

OKLAHOMA MONTHLY CLIMATE SUMMARY

AUGUST 2007



August would have been of the typical Oklahoma variety – hot and humid, with a smattering of rain here and there – if not for the visit from an unwanted guest. The remnants of tropical storm Erin arrived from the southwest and intensified to tropical storm strength once again over central Oklahoma. The reinvigorated storm, complete with an honest-to-goodness tropical eye and eyewall structure, spawned tornadoes, contained winds gusting to over 80 mph, and neared 500-year rainfall rates near Ft. Cobb on the 3-, 6- and 12-hour time scales. The event brought nine inches or more to the Watonga and Fort Cobb areas, and between 7-9 inches at several other locations. The prodigious rainfall amounts pulled August from the dry side to rank as the 47th wettest since 1895, and propelled the summer to the 4th wettest on record. The heat held sway against the precipitation, however, and ranked as the 35th warmest on record.

Precipitation

Most of the state outside of Erin’s heavy precipitation “footprint” remained fairly dry during August. The Panhandle continued its parched ways with a deficit of nearly an inch -- its 23rd driest August on record -- which contributed to the 19th driest summer season for that area. Southeastern Oklahoma was similarly dry and finished with the 16th driest August on record. The Oklahoma Mesonet site at Hugo measured a measly 0.12 inches of rainfall for the month. Central Oklahoma’s summer precipitation total finished with a surplus of nearly 14 inches, easily the wettest such period on record for that region. The southwest also experienced its wettest summer on record with a surplus of more than eight inches. For the year-to-date period, the Panhandle was the lone region with deficit conditions, posting a shortfall of more than two inches. Central Oklahoma’s January-August period, on the other hand, was the wettest such period on record with a surplus of more than 18 inches. The year-to-date statewide average of more than 32 inches ranked as the 4th wettest on record.

Temperature

Oklahoma’s string of cool summer months came to a screeching halt during August. While the summer season was nearly a degree below normal statewide to rank as the 31st coolest on record, August was actually two degrees above normal. The year-to-date period was fairly close to normal at a tenth of a degree below normal.

August 2007 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	106°F	Goodwell	Aug 20
		Hooker	Aug 20
		Webber Falls	Aug 13
Low Temperature	57°F	Hooker	Aug. 31
High Precipitation	9.87 in.	El Reno	
Low Precipitation	0.12 in.	Hugo	

August Daily Highlights

August 1-2: The first two days of August brought heavy showers to the state. The Oklahoma Mesonet site at Slapout recorded more than three inches on the first, followed closely by Pauls Valley with exactly three inches. The slow-moving storms added to the state’s wet July totals. Temperatures during this period were mainly in the 80s and 90s with lows in the 60s and 70s.

August 3-8: This six-day period portrayed a typical August run of hot and muggy weather. Very little rain fell as the state was dominated by an upper-level ridge of high pressure. The first serious run of triple-digit temperatures began on the fifth with highs in northwestern Oklahoma rising to the 105-degree mark. The winds kicked up from the south to about 30 mph between the sixth and eighth. Low temperatures were seasonable throughout the period.

August 9-15: The ninth saw slow-moving storms in the morning in northern Oklahoma. The Newkirk and Burbank Mesonet sites recorded more than an inch of precipitation. Winds of up to 74 mph were measured by the Kingfisher Mesonet site. That was the end to the stormy weather, however, as sunny skies and hot weather once again became the norm through the 15th. The state’s highest temperature of the month (and the year thus far), 106 degrees, occurred at Hooker and Webbers Falls on the 12th and 13th, respectively.

August 16-19: This four-day stretch saw one of the rarest of events that Oklahoma will ever see weather-wise: the intensification of a tropical weather system. Remnants of Tropical Storm Erin first brought high clouds to the state on the 16th. Temperatures were still able to reach the 90s and

100s, however. More heat and a bit of rain were in store on the 17th as Erin continued moving through southwestern Texas, eventually turning to the northeast toward Oklahoma. The rain from Erin's remnants began early on the 18th, mainly in western Oklahoma. Two brief tornadoes spun up in between 3-5 pm near Hobart and Cordell. As the day wore on, the rain intensified west of I-35. Just before midnight, the remnants of TS Erin began to intensify. A definite eye and associated eye wall structure formed in southeastern Blaine County around 4 a.m. on the 19th. Wind gusts recorded during the intensification exceeded 70 mph, with a gust measured at the Watonga airport of 82 mph before the sensor stopped reporting. The Mesonet site at Watonga, near the center of the circulation, reported severe winds nearly continuously for two hours. During this time, sustained wind speeds over 40 miles per hour were reported. The eye then traveled east across Canadian and Oklahoma Counties before becoming unorganized. The slow-moving system dropped more than five inches of rainfall along its path, with over an inch common in a larger area from Erin's outer bands. Of the Mesonet sites, Fort Cobb picked up the highest total with 9.24 inches. However, a volunteer observer reported 11.00 inches northwest of Geary, while another observer three miles northeast of Eakly measured nearly 13 inches.

August 20-22: The heat returned with Erin's exit. Highs were once again into triple-digit territory over much of western Oklahoma on the 20th. A few showers and storms hit the northwest on the 20th and 21st, but amounts were less than an inch. Highs moderated to a more seasonable level on the 22nd in the 80s and 90s.

August 23-25: A very windy period that brought severe storms back to the state. A cold front began to slide into Oklahoma from the northwest. A wind advisory was issued for much of western Oklahoma on the 23rd as winds gusted to 40 mph. Storms in the northwest dumped over an inch of rain in Harper and Woods Counties. Storms persisted overnight and later formed farther east along and north of I-44. As the storms moved to the east late on the 24th they became much more efficient rain-producers and dropped up to four inches in northeastern Oklahoma. Flash flood warnings were issued for several locations in the northeast. Additional storms on the 25th produced over three inches of rainfall for McAlester. High temperatures throughout this period were in the 90s.

August 26-31: August could not escape without yet another bit of rainy weather, but not before some typical August weather first. The 26th-28th period was dominated by upper-level high pressure, which meant heat and humidity. Highs in the 90s combined with the moisture to produce heat indices above 100 throughout this period. A cold front entered the state from the northwest on the 29th, offering cooler weather and a focus for showers and thunderstorms. Most of the rainfall was confined to central and southern Oklahoma. The month ended with a splendid day under following the front's passage. Lower temperatures and humidity were a result, and low temperatures dropped into the 60s before rebounding into the 80s.

August 2007 Statewide Statistics			
Temperature			
	Average	Depart.	Rank (1895-2007)
Month (August)	82.4°F	2.0°F	35th Warmest
Season-to-Date (Jun-Aug)	78.6°F	-0.9°F	31st Coolest
Year-to-Date (Jan-Aug)	61.8°F	-0.1°F	54th Warmest
Precipitation			
	Total	Depart.	Rank (1895-2007)
Month (August)	3.07 in.	0.30 in.	47th Wettest
Season-to-Date (Jun-Aug)	16.21 in.	6.44 in.	4th Wettest
Year-to-Date (Jan-Aug)	32.56 in.	7.90 in.	4th Wettest

Depart. = Departure from 30-year normal

August 2007 Severe Weather

Significant Tornadoes (EF2 or greater)

No significant tornadoes were reported in the state.

