OKLAHOMA MONTHLY CLIMATE SUMMARY
MAY 2008

OKLAHOMA CLIMATOLOGICAL SURVEY

A major return of significant tornadoes occurred in May. Seven twisters rated at least EF-2 in intensity touched down within the state's confines in addition to 24 of the weak variety. The most unfortunate statistic was the cost in lives, however, as a violent EF-4 tornado plowed through the small town of Picher on May 10th and claimed the souls of six Oklahomans. Another tornado struck and destroyed a hog farming operation near Lacey with the entire episode shown live from a local news helicopter. The preliminary count of 31 tornadoes was the most for any month since May 2003 when 59 tornadoes touched down. The six deaths were the most in a single day since the deadly May 3, 1999, Moore-South Oklahoma City EF-5 that killed 36. Severe weather was widespread throughout the month, especially in the form of large hail. Twenty-four instances of hail two inches or greater were reported to go along with the tornadoes. Oddly, despite all the tornadoes and severe weather the month's final rainfall tally finished below normal for much of the state. The statewide average rainfall was a tad below normal to rank as the 53rd driest since 1895. The month was fairly warm as well and ranked as the 49th warmest on record. The spring season ranked as the 20th wettest on record but a tad cool with the 51st-coolest ranking.

Precipitation

While some areas of the state were extremely wet, the dry areas in the Panhandle, western and south central Oklahoma propelled the statewide average to a below-normal finish, albeit by less than an inch. The rainfall averages were bookended by the Panhandle, which suffered through its 12th driest May on record, and the northeast, which experienced its 21st wettest May on record. Nowata led the state with over 11 inches of rainfall while Boise City brought up the rear with about three-quarters of an inch. The spring benefited from the sixth wettest March on record to finish with a surplus of nearly two inches. Again, the statistics were highly skewed by the 7th wettest spring on record for the southeast and the 4th driest for the Panhandle.

Temperature

The month was warm at about half of a degree above normal on the statewide scale. The eastern half of the state had the most areas below normal, mostly near the border with Arkansas. The west was significantly warm – as much as 3-4 degrees above normal – as it lacked the precipitation and cloud cover of the east. The month's high temperature of 102 degrees was recorded by the Walters Mesonet site on the 19th while the lowest temperature of 29 degrees was recorded by the Goodwell and Fairview sites on the 3rd and 4th, respectively. The spring season's statewide temperature average was fairly close to normal.

May 2008 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	102°F	Walters	19
Low Temperature	29°F	Boise City	3
High Precipitation	11.21 in.	Nowata	
Low Precipitation	0.74 in.	Boise City	

May Daily Highlights

May 1-2: A tumultuous month needs a tumultuous beginning, and that's exactly what May received with large supercells roaming the state on the first. Preliminary reports from the NWS indicate at least eight tornadoes touched down that evening and overnight into the second. Hail up to the size of grapefruits fell in parts of the state from these dryline-fired supercells. Wind and hail damage reports were widespread. The storms, which formed in central Oklahoma, marched east ahead of a potent cold front that dropped low temperatures into the 30s in the northwest on the second. Winds behind the front gusted to 50 mph from the north. Highs did reach into the 70s and 80s later on the second, however. Precipitation amounts from the storms were rather light with most reports from the Oklahoma Mesonet falling between a half-inch to an inch.

May 3-7: More substantial rains fell during this five-day period, although with a little less damage and destruction to go along with it. The third and fourth were relatively calm if not a bit chilly in the mornings. Low temperatures fell into the 30s and 40s for the most part, although 29 degrees was recorded on the third and fourth at various locations in the northwest. High pressure at the surface moved to the east on the fifth as a storm system moved in from the west.

Storms formed in the northwest, dropping hail to the size of quarters in Woods County. The severe weather continued the following two days with more storms and more large hail and high winds. Four weak tornadoes touched down in central Oklahoma on the seventh. These storms brought a bit more rainfall and flooding was reported on the seventh in many northeast locations. Three-to-four inches of rain fell on the seventh in several areas, including a maximum of 4.46 inches at the Nowata Mesonet site. All areas of the state received at least a half-inch of precipitation during this period.

May 8-10: The front that brought all the severe weather the previous two days moved through the state completely and dropped temperatures into the 40s and 50s the morning of the eighth. Southerly winds quickly returned that afternoon in response to another storm system headed towards the state. A cold front moved through late on the eighth and into the ninth and kicked off another round of storms across northern Oklahoma. Wind damage and large hail were reported with these storms. The real action occurred on the tenth as an upper-level storm approached from the west. Moisture from the Gulf of Mexico streamed up and over the state that afternoon. Supercells formed in eastern Oklahoma around noon and quickly became tornadic. Ten tornadoes, with four being rated "significant", touched down in the eastern third of the state. A violent EF-4 tornado brushed the extreme northeastern corner of the state and supplied misery to the town of Picher, killing six. Other significant tornadoes struck near Hartshorne and Yanush, Haywood, and Adel. The Picher tornado reached a mile wide at times and also brushed the edge of Quapaw before moving into Missouri.

May 11-12: Nary a drop of rain fell during these two days, a blessed respite from the previous rough weather. It was rather chilly in the mornings, however, with lows in the 30s and 40s for the two days. The afternoons warmed up into the 70s and 80s, however.

May 13-15: A cold front moved into the state on the 13th and brought more rain, mainly in eastern Oklahoma. A strip from central Oklahoma down to the southeast had between 1-3 inches during the three days, but nearly all the state got at least a bit of rain. The weather was a bit cooler than normal with highs in the 60s and 70s.

May 16-21: Another bone-dry period for the state with just a bit of rain registered by the Oklahoma Mesonet in the south. The weather turned downright hot at times during these six days, especially on the 19th when 102 degrees was recorded at both Walters and Grandfield – along with a few more 100s in southern Oklahoma.

May 22-24: The last nine of May's preliminary count of 31 tornadoes occurred on the 23rd and 24th. The severe storms began on the 22nd, however, and dropped baseball size hail. A heat burst produced severe winds near Alva up to 62 mph. The storms continued overnight in the north before building once again the next afternoon. An EF-3 tornado damaged homes and crops in Harper County and other storms contained baseball size hail. The remaining eight tornadoes all occurred the evening of the 24th in Kingfisher and Garfield counties. One of those tornadoes gave national television audiences a spectacular view of the destruction of a hog farm as it aired live from a local news helicopter. The rainfall totals from this series of storms were between 1-4 inches, centered mostly on north central Oklahoma.

May 25-28: While the tornadoes for the month were done, the severe weather was not. Storms formed at varying times during the first three days before finally yielding to a pretty nice day on the 28th. The highlights, or lowlights, would be 3-6 inches of flooding rainfall across Kay County and softball size hail in Roger Mills County on the 26th. The rainfall during this severe period was more widespread in the northeast and south central than other sections. The 28th was the anomaly of the four days as the weakening cold front that brought all the rain and storms moved to the southeast. The day ended sunny and warm with highs in the 70s and 80s.

