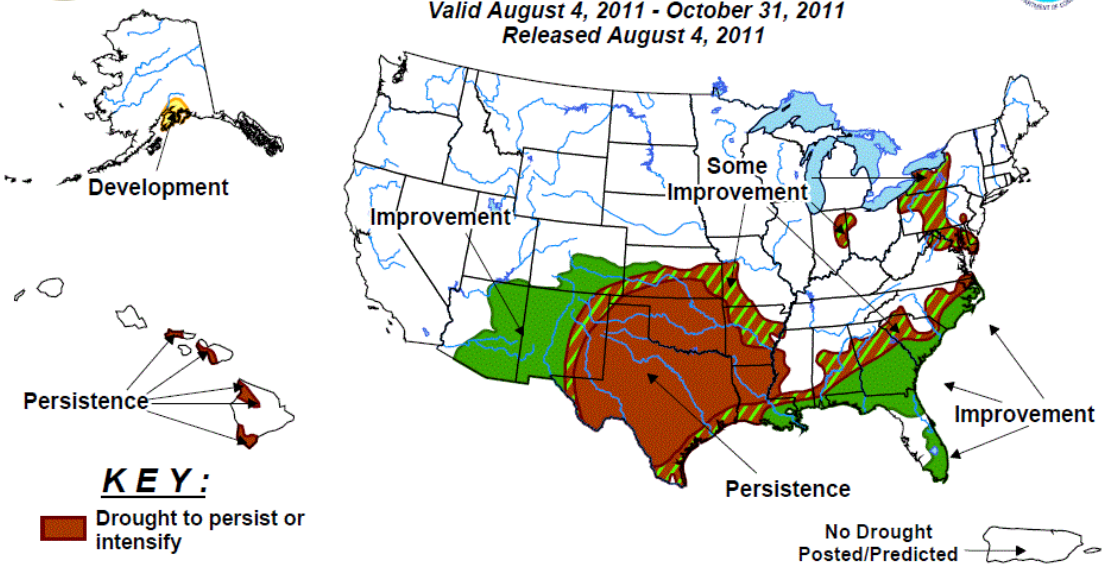
USDA · National Drought Mitigation Center

Released Thursday, August 11, 2011
Laura Edwards, Western Regional Climate Center

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid August 4, 2011 - October 31, 2011
Released August 4, 2011

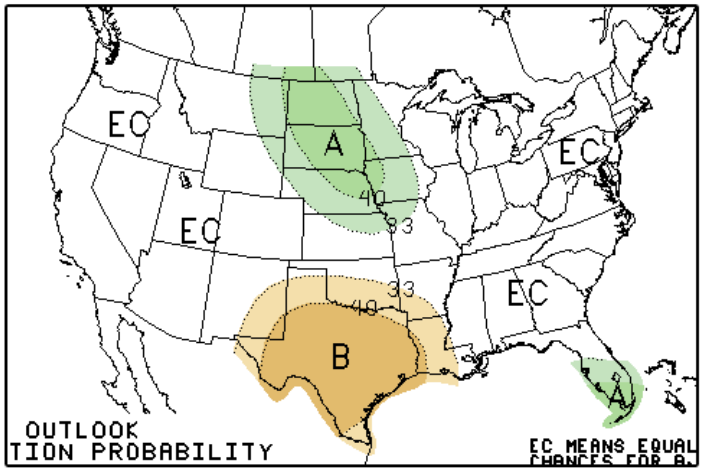


KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

AUGUST 2011 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

- 5% - 10%
- 0% - 5%

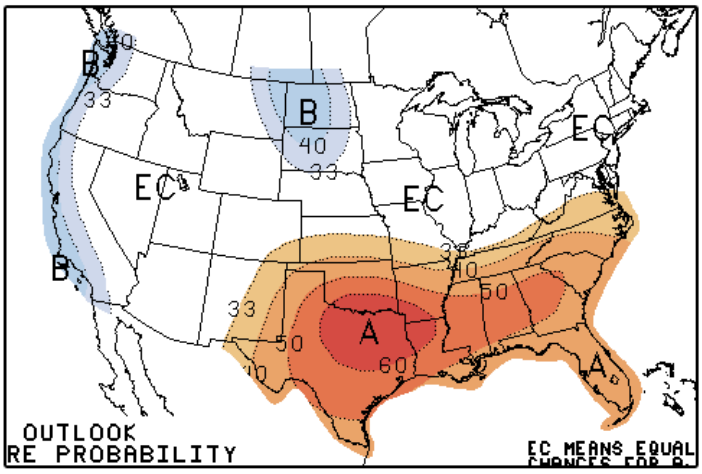
A = Above

- 0% - 5%
- 5% - 10%

B = Below

*EC indicates no forecasted anomalies due to lack of model skill.