Hail (2 inches in diameter or greater)

No significant hail were reported in the state.

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
74	2 NE Kingfisher	Kingfisher	9
70	3 E Bison	Garfield	9
82	Watonga	Blaine	19
75	4 NNW Fort Cobb	Caddo	19
70	7 SW Fort Cobb	Caddo	19

Flooding

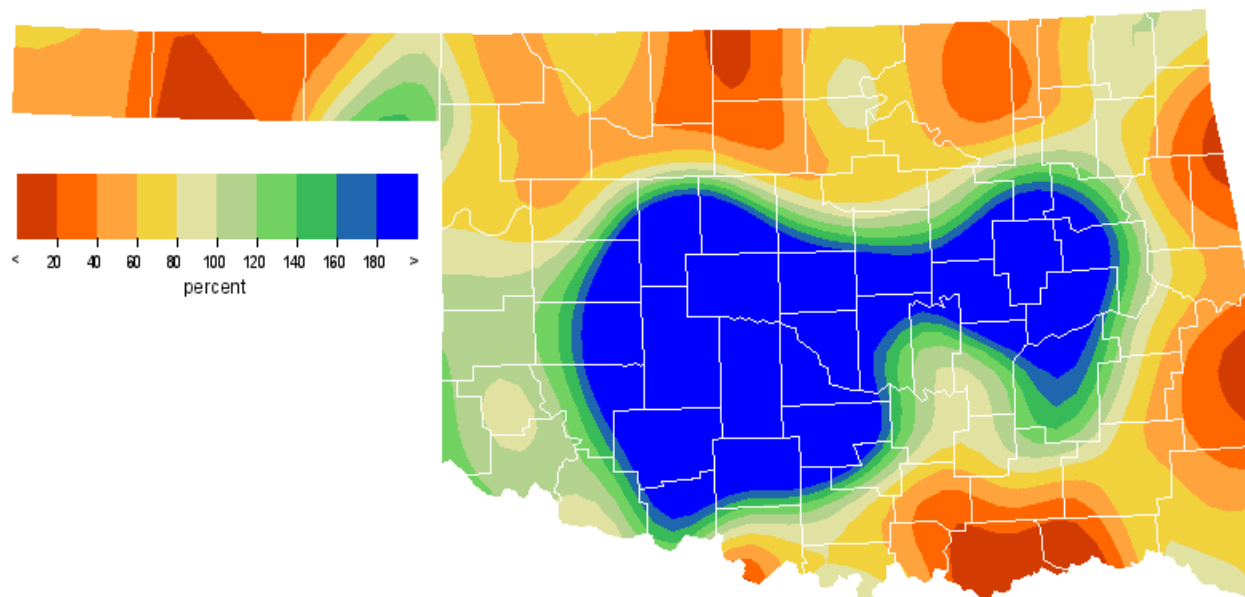
Location	County	Day
Cordell	Washita	1
Pauls Valley	Garvin	1
Cyril	Caddo	18
Hobart	Kiowa	18
Mountain View	Kiowa	18
1 E Mountain View	Kiowa	19
1 S Union City	Canadian	19
1 W Tuttle	Grady	19
2 N Hitchita	McIntosh	19
2 S Union City	Canadian	19
2 SW Eakly	Caddo	19
2 W Mountain View	Caddo	19
3 SE Thomas	Custer	19
4 ESE Mountain View	Kiowa	19
4 N Henryetta	Okmulgee	19
4 S Carnegie	Caddo	19
5 E Mountain View	Kiowa	19

Location	County	Day
Hitchita	McIntosh	19
Kingfisher	Kingfisher	19
Norman	Cleveland	19
Norman	Cleveland	19
Okemah	Okfuskee	19
Oklahoma City	Oklahoma	19
Okmulgee	Okmulgee	19
Seminole	Seminole	19
Shawnee	Pottawatomie	19
Warner	Muskogee	19
Yukon	Canadian	19
6 W Hectorville	Okmulgee	24
Bixby	Tulsa	24
Coweta	Wagoner	24
Mounds	Creek	24
Pryor	Mayer	24

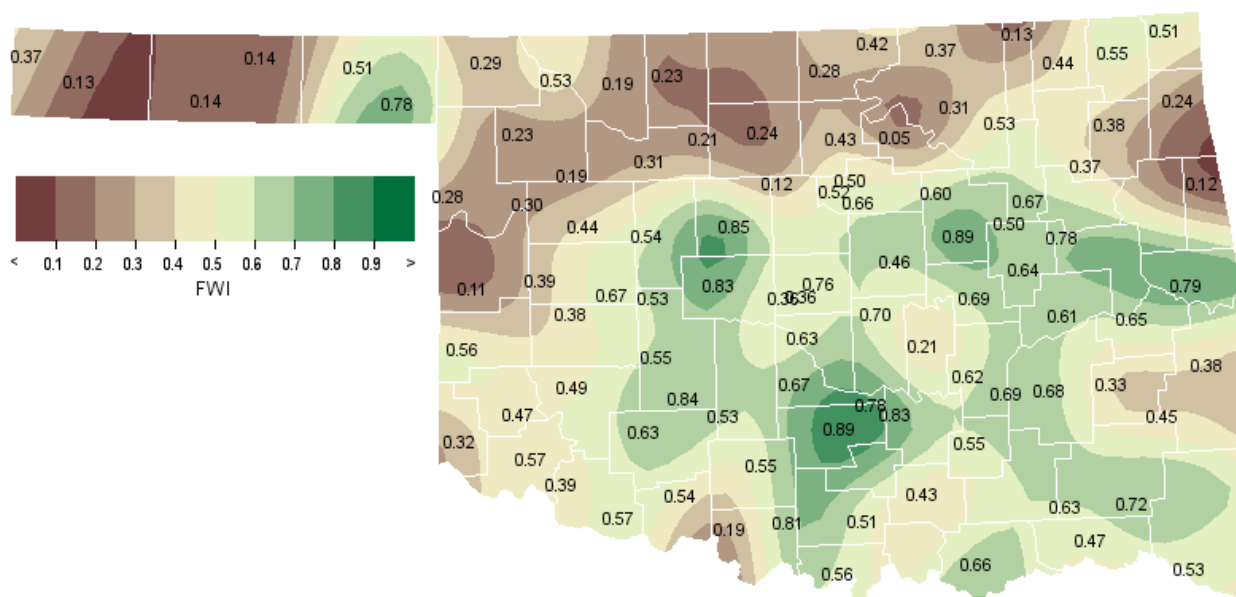
Record Event Reports

Description	Day	Location	Record	Previous Record	Year
Daily Minimum Temperature (tie)	19	Oklahoma City	3.82	0.87	1977
August Daily Maximum Rainfall	19	Oklahoma City	3.82	3.17	1934
Daily Maximum Rainfall	25	McAlester	3.61	0.41	1988