May 29-31: The month's final three days were a welcome relief from the violent weather found in the first 28. Sunny skies and warm afternoons were punctuated by a downright hot day on the 31st with Hollis reaching the century mark.

May 2008 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2008)
Month (May)	68.5ºF	0.6ºF	49th Warmest
Season-to-Date (Mar-May)	58.8ºF	-0.2ºF	51st Warmest
Year-to-Date (Jan-May)	51.2ºF	0.1ºF	45th Warmest

Precipitation

	Total	Depart.	Rank (1895-2008)
Month (May)	4.54 in.	-0.67 in.	53rd Driest
Season-to-Date (Mar-May)	13.45 in.	1.77 in.	20th Wettest
Year-to-Date (Jan-May)	16.22 in.	1.33 in.	28th Wettest

Depart. = Departure from 30-year normal

May 2008 Severe Weather

Significant Tornadoes (EF2 or greater)

EF-rating	Location	County	Date
4	Picher-Quapaw-3 NE Peoria	Ottawa	10
2	4 NW - 6 ENE Haywood	Pittsburg	10
2	7 SW Hartshorne - Yanush- 1.3 ENE Yanush	Pittsburg/ Latimer	10
2	3 NE Daisy - 2.75 WSW Adel	Atoka/Pushmataha	10
3	10 SSW - 5 SSW Selman	Harper	23
2	1 NW - 1 NE Lacey	Kingfisher	24
2	7 SW - 10 SE Covington	Garfield	24

Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
3.50	Midwest City	Oklahoma	1
3.00	Midwest City	Oklahoma	1
3.00	1 S Warwick	Lincoln	1
2.75	Choctaw	Oklahoma	1
2.75	Midwest City	Oklahoma	1
2.75	Wellston	Lincoln	1
2.75	Glencoe	Payne	1
2.75	Carney	Lincoln	1
2.75	Shidler	Osage	1
2.50	Midwest City	Oklahoma	1
2.75	Blackwell	Kay	9
2.75	Burbank	Osage	9
2.75	1 N Strong City	Roger Mills	22
2.75	Kingfisher	Kingfisher	22
2.75	1 W Kingfisher	Kingfisher	22
2.50	Cheyenne	Roger Mills	22
2.00	1 NE Catesby	Ellis	22
2.75	13 N Shattuck	Ellis	23
2.75	1 E Douglas	Garfield	24

Hail cont.

Size (in.)	Location	County	Day
4.25	11 SSE Cheyenne	Roger Mills	26
2.50	2 W Vinson	Harmon	26
2.50	3 E Colony	Washita	26
4.00	2 E Weatherford	Custer	31
2.75	Wann	Nowata	31

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
70	Checotah	McIntosh	2
75	Noble	Cleveland	7
75	4 E Beggs	Okmulgee	7
70	6 NW Oklahoma City	Oklahoma	7
72	2 NNW Ninnekah	Grady	25
80	Braman	Kay	26
70	3 SW Elgin	Osage	31

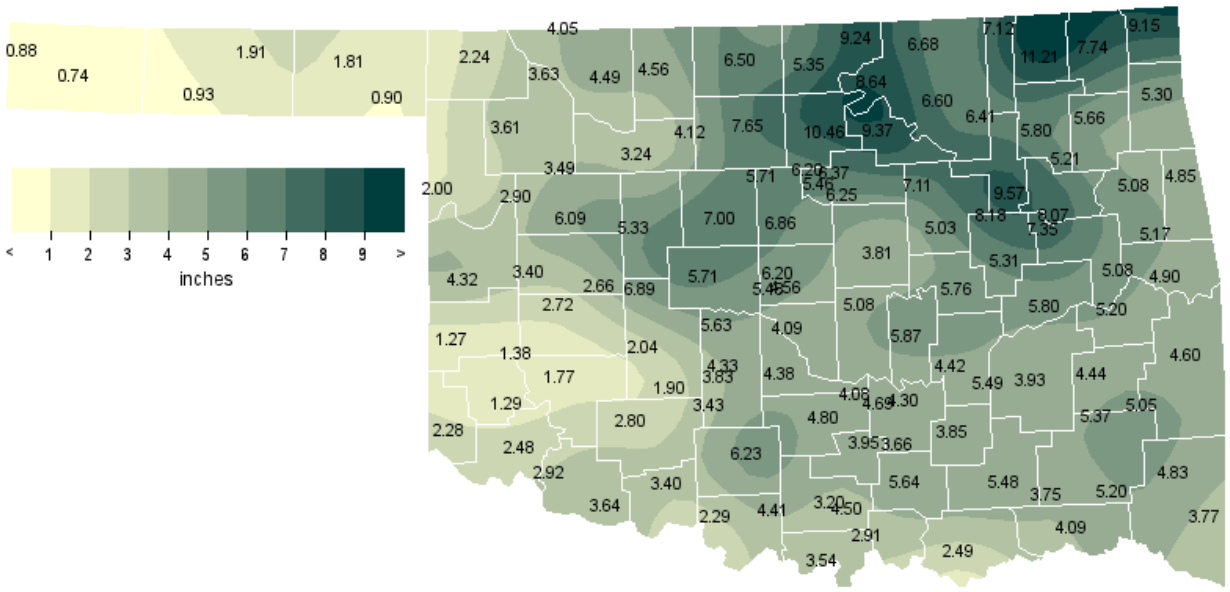
Flooding

Location	County	Day
3 S Cleora	Delaware	7
3 W Centralia	Craig	7
Burbank	Osage	7
Edmond	Oklahoma	7
Ketchum	Craig	7
Welty	Okfuskee	7
5 W Nowata	Nowata	8
Braman	Kay	26
3 NW Sapulpa	Creek	27
4 E Haskell	Wagoner	27
4 SW Olustee	Jackson	27
H8 NW Tulsa	Osage	27
Bixby	Tulsa	27
Coweta	Wagoner	27
Hectorville	Okmulgee	27
Tulsa	Tulsa	27