AUGUST 2011 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

- 10% - 20%
- 5% - 10%
- 0% - 5%

A = Above

- 0% - 5%
- 5% - 10%

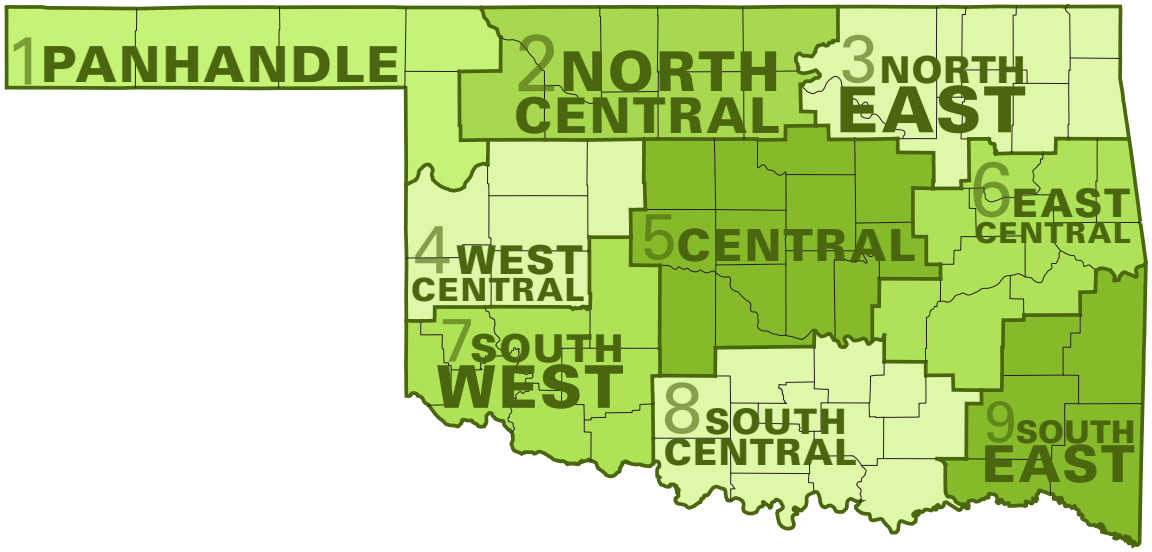
B = Below

*EC indicates no forecasted anomalies due to lack of model skill.

AUGUST CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	92.3	64.1	78.2	2.48
2	93.4	67.6	80.6	3.01
3	92.6	68.1	80.4	3.13
4	93.0	67.7	80.4	2.63
5	93.2	68.8	81.0	2.61
6	92.6	68.5	80.6	2.77
7	94.7	68.8	81.8	2.6
8	94.1	69.5	81.8	2.49
9	93.5	67.7	80.6	2.72
Statewide	93.3	68	80.7	2.73

Oklahoma Climate Divisions



INTERPRETATION INFORMATION

MEAN DAILY TEMPERATURE: Calculated from an average of the daily maximum and minimum temperatures. Daily averages are summed for each day, and then divided by the number of valid data points – typically the number of days in the month. Although this may differ from the "true" daily average, it is consistent with historical methods of observation and comparable to the normals and extremes for stations and regions of the state.

DEGREE DAYS: Degree Days are calculated each day of the month for which there is a temperature report and the mean temperature for the day is less than (Heating Degree Days) or greater than (Cooling Degree Days) 65 degrees. Daily values are summed to arrive at a monthly total. HDD/CDD are qualitative measures of how much heating/cooling was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value.

SEVERE WEATHER REPORTS: Only the most significant events are listed. Tornadoes of F2 or greater strength (on the 0-5 Fujita scale), hail of two inches diameter or greater, and wind speeds of 70 miles per hour or above are listed. National Weather Service defines storms as severe when they produce a tornado, hail of three-quarters inch or greater, or wind speeds above 57 miles per hour (50 knots). For additional reports, contact the Oklahoma Climatological Survey, Storm Prediction Center, or your local National Weather Service forecast office.

SOIL MOISTURE: The soil moisture variable displayed is the Fractional Water Index (FWI), measured at a depth of 25 cm. This unitless value ranges from very dry soil having a value of 0, to saturated soils having a value of 1.

ADDITIONAL RESOURCES

SUNRISE / SUNSET TABLES
U.S. Naval Observatory: http://aa.usno.navy.mil/data

SEVERE STORM REPORTS
Storm Prediction Center: http://spc.noaa.gov/climo/

National Climatic Data Center (more than about 4-5 months old):
http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storms

SEASONAL OUTLOOKS
Climate Prediction Center:
http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

CLIMATE CALENDARS AND OTHER LOCAL WEATHER AND CLIMATE INFORMATION
Oklahoma Climatological Survey:
http://climate.mesonet.org or http://climate.ok.gov/

OKLAHOMA CLIMATOLOGICAL SURVEY

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