August 2007 Percent of Normal Precipitation



August 2007 Average Soil Moisture at 25cm



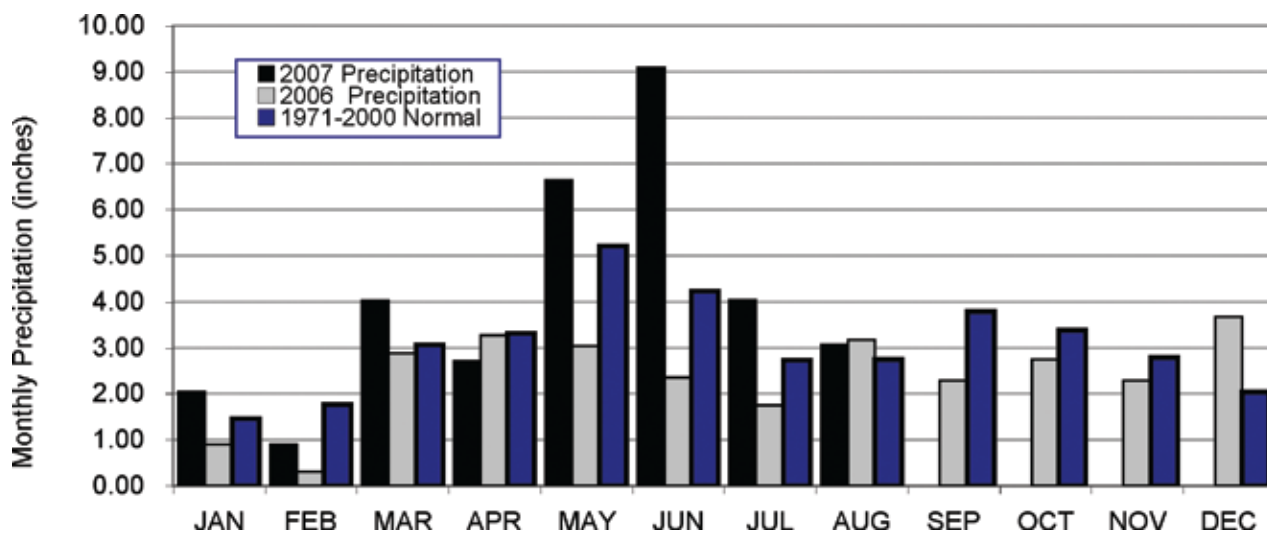
Mesonet Monthly Summary for August 2007

NAME	MEAN HIGH			LOW		HDD	CDD	TOT HIGH			NAME	MEAN HIGH			LOW		HDD	CDD	TOT HIGH		
	TEMP	TEMP	DAY	TEMP	DAY			PPT	24-HR	DAY		TEMP	TEMP	DAY	TEMP	DAY			PPT	24-HR	DAY
PANHANDLE																					
Arnett	80.8	100	14	62	31	0	490	1.76	.89	2	Goodwell	80.8	106	20	61	31	0	491	.26	.15	1
Beaver	81.9	103	11	59	31	0	525	1.40	.68	1	Hooker	81.5	106	20	59	31	0	512	.74	.28	23
Boise City	78.5	102	20	60	31	0	418	1.57	.48	28	Kenton	78.4	102	20	57	31	0	415	*****	*****	***
Buffalo	83.9	105	8	61	31	0	587	1.47	1.15	23	Slapout	80.9	102	8	61	31	0	494	3.96	3.13	1
NORTH CENTRAL																					
Alva	83.4	103	14	62	31	0	569	2.37	1.95	24	May Ranch	82.7	102	15	62	31	0	550	2.09	1.26	23
Blackwell	82.7	102	14	62	31	0	548	2.30	1.43	24	Medford	84.1	104	14	61	31	0	593	.77	.65	24
Breckinridge	83.1	103	14	62	31	0	560	.86	.46	24	Newkirk	82.5	100	14	64	31	0	544	2.35	1.47	9
Cherokee	83.4	102	14	62	31	0	569	.90	.67	24	Red Rock	83.2	103	14	63	31	0	566	4.12	2.89	24
Fairview	84.9	105	12	63	31	0	617	1.14	.89	24	Seiling	81.8	102	14	63	31	0	521	1.90	.70	21
Freedom	83.5	104	15	62	31	0	573	1.20	.66	24	Woodward	81.9	100	15	61	31	0	524	1.41	.70	20
Lahoma	83.2	103	14	63	31	0	564	1.74	1.00	24											
NORTHEAST																					
Bixby	82.8	102	13	66	31	0	552	4.99	2.01	25	Nowata	82.8	102	14	61	31	0	552	1.62	1.23	24
Burbank	82.0	100	15	62	31	0	528	2.52	1.27	9	Pawnee	83.1	103	14	65	31	0	561	1.84	.58	24
Claremore	83.8	105	14	63	31	0	583	1.81	1.38	24	Porter	82.7	102	13	66	25	0	550	4.64	2.31	19
Copan	83.2	103	15	62	31	0	564	1.60	.91	24	Pryor	82.9	103	14	63	31	0	556	3.21	2.31	24
Foraker	81.7	99	14	62	31	0	516	1.26	.38	9	Skiatook	83.0	102	13	65	31	0	559	1.29	.76	19
Inola	81.6	101	14	65	31	0	513	3.29	1.93	24	Vinita	82.4	102	13	61	31	0	539	3.44	1.76	24
Jay	82.0	102	15	62	31	0	526	1.31	.56	25	Wynona	82.9	103	14	65	31	0	554	1.14	.44	29
Miami	82.2	102	14	60	31	****	****	3.36	1.97	25											
WEST CENTRAL																					
Bessie	82.3	102	14	67	10	0	535	3.91	2.57	18	Putnam	81.1	100	14	63	31	0	499	1.42	.65	18
Butler	81.7	101	14	64	31	0	518	3.42	1.17	24	Retrop	82.2	101	14	67	31	0	534	3.60	1.81	18
Camargo	81.4	102	14	61	31	0	508	1.53	.59	24	Watonga	82.2	102	14	66	31	0	533	7.60	3.74	19
Cheyenne	81.1	100	14	63	31	0	498	2.58	.97	18	Weatherford	82.2	102	14	67	31	0	533	7.59	6.52	18
Erick	80.8	101	14	62	31	0	489	2.91	1.76	18											
CENTRAL																					
Acme	81.9	100	14	65	31	0	523	6.54	4.17	19	Norman	82.8	100	14	67	31	0	553	6.09	4.97	19
Bowlegs	82.2	101	14	66	31	0	532	2.13	2.10	19	Oilton	81.0	101	14	61	31	0	497	3.16	1.54	25
Bristow	81.5	103	14	62	11	0	511	3.06	1.74	19	Oklahoma City	83.5	102	14	66	31	0	574	6.05	4.61	19
Chandler	82.4	100	14	67	31	0	540	4.70	3.25	19	Oklahoma City	84.0	102	14	68	31	0	589	5.34	3.50	19
Chickasha	82.9	102	13	63	10	0	554	5.83	3.91	19	Oklahoma City	83.9	100	14	70	31	0	586	6.02	4.25	19
El Reno	80.9	100	14	60	31	0	494	9.87	7.07	19	Okemah	*****	***	***	***	***	****	****	8.41	7.77	19
Guthrie	83.7	103	14	66	31	0	580	4.20	3.19	19	Perkins	83.4	102	14	66	31	0	571	2.28	1.24	18
Kingfisher	82.9	101	14	66	31	0	555	6.61	5.35	19	Shawnee	83.0	101	14	65	31	0	557	5.25	4.55	19
Marena	82.2	101	14	65	31	0	533	1.45	.63	18	Spencer	82.9	100	14	65	31	0	555	*****	*****	***