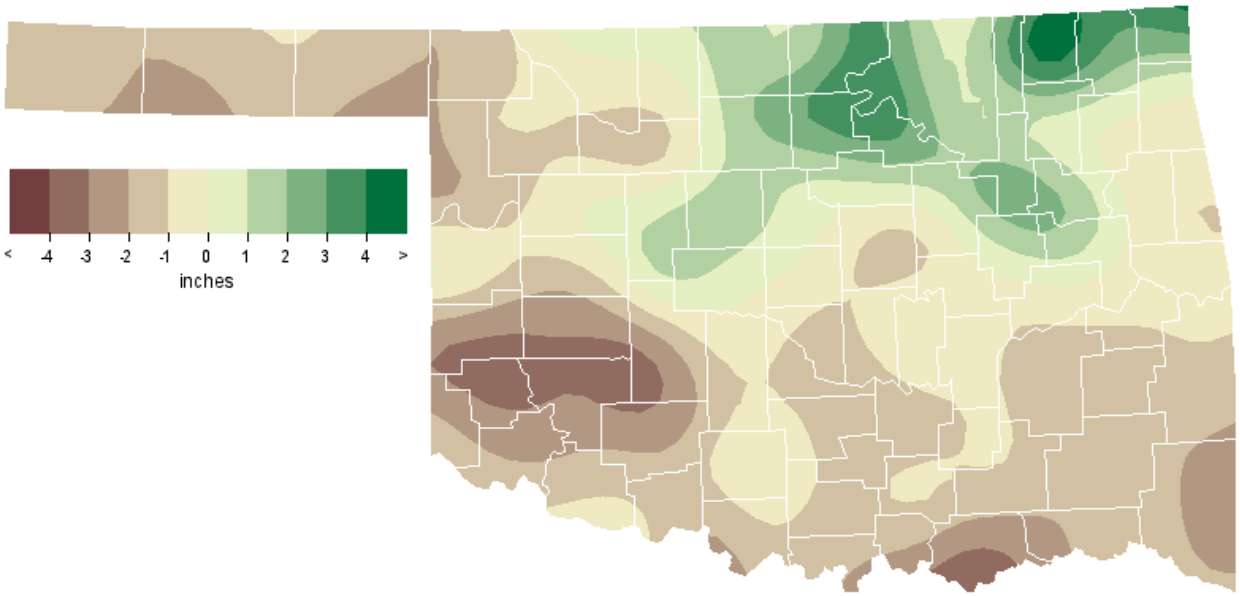
Record Event Reports

Description	Day	Location	Record	Previous Record	Year
Warmest Minimum Temperature	24	Oklahoma City	76	74	1996
Warmest Minimum Temperature	25	Oklahoma City	74	72	1965

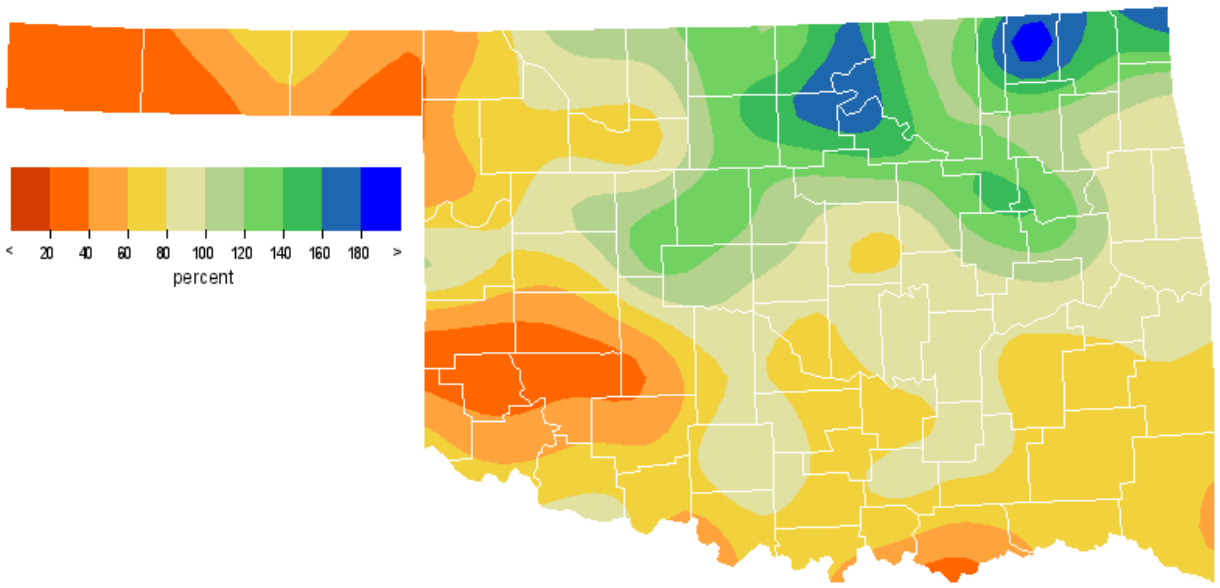
May 2008 Observed Precipitation



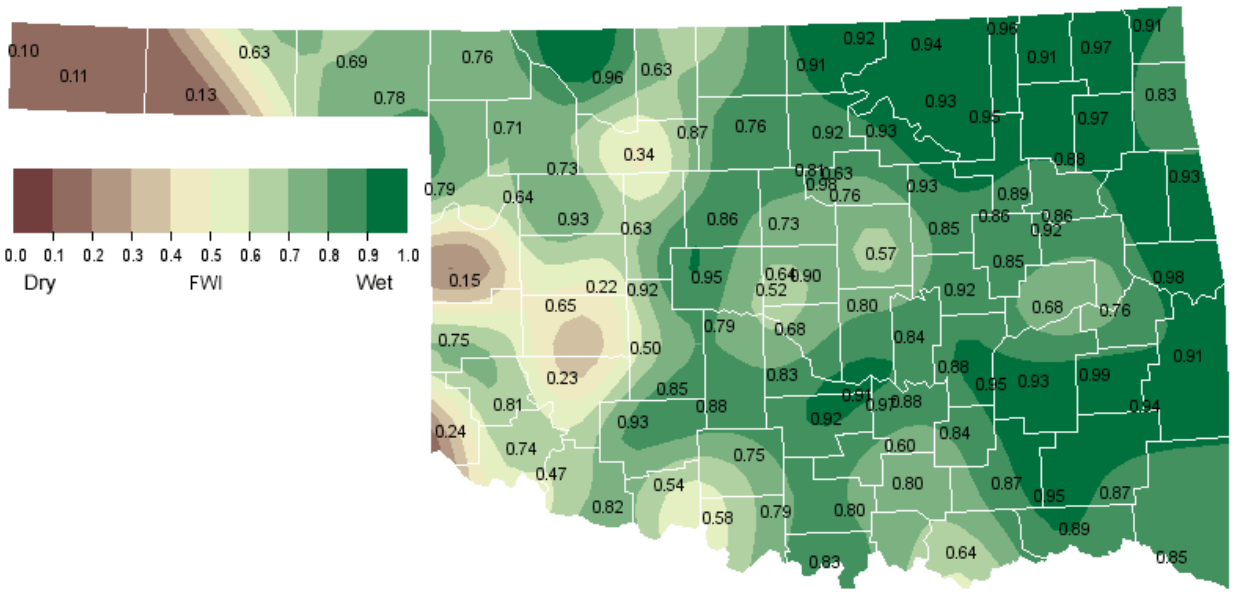
May 2008 Departure from Normal Precipitation



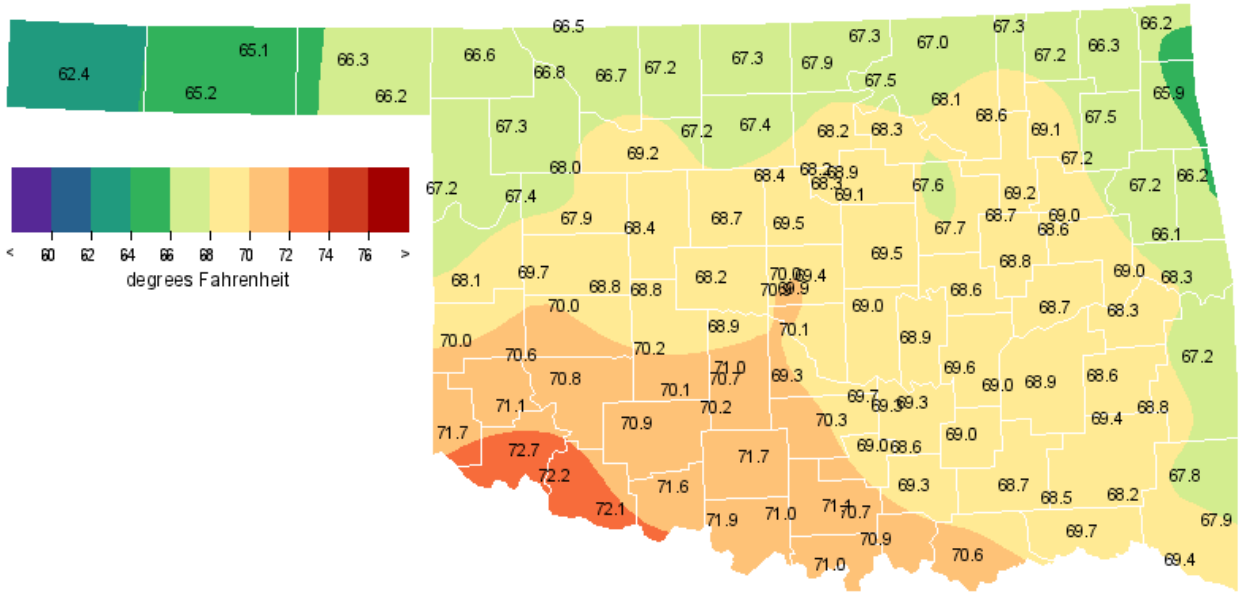
May 2008 Percent of Normal Precipitation