Minco	81.7	99	14	68	10	0	518	7.61	4.92	19	Stillwater	83.6	105	14	65	31	0	575	1.31	.51	19
Marshall	84.2	104	14	64	31	0	594	1.07	.47	19	Washington	82.0	101	13	66	10	0	528	6.22	3.85	19
Ninnekah	83.5	102	14	67	31	0	574	5.48	3.02	19											
EAST CENTRAL																					
Calvin	82.0	102	14	63	11	0	526	2.84	2.46	19	Sallisaw	83.1	101	13	65	31	0	560	1.79	1.11	25
Cookson	81.6	103	13	63	31	0	515	2.26	1.16	25	Stigler	82.5	103	14	65	31	****	****	2.19	1.43	25
Eufaula	83.5	102	12	67	26	0	574	5.75	2.80	19	Stuart	82.2	102	14	66	11	0	533	2.68	1.73	19
Haskell	82.5	102	14	66	31	0	542	5.53	3.08	19	Tahlequah	82.8	103	13	66	26	0	550	1.53	.78	19
Hectorville	83.0	102	14	67	31	0	559	5.70	2.26	25	Webbers Falls	84.7	106	13	67	31	0	610	3.86	2.37	19
McAlester	82.3	102	14	66	11	0	536	5.99	3.48	25	Westville	82.1	104	13	65	26	0	529	.77	.28	19
Okmulgee	82.8	103	13	65	11	0	552	9.66	8.55	19											
SOUTHWEST																					
Altus	82.2	100	14	68	10	0	535	3.23	1.81	18	Hollis	82.1	102	14	64	10	0	531	3.00	2.09	18
Apache	81.7	99	14	67	10	0	518	5.81	3.03	19	Mangum	81.3	101	14	62	10	0	506	1.92	1.46	18
Fort Cobb	81.4	100	14	65	10	0	509	9.55	9.00	18	Medicine Park	82.6	100	13	70	31	0	546	5.43	4.22	18
Grandfield	84.3	103	14	66	10	0	597	2.58	1.13	19	Tipton	83.6	103	14	67	10	0	578	3.30	2.05	18
Hinton	81.7	101	14	65	31	0	517	*****	*****	***	Walters	83.4	103	14	66	10	0	571	6.67	4.94	19
Hobart	82.8	101	14	66	31	0	553	4.21	3.37	18											
SOUTH CENTRAL																					
Ada	82.8	101	14	66	31	0	553	3.89	3.51	19	Madill	83.1	102	14	69	31	0	562	1.67	.95	25
Ardmore	83.3	101	14	69	26	0	567	2.39	1.50	30	Newport	83.1	103	14	69	10	0	562	1.42	.68	1
Burneyville	82.6	101	14	67	30	0	547	2.19	.69	30	Pauls Valley	82.6	101	14	68	31	0	546	7.02	3.69	19
Byars	82.2	100	14	67	31	0	534	3.63	3.56	19	Ringling	82.7	100	13	68	10	0	549	2.71	1.68	1
Centrahoma	82.4	102	14	66	11	0	538	2.73	1.44	30	Sulphur	81.6	101	14	66	10	0	514	2.35	1.97	19
Durant	82.8	101	14	68	10	0	552	.24	.23	25	Tishomingo	82.3	102	14	65	10	0	536	.76	.48	25
Fittstown	81.5	101	14	66	28	0	510	1.81	1.60	19	Vanoss	82.3	100	14	68	31	0	537	4.53	4.40	19
Ketchum Ranch	83.4	101	14	69	10	0	569	6.29	4.49	19	Waurika	83.8	103	14	65	10	0	584	1.32	.75	19
Lane	81.6	100	13	67	26	****	****	1.77	1.30	25											
SOUTHEAST																					
Antlers	81.6	102	13	64	11	0	514	.47	.39	25	Idabel	82.4	102	13	63	26	0	540	1.99	1.57	17
Broken Bow	81.5	104	13	63	26	0	511	1.81	.59	18	Mt Herman	81.5	102	13	65	31	0	511	1.16	.45	25
Clayton	83.1	103	13	65	26	0	560	1.34	.69	25	Talihina	82.8	104	14	64	26	****	****	1.56	1.01	25
Cloudy	81.0	102	13	64	26	0	497	3.27	.93	25	Wilburton	82.7	102	14	65	31	0	549	2.79	2.29	25
Hugo																					

August 2007 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Aug-06
Panhandle	1.59	-0.92	23rd Driest	5.68 (1977)	0.47 (1913)	4.65
North Central	1.78	-1.27	32nd Driest	7.69 (1974)	0.09 (1913)	3.06
Northeast	2.49	-0.69	41st Driest	8.03 (1964)	0.02 (2000)	3.45
West Central	3.84	1.12	24th Wettest	7.25 (2005)	0.05 (1913)	3.66
Central	4.94	2.31	14th Wettest	7.21 (1906)	0.03 (2000)	3.37
East Central	3.89	1.02	38th Wettest	6.89 (1915)	0.00 (2000)	2.69
Southwest	4.57	1.88	14th Wettest	8.01 (1996)	0.00 (1913)	3.30
South Central	2.75	0.21	44th Wettest	8.46 (1915)	0.01 (2000)	1.67
Southeast	1.51	-1.20	16th Driest	8.73 (1915)	0.19 (1943)	2.68
Statewide	3.07	0.30	47th Wettest	6.54 (1906)	0.14 (2000)	3.17