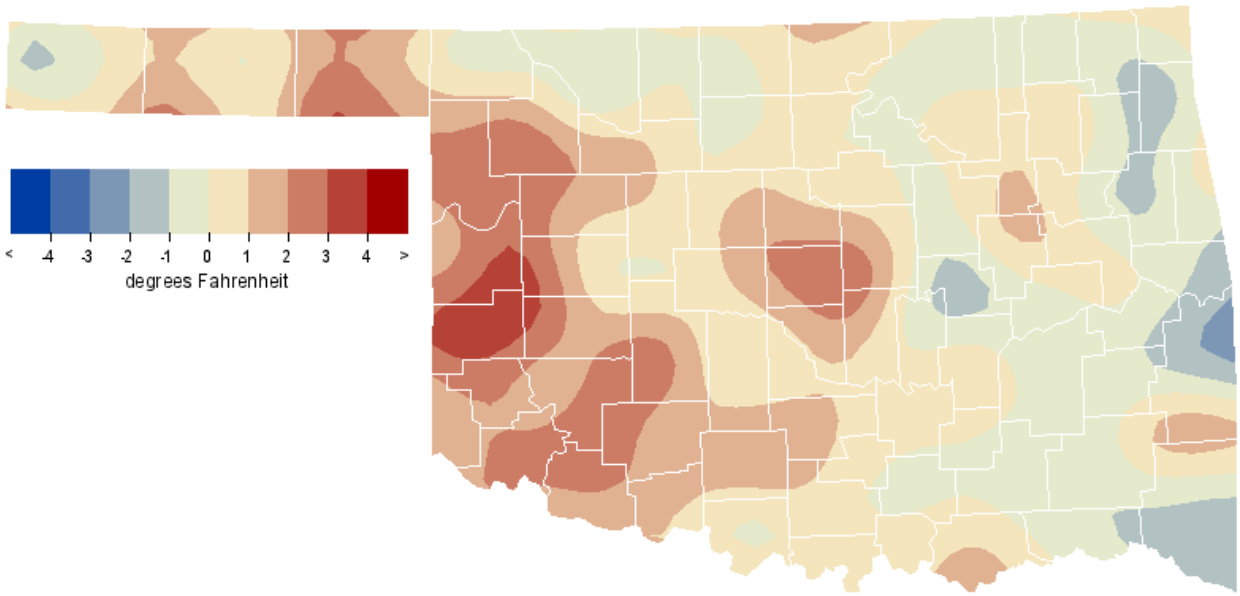
May 2008 Average Soil Moisture at 25cm



May 2008 Average Temperature



May 2008 Departure from Normal Temperature



Mesonet Monthly Summary for May 2008

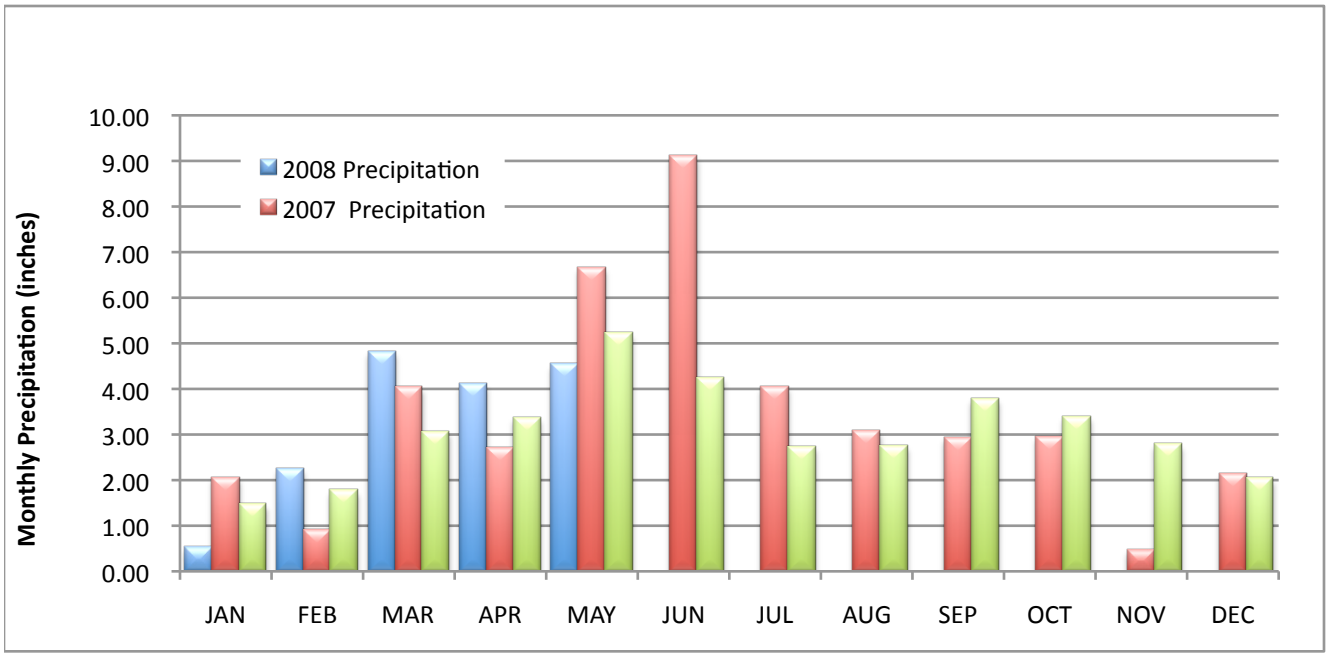
NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	67.1	95	30	37	3	72	139	2.00	.78	7
Beaver	66.3	96	19	34	11	95	136	1.81	.65	7
Boise City	62.4	94	26	29	3	147	66	.74	.50	7
Buffalo	66.6	95	19	29	4	90	140	2.24	.72	5
NORTH CENTRAL										
Alva	66.7	92	30	30	4	84	135	4.49	1.24	5
Blackwell	67.9	93	30	34	4	58	147	5.35	2.10	7
Breckinridge	67.4	92	30	34	4	65	140	7.65	2.83	24
Cherokee	67.2	93	30	30	4	77	146	4.56	1.18	25
Fairview	69.1	97	31	35	4	53	181	3.24	.93	6
Freedom	66.8	94	19	34	11	79	135	3.63	.98	23
Lahoma	67.2	92	30	34	4	73	142	4.12	1.20	7
NORTHEAST										
Bixby	69.2	94	19	38	4	47	177	9.57	2.44	26
Burbank	67.5	90	19	37	4	66	143	8.64	3.08	26
Claremore	69.0	92	19	38	4	46	171	5.80	2.65	7
Copan	67.2	90	19	38	4	61	130	7.12	2.96	7
Foraker	67.0	88	19	40	4	63	124	6.68	2.65	7
Inola	67.2	90	19	37	4	68	135	5.21	1.82	7
Jay	65.9	87	19	35	4	84	112	5.30	2.34	7
Miami	66.2	87	25	36	4	74	112	9.15	3.15	7
WEST CENTRAL										
Bessie	70.0	96	19	38	4	47	201	2.72	1.38	7
Butler	69.6	96	31	33	4	52	195	3.40	1.61	26
Camargo	67.4	95	19	30	4	71	146	2.90	1.20	7
Cheyenne	68.1	95	31	38	4	64	160	4.32	1.89	7
Erick	69.9	99	31	35	4	50	202	1.27	.85	7
CENTRAL										
Acme	70.2	97	19	37	4	49	211	3.43	2.05	7
Bowlegs	68.9	94	19	36	4	56	177	5.87	2.40	7
Bristow	67.7	91	19	34	4	72	156	5.03	2.21	7
Lake Carl Blac	68.1	93	19	35	4	60	157	6.20	1.75	7
Chandler	69.5	94	19	38	4	49	190	3.81	1.66	7
Chickasha	71.0	99	19	34	4	43	228	4.33	1.69	7
El Reno	68.2	94	19	35	4	58	158	5.71	2.64	7
Guthrie	69.5	94	19	38	4	47	187	6.86	2.52	7
Kingfisher	68.7	95	19	33	4	57	170	7.00	2.99	7
Marena	68.4	92	19	41	4	55	160	5.46	1.89	7
Minco	69.0	95	19	41	11	52	175	5.63	1.94	7
Marshall	68.4	93	19	34	4	58	162	5.71	2.73	7
EAST CENTRAL										
Calvin	69.6	95	19	38	4	48	191	4.42	1.39	27
Cookson	66.1	88	25	35	4	82	117	5.17	1.70	27
Eufaula	68.6	88	19	39	4	50	162	5.80	1.52	13
Haskell	68.6	93	19	38	4	51	163	7.35	1.95	27
Hectorville	68.7	91	19	40	4	49	163	8.18	2.83	7
McAlester	68.8	91	19	38	4	55	174	3.93	1.14	27
Okmulgee	68.8	92	19	36	4	55	172	5.31	2.02	7
SOUTHWEST										
Altus	72.7	101	19	38	4	27	265	2.48	1.02	7
Apache	70.1	98	19	41	11	48	207	1.90	1.23	7
Fort Cobb	70.3	97	19	38	4	47	210	2.04	.80	7
Grandfield	72.1	102	19	37	4	35	256	3.64	2.19	7
Hinton	68.8	93	19	37	4	56	174	6.89	2.26	7
Hobart	70.8	98	19	36	4	50	231	1.77	1.13	7
SOUTH CENTRAL										
Ada	69.3	96	19	35	4	54	188	4.30	1.95	27
Ardmore	70.7	96	19	39	4	37	213	4.50	1.86	27
Burneyville	71.1	97	19	35	4	44	232	3.54	1.79	27
Byars	69.6	94	19	42	4	46	190	4.08	1.43	27
Centrahoma	69.0	92	19	35	4	55	178	3.85	1.95	27
Durant	70.5	95	19	40	4	36	207	2.49	1.51	27
Fittstown	68.6	94	19	35	4	57	169	3.66	1.49	27
Ketchum Ranch	71.6	98	19	40	4	35	240	6.23	2.51	27
Lane	68.8	92	19	37	4	49	167	5.48	2.74	27
SOUTHEAST										
Antlers	68.6	93	19	35	4	56	166	3.75	2.15	27
Broken Bow	67.9	90	25	37	4	52	142	3.77	1.22	14
Clayton	69.4	93	19	36	4	52	189	5.37	1.74	14
Cloudy	68.2	90	19	39	12	51	150	5.20	2.74	14
Hugo	69.7	91	19	42	4	38	184	4.09	2.56	27

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	65.2	96	19	31	11	110	117	.93	.50	7
Hooker	65.1	96	19	32	4	107	110	1.91	.92	7
Kenton	*****	***	***	***	***	****	****	.88	.40	7
Slapout	66.2	95	19	34	4	94	132	.90	.33	7
May Ranch	66.5	93	19	37	11	81	127	4.05	.99	23
Medford	67.3	93	30	35	4	69	142	6.50	1.97	24
Newkirk	67.2	90	30	42	11	59	128	9.24	2.34	7
Red Rock	68.2	92	19	36	4	58	156	10.46	3.19	24
Seiling	68.0	95	19	29	4	65	157	3.49	1.18	6
Woodward	67.2	94	19	39	11	71	141	3.61	.98	6
Nowata	67.2	88	19	36	4	67	135	11.21	4.46	7
Pawnee	68.3	90	19	37	4	55	158	9.37	2.44	7
Porter	68.9	92	19	40	4	49	171	8.07	2.33	27
Pryor	67.4	90	19	36	4	66	142	5.66	2.43	7
Skiatook	68.5	90	19	39	4	51	160	6.41	3.41	7
Vinita	66.3	87	19	37	4	69	110	7.74	2.25	7
Wynona	68.1	90	19	37	4	55	153	6.60	2.52	7
Putnam	67.9	95	19	39	4	66	155	6.09	2.53	22
Retrop	70.6	99	19	40	11	46	219	1.38	.59	7
Watonga	68.4	94	19	41	3	59	164	5.33	1.72	7
Weatherford	68.8	96	31	39	3	61	179	2.66	1.17	26
Ninnekah	70.6	97	19	34	4	48	222	3.83	1.21	27
Norman	70.1	95	19	39	4	47	204	4.09	1.44	7
Oilton	67.6	91	19	33	4	72	152	7.11	3.20	7
OKC East	69.9	95	19	37	4	50	202	4.56	2.12	7
OKC North	70.0	94	19	41	4	47	203	6.20	3.43	7
OKC West	70.9	95	19	41	4	39	222	5.48	2.79	7
Okemah	68.6	92	19	37	4	59	170	5.76	1.53	7
Perkins	69.2	92	19	37	4	50	179	6.25	2.18	7
Shawnee	69.0	93	19	38	4	56	180	5.08	2.62	7
Spencer	69.4	94	19	40	4	52	187	*****	*****	***
Stillwater	68.9	93	19	36	4	53	173	6.37	1.67	7
Washington	69.3	95	19	38	4	52	186	4.38	2.33	7
Sallisaw	68.3	91	25	38	4	54	157	4.90	2.13	27
Stigler	68.3	90	25	37	4	54	156	5.20	1.52	27
Stuart	69.0	91	19	39	4	53	176	5.49	1.81	27
Tahlequah	67.2	89	19	35	4	73	140	5.08	1.48	7
Webbers Falls	69.0	93	25	39	4	47	172	5.08	2.23	27
Westville	66.2	88	19	36	4	75	113	4.85	1.03	7
Hollis	71.6	101	19	40	4	35	240	2.28	1.08	6
Mangum	71.1	101	19	33	4	44	234	1.29	.56	7
Medicine Park	70.9	98	19	42	3	38	222	2.80	1.85	7
Tipton	72.2	98	19	38	4	32	255	2.92	1.74	7
Walters	71.7	102	19	37	4	36	242	3.40	2.01	7
Madill	70.9	95	19	37	4	39	222	2.91	1.07	27
Newport	71.1	98	19	42	4	35	224	3.20	1.31	27
Pauls Valley	70.3	95	19	37	4	45	209	4.80	1.55	27
Ringling	71.0	97	19	40	4	39	224	4.41	2.61	27
Sulphur	69.0	94	19	35	4	57	181	3.95	1.98	27
Tishomingo	69.3	93	19	36	4	50	183	5.64	1.86	27
Vanoss	69.3	95	19	36	4	55	189	4.69	2.46	27
Waurika	71.9	99	19	40	4	33	246	2.29	.88	6
Idabel	69.4	90	24	40	12	35	170	*****	*****	***
Mt Herman	67.7	87	19	39	12	57	142	4.83	1.53	27
Talihina	68.7	90	19	37	4	55	170	5.05	1.43	27
Wilburton	68.9	91	19	37	4	****	****	4.44	1.27	27
Wister	67.2	90	26	36	4	65	133	4.60	1.17	2

May 2008 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	May-07
Panhandle	1.43	-1.94	12th Driest	6.37 (1951)	0.00 (1927)	1.68
North Central	5.41	0.69	27th Wettest	11.70 (1957)	0.25 (1924)	6.52
Northeast	7.50	2.02	21st Wettest	19.10 (1943)	1.38 (1917)	7.14
West Central	3.34	-1.56	48th Driest	12.40 (1982)	0.00 (1924)	6.79
Central	5.40	-0.23	47th Wettest	12.53 (1902)	0.96 (1988)	9.41
East Central	5.44	-0.45	55th Driest	14.72 (1943)	1.25 (1941)	5.52
Southwest	2.86	-2.11	30th Driest	11.96 (1902)	0.38 (1984)	6.53
South Central	4.12	-1.48	39th Driest	12.66 (1982)	0.46 (1988)	8.29
Southeast	4.57	-1.79	35th Driest	14.36 (1990)	1.24 (1963)	5.94
Statewide	4.54	-0.67	53rd Driest	10.68 (1957)	1.30 (1988)	6.66

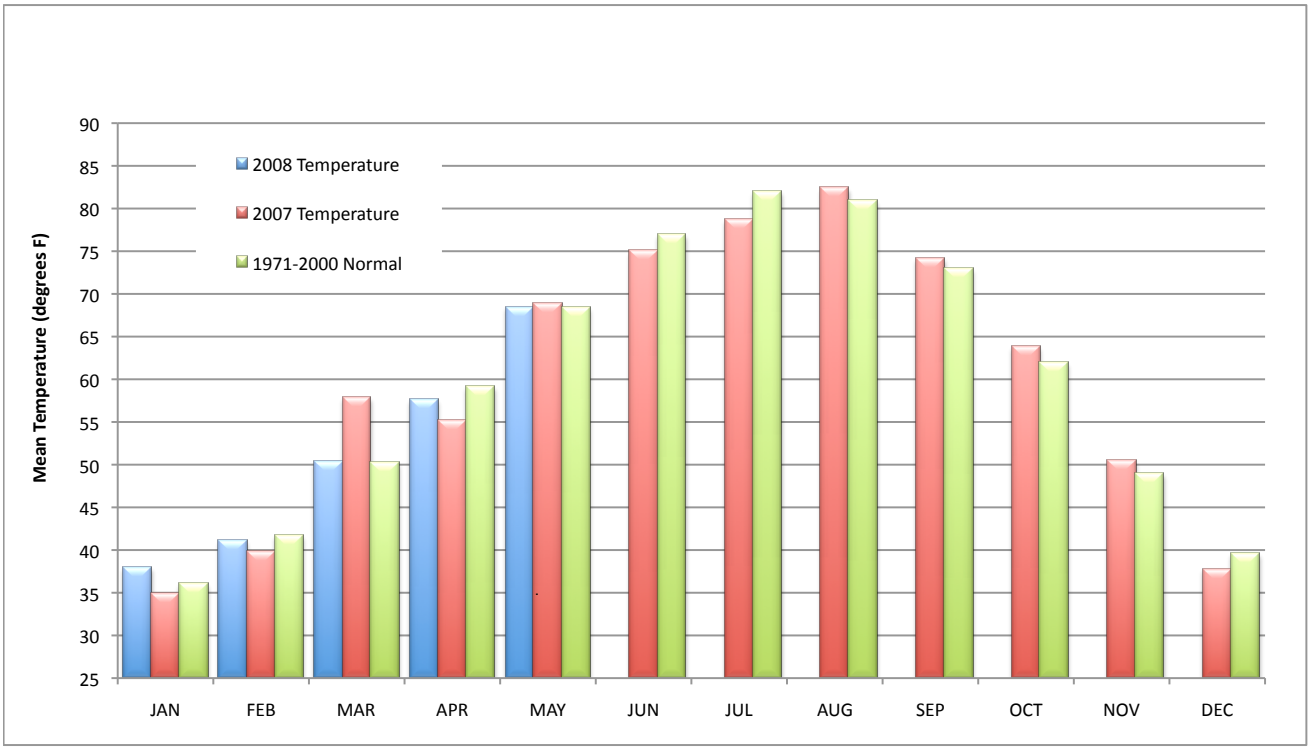
2007 and 2008 Statewide Precipitation Monthly Totals vs. Normal