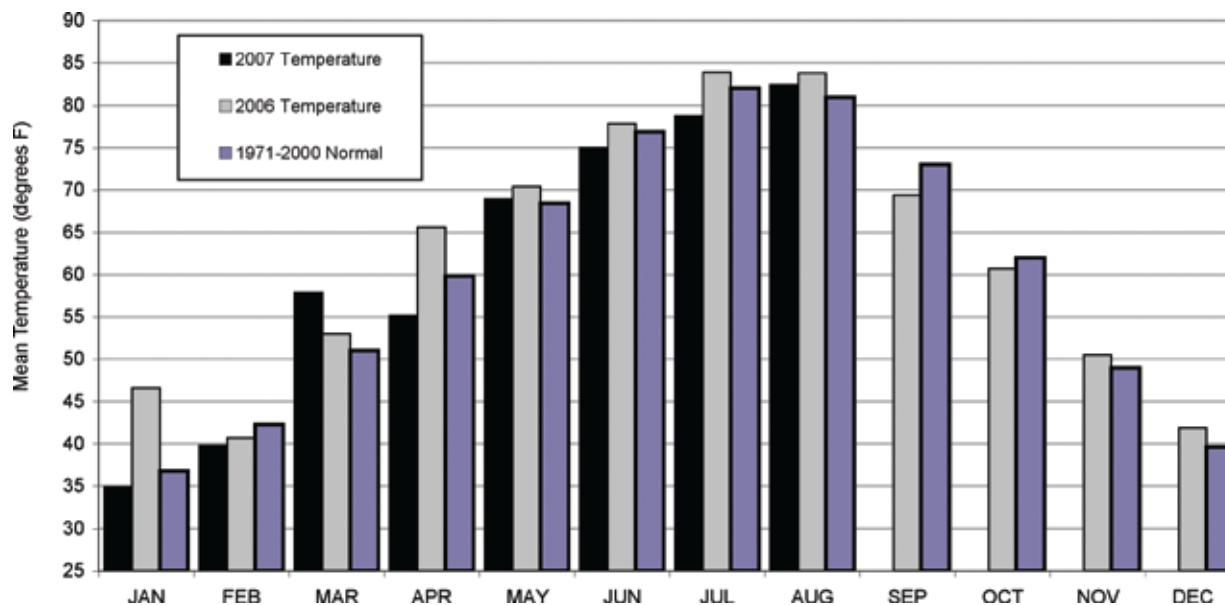
2006 and 2007 Statewide Precipitation Monthly Totals vs. Normal



August 2007 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Aug-06 (F)
Panhandle	80.9	3.1	14th Warmest	83.1 (1983)	71.3 (1915)	77.6
North Central	83.1	2.4	29th Warmest	88.9 (1936)	72.3 (1915)	83.0
Northeast	82.6	2.8	20th Warmest	88.4 (1936)	71.7 (1915)	84.2
West Central	81.6	1.4	39th Warmest	87.4 (1936)	72.9 (1915)	82.7
Central	82.7	1.7	36th Warmest	88.3 (1936)	73.1 (1915)	84.9
East Central	82.7	2.3	35th Warmest	88.0 (1936)	73.0 (1915)	85.0
Southwest	82.5	0.7	52nd Warmest	88.1 (1952)	75.4 (1915)	84.9
South Central	82.7	0.9	50th Warmest	87.6 (1934)	75.5 (1915)	86.5
Southeast	82.3	2.0	38th Warmest	87.3 (1943)	74.5 (1915)	84.9
Statewide	82.4	2.0	35th Warmest	87.2 (1936)	73.2 (1915)	83.8

2006 and 2007 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for August 2007

Climate Division	High Temp			Low Temp			High Monthly Rainfall			High Daily Rainfall		
	(F)	Day	Station	(F)	Day	Station	(inches)	Station	(inches)	Day	Station	
Panhandle	106	20th	Hooker	57	31st	Kenton	3.96	Slapout	3.13	1st	Slapout	
North Central	105	12th	Fairview	61	31st	Woodward	4.12	Red Rock	2.89	24th	Red Rock	
Northeast	105	14th	Claremore	60	31st	Miami	4.99	Bixby	2.31	24th	Pryor	
West Central	102	14th	Camargo	61	31st	Camargo	7.60	Watonga	6.52	18th	Weatherford	
Central	105	14th	Stillwater	60	31st	El Reno	9.87	El Reno	7.77	19th	Okemah	
East Central	106	13th	Webber Falls	63	31st	Cookson	9.66	Okmulgee	8.55	19th	Okmulgee	
Southwest	103	14th	Walters	62	10th	Mangum	9.55	Fort Cobb	9.00	18th	Fort Cobb	
South Central	103	14th	Newport	65	10th	Tishomingo	7.02	Pauls Valley	4.49	19th	Ketchum Ranch	
Southeast	104	13th	Wister	63	26th	Idabel	3.27	Cloudy	2.29	25th	Wilburton	
Statewide	106	20th	Hooker	57	31st	Kenton	9.87	El Reno	9.00	18th	Fort Cobb	

September Climatological Outlook

NORMAN -Summer's heat fades as precipitation increases across most of Oklahoma during September. The statewide-averaged normal temperature for the month, 73.0 degrees, makes September the 4th warmest month of the year. As such, climatologists consider it to be the first month of the autumn transitional season. Monthly precipitation decreases in extreme northwestern portions of the state, even as the rest of the state enjoys a second rainy season. Normal monthly precipitation, averaged statewide, is 3.80 inches, an increase of more than one inch over either of the two previous months. An increasing frequency of fronts, bringing cooler air from the northern plains, leads to the lower temperatures, an effect that often isn't apparent before the middle of the month.

Precipitation

Mean: 3.80 inches
Wettest September: 1945, 7.86 inches
Driest September: 1956, 0.27 inches
Wettest location: Kansas, 5.56 inches
Driest location: Regnier, 1.44 inches
Most recorded: 16.82 inches, Wyandotte, 1945

Freezes are uncommon in September, but stations in the extreme northwest experience a freeze before the end of September in about 10 percent of years. The earliest reported freeze is September 15, in 1993 at Freedom (28 degrees), Gage (30 degrees), and Hammon (30 degrees), and in 1947 at Kenton (31 degrees). Hot weather is most evident in the southwest. Chattanooga averages 16 days in September with a high temperature of 90 degrees or more, including four days in which the temperature reaches 100 degrees or more. Conversely, Kansas and Stilwell each average only six September days with the high temperature in the 90s. Triple digit temperatures occur only about once every third year at Miami, Kenton, and Boise City.

Temperature

Mean: 73.0 degrees
Hottest September: 1931, 79.8 degrees
Coolest September: 1974, 64.7 degrees
Hottest location: Waurika, 76.8 degrees
Coolest location: Boise City, 68.0 degrees
Hottest recorded: 115 degrees, Alva, September 3, 1939
and 1947
Coldest recorded: 25 degrees, Boise City, September 30,
1985

Statewide-averaged precipitation has varied between 0.27 inch in 1956 and 7.86 inches in 1945. Wyandotte recorded 16.82 inches in September 1945 to hold the monthly state record. The record daily precipitation at a regular reporting station is the 10.42 inches reported at Barnsdall on September 29, 1986. Snow is rare in September, But Boise City reported 4 inches for the month in 1984 and Kenton recorded 3 inches on September 17, 1971, the earliest snowfall in the state since at least 1910.

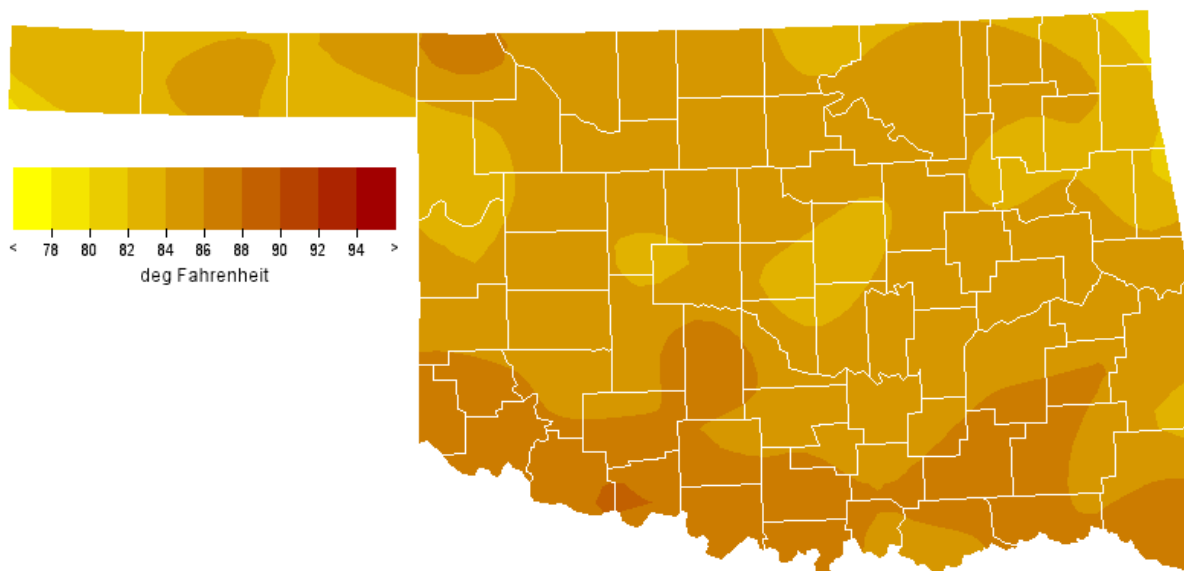
Tornadoes are slightly more frequent in September, averaging 2.1 each year, than they are during the previous two months. The most tornadoes reported in the state during September is 16 in 1992. No tornadoes were reported in the state during September in 18 of 52 years from 1950 through 2001 (the period of comprehensive records). Two people killed in Pottawattomie County on September 14, 1957 are the only tornado-related deaths recorded in September during that period.

Tornadoes

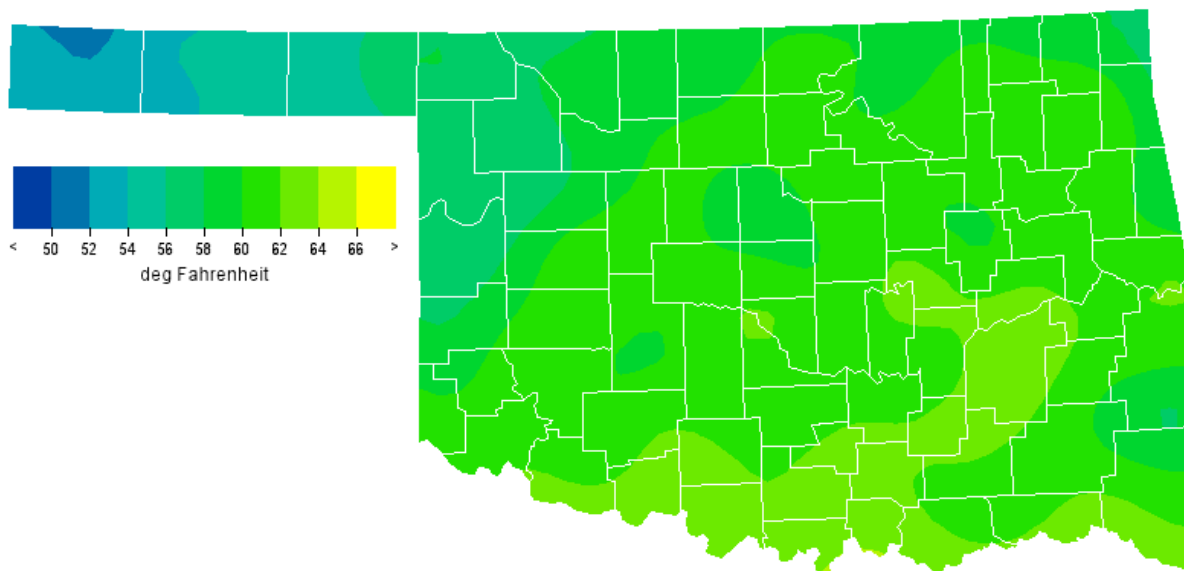
Average September Tornadoes: 2.1
Most: 16 (1992)

Floods present a more common weather hazard than tornadoes in September. Residual moisture from tropical disturbances, usually from the Gulf of Mexico but occasionally from the Pacific Ocean, interacts with slow moving frontal systems in the state from time-to-time during the autumn months. Widespread heavy downpours are the typical result, frequently leading to flooding on larger rivers and streams. On other occasions, a frontal system will stall within the state and successive thunderstorms will form along the frontal boundary and follow each other along a narrow path, thereby producing intense rain over a limited area and causing dangerous flash flooding.

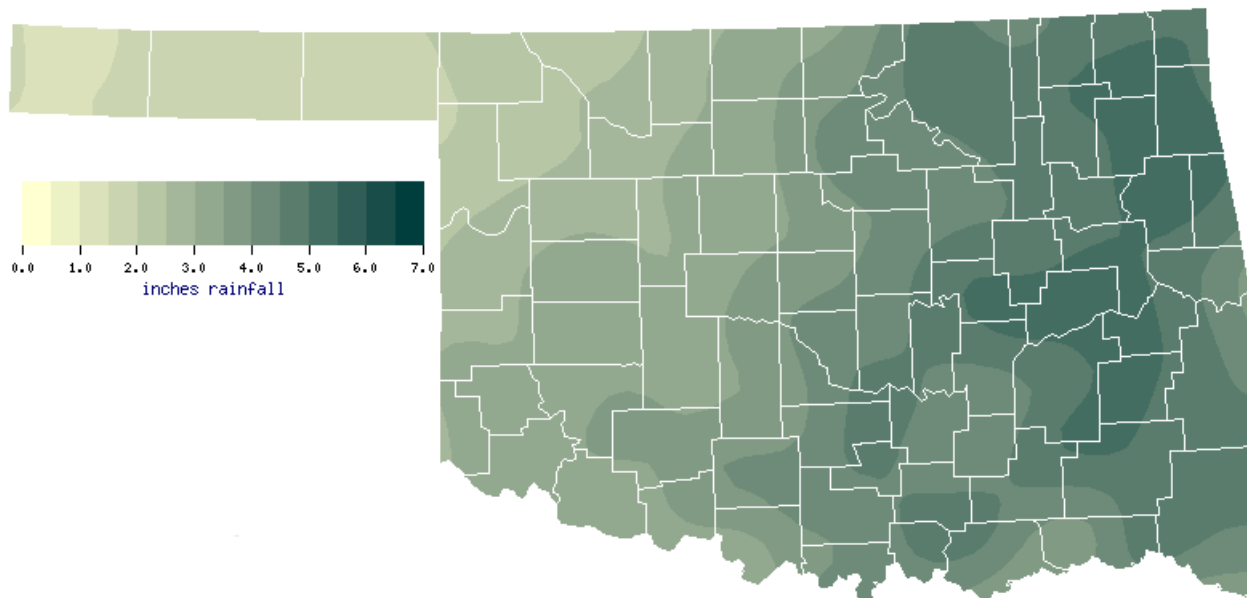
September Normal Daily Maximum Temperature (1971-2000)