May 2008 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	May-07 (F)
Panhandle	65.6	1.2	38th Warmest	72.0 (1896)	56.8 (1917)	64.7
North Central	67.5	0.4	55th Warmest	75.2 (1896)	60.7 (1907)	68.5
Northeast	67.6	0.4	55th Coolest	74.1 (1962)	61.2 (1907)	69.2
West Central	69.0	1.8	36th Warmest	75.6 (1896)	60.9 (1907)	67.8
Central	69.2	0.7	44th Warmest	75.5 (1896)	62.0 (1907)	69.6
East Central	68.3	0.0	49th Coolest	74.8 (1896)	62.2 (1907)	69.6
Southwest	71.1	1.5	31st Warmest	77.8 (1896)	62.8 (1907)	69.6
South Central	70.1	0.4	47th Warmest	76.0 (1896)	63.6 (1907)	70.4
Southeast	68.6	-0.2	40th Coolest	75.3 (1896)	62.8 (1907)	70.0
Statewide	68.5	0.6	49th Warmest	75.0 (1896)	61.5 (1907)	68.8

2007 and 2008 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for May 2008

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	96	19th	Goodwell	29	3rd	Boise City	2.24	Buffalo	0.92	7th	Hooker
North Central	97	31st	Fairview	29	4th	Seiling	10.46	Red Rock	3.19	24th	Red Rock
Northeast	94	19th	Bixby	35	4th	Jay	11.21	Nowata	4.46	7th	Nowata
West Central	99	31st	Erick	30	4th	Camargo	6.09	Putnam	2.53	22nd	Putnam
Central	99	19th	Chickasha	33	4th	Kingfisher	7.11	Oilton	3.43	7th	Oklahoma City
East Central	95	19th	Calvin	35	4th	Cookson	8.18	Hectorville	2.83	7th	Hectorville
Southwest	102	19th	Walters	33	4th	Mangum	6.89	Hinton	2.26	7th	Hinton
South Central	99	19th	Waurika	35	4th	Burneyville	6.23	Ketchum Ranch	2.74	27th	Lane
Southeast	93	19th	Antlers	35	4th	Antlers	5.37	Clayton	2.74	14th	Cloudy
Statewide	102	19th	Walters	29	3rd	Boise City	11.21	Nowata	4.46	7th	Nowata

June Climatological Outlook

June marks a transition from spring into summer, and is considered the first of the "climatological summer" months. About the middle of the month, weather patterns change from mild and wet to dry and hot. The transition is especially apparent across Western Oklahoma, where the wheat harvest replaces vegetation with exposed soil. Sunlight heats the bare ground more quickly, pushing temperatures higher. Buffalo and Mangum each average more than five days with temperatures at or above 100 degrees.

Temperature
Mean: 76.9 degrees
Warmest June: 1953, 85.1 degrees
Coldest June: 1903, 70.3 degrees
Hottest location: Waurika, 80.3 degrees
Coolest location: Boise City, 72.6 degrees
Hottest recorded: 120 degrees, Tipton, June 27, 1994
Coldest recorded: 34 degrees, Kenton, June 13, 1919

Rainfall across the state generally decreases from its springtime peak, but the Panhandle has its wettest months ahead of it. While most of the state follows the patterns of the Great Plains, weather patterns in far western Oklahoma are more controlled by the Rocky Mountains to the west, which typically develop late afternoon thunderstorms. Even with its peak rainfall occurring in June, most Panhandle locations are still drier than the rest of the state. Rainfall totals over an inch are rare, even in their rainy season. The Panhandle is also notable for dust storms during the dry years, especially during the 1930s and 1950s. In 1937, Goodwell reported 11 days with visibility less than one mile due to dust storms, and a dust storm near Hooker in 1957 led to a 12-car pile-up. A "black blizzard" was reported at Kenton in 1939, when rain washed thick dust from the air.

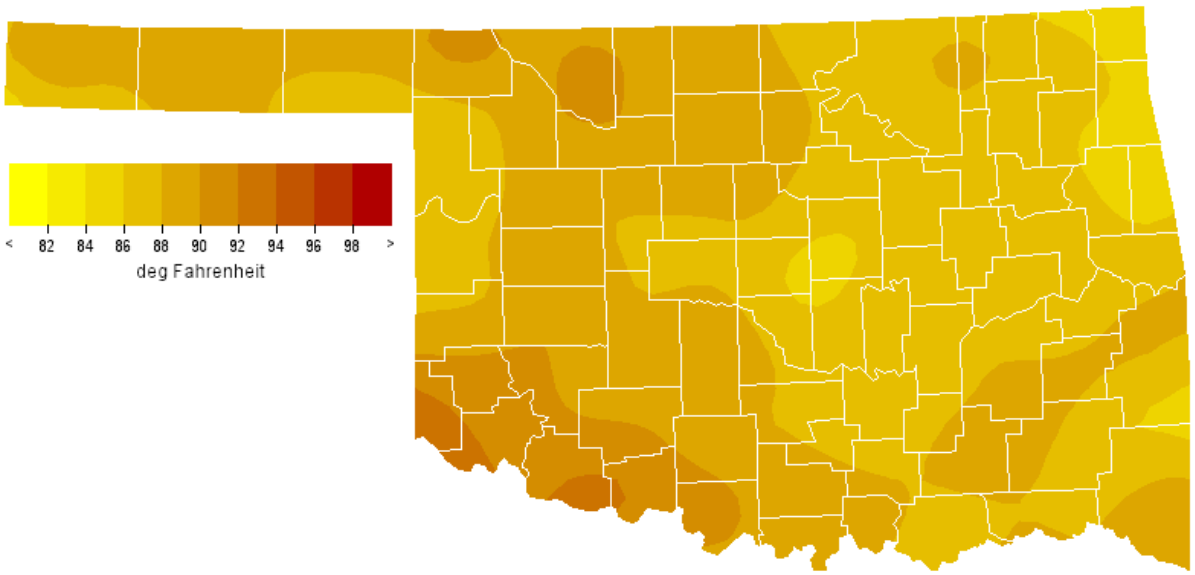
Flooding is a major hazard during June. Flooding can occur from localized heavy rainfall, or from persistent rains in a river basin. As much as twenty inches may have fallen near Hydro within a 14-hour period one June 22, 1948, although official reports showed 11.25 inches. Resulting flash floods killed 11 people who found themselves trapped along Route 66. Basin flooding in 1923 was described as "unusually disastrous" on the North Canadian, Arkansas, Cimarron, and Neosho rivers from June 7-11. The Washita River flooded Pauls Valley in 1941, contributing to an extensive development effort to control the river through a series of small dams upstream. In 1957, waters first topped the spillway at Lake Texoma, and the Red River remained in flood stage downstream of the dam for the entire month. Waurika, Guthrie, and areas north and east of the Arkansas River have frequently dealt with flooding in past Junes.