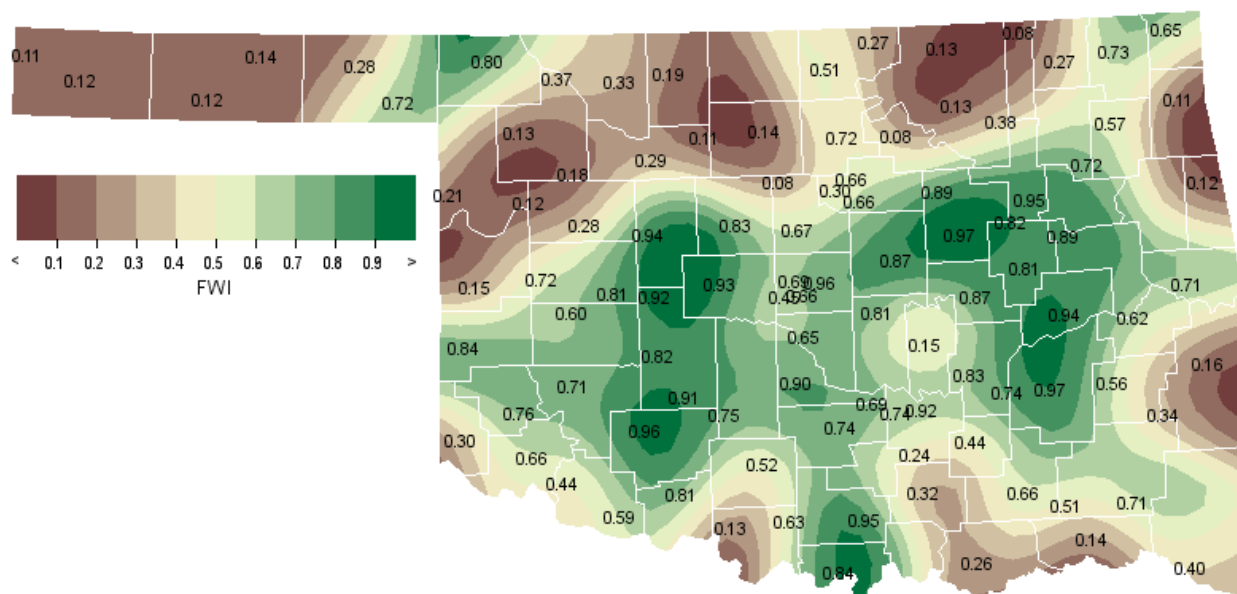
September Normal Daily Minimum Temperature (1971-2000)



September Normal Precipitation (1971-2000)



September 1, 2007 Soil Moisture Conditions at 25cm



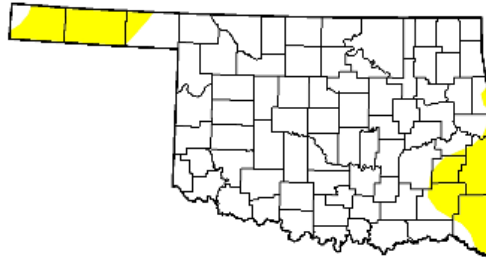
U.S. Drought Monitor

Oklahoma

August 28, 2007
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	87.0	13.0	0.0	0.0	0.0	0.0
Last Week (08/21/2007 map)	83.2	16.8	0.0	0.0	0.0	0.0
3 Months Ago (06/05/2007 map)	96.9	3.1	0.0	0.0	0.0	0.0
Start of Calendar Year (01/02/2007 map)	31.3	68.7	39.8	24.5	18.2	0.0
Start of Water Year (10/03/2006 map)	2.7	97.3	92.7	46.2	16.6	0.0
One Year Ago (08/29/2006 map)	1.0	99.0	97.4	63.3	30.7	6.4



Intensity:

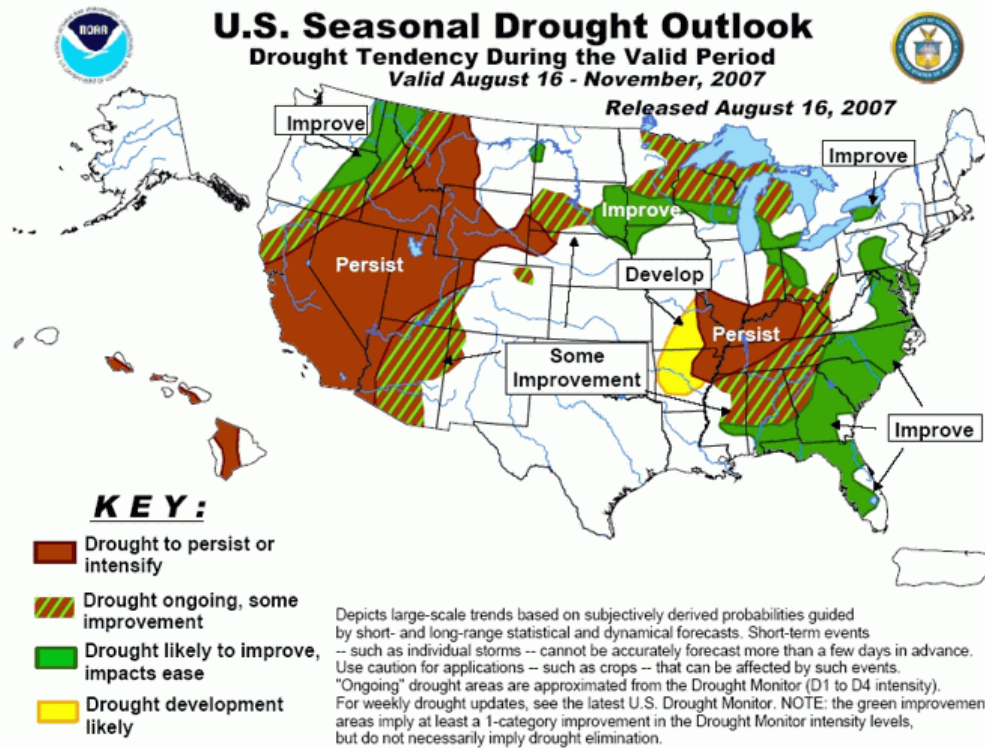
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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

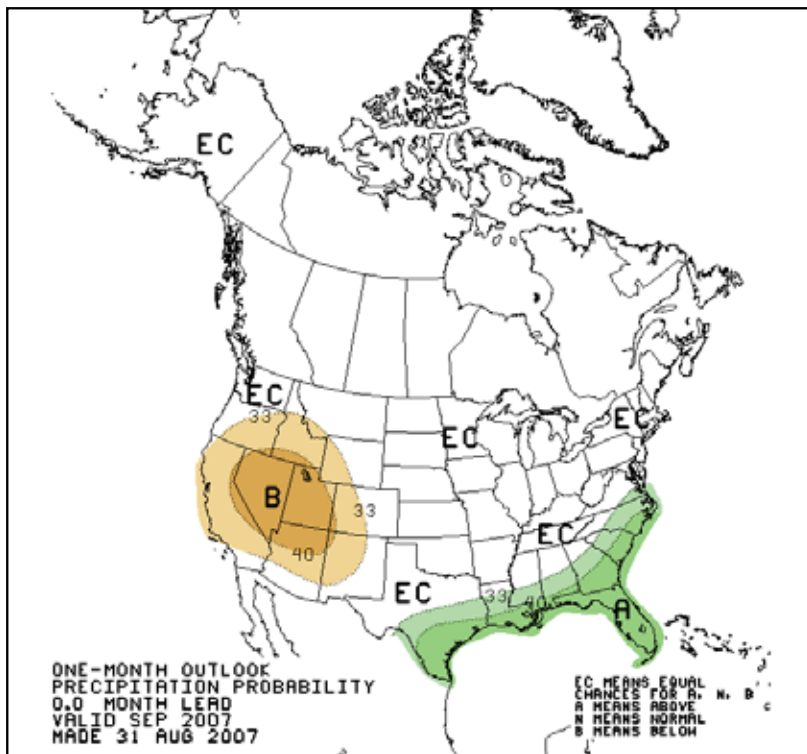
<http://drought.unl.edu/dm>



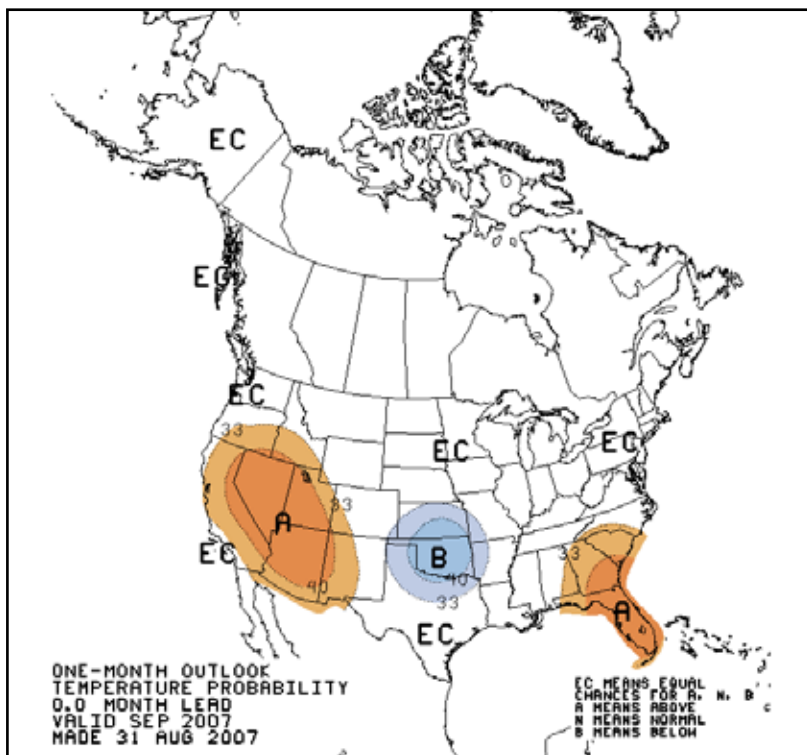
Released Thursday, August 30, 2007
Author: Thomas Heddinghaus, CPC/NOAA



September 2007 U.S. Precipitation Forecast



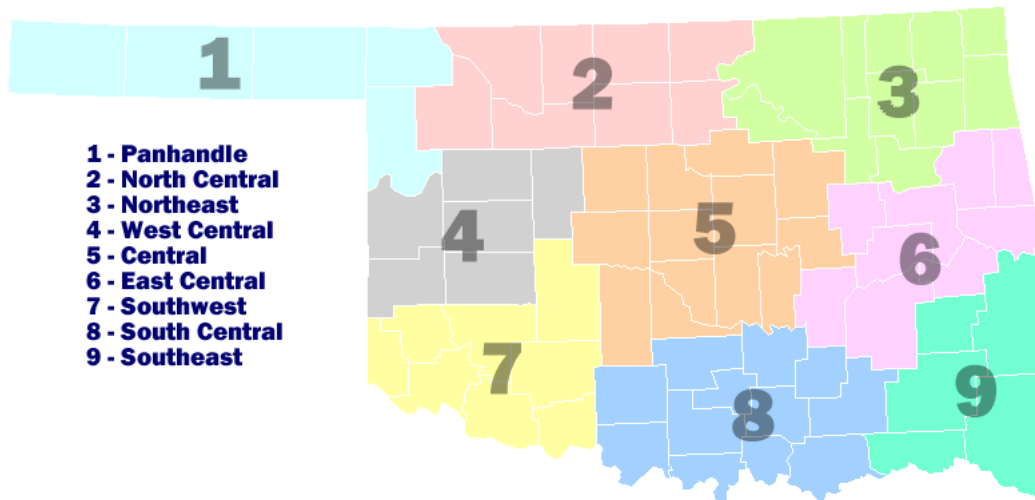
September 2007 U.S. Temperature Forecast



September Climate Normals

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	84.5	55.6	70.1	1.86
2	84.8	59.2	72	3.13
3	84.1	60.5	72.3	4.83
4	84.7	59.5	72.1	2.95
5	84.8	61.0	72.9	4.03
6	84.5	61.3	72.9	4.88
7	86.4	61.0	73.7	3.34
8	86.2	62.3	74.3	4.27
9	85.9	60.9	73.4	4.52
Statewide	85.1	60.3	72.7	3.9

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.ocs.ou.edu> or

<http://www.ocs.ou.edu/>

E-mail (ocs@ou.edu) or telephone (405/325-2541)



Oklahoma Climatological Survey is the State
Climate Office for Oklahoma

Dr. Ken Crawford, Director and State
Climatologist

Editor

Gary D. McManus, Assistant State
Climatologist

Contributors

Gary D. McManus

Mark A. Shafer, Director of Climate
Information

Derek S. Arndt, Assistant State Climatologist

Howard Johnson, Associate State
Climatologist (Ret.)

Design

Stdrovia Blackburn, Graphic Design Manager

For more information, contact:

Oklahoma Climatological Survey

The University of Oklahoma

120 David L. Boren Blvd., Suite 2900

Norman, OK 73072-7305

tel: 405-325-2541

fax: 405-325-2550

e-mail: ocs@ou.edu

<http://www.ocs.ou.edu>