Precipitation
Mean: 4.24 inches
Wettest June: 1908, 8.73 inches
Driest June: 1933, 0.46 inches
Wettest location: Durant, 5.49 inches
Driest location: Kenton, 2.18 inches
Most recorded: 18.87 inches, Meeker, 1932

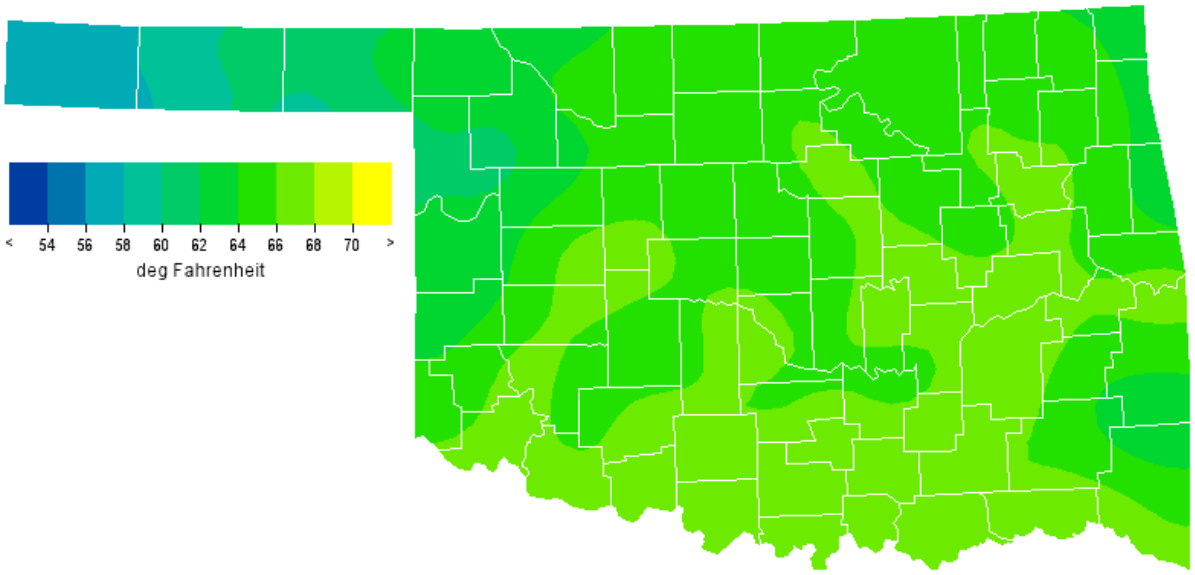
Springtime severe weather patterns are common in early June. The state averages nine tornadoes per year, with as many as 28 occurring in 1995 and as few as none in 1987. Especially violent tornadoes include one on June 1, 1917 that killed 14 people in Coalgate, one that left 35 dead in southwest Oklahoma City on June 12, 1942, and a June 8, 1974 tornado that killed 14 in Drumright. Hail also plagues the state. Farmers have lost wheat crops to hailstorms just before the fields were ready for harvest. One hailstorm cut a 25-mile by 10-mile swath west of Gage on June 14, 1938. In 1993, hailstorms from Tyrone to Grove caused more than $70 million in damage to the wheat crop alone. Hail up to six inches in diameter was reported in Enid from the storm, and extensive property damage occurred in Blackwell. A nearly-stationary storm dropped hailstones on Woodward for one hour in 1957, causing extensive damage to property. Straight-line winds from thunderstorms have been recorded as high as 110 miles per hour, leaving many customers without power.

Tornadoes
Average June Tornadoes: 8.4
Most: 28 (1995)

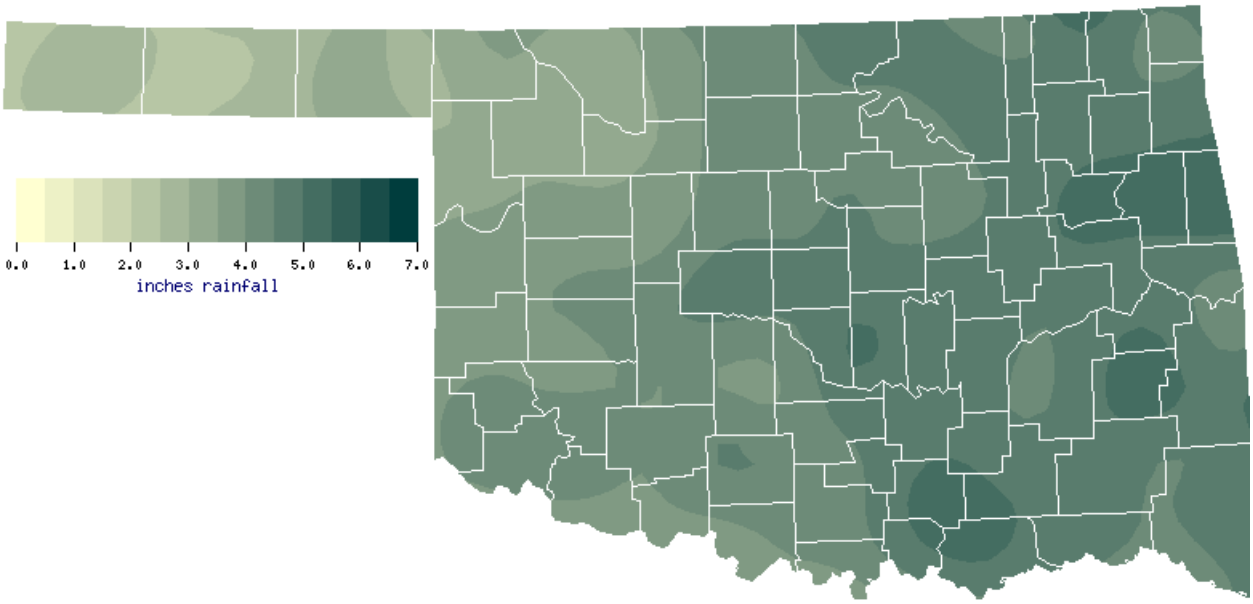
June Normal Daily Maximum Temperature (1971-2000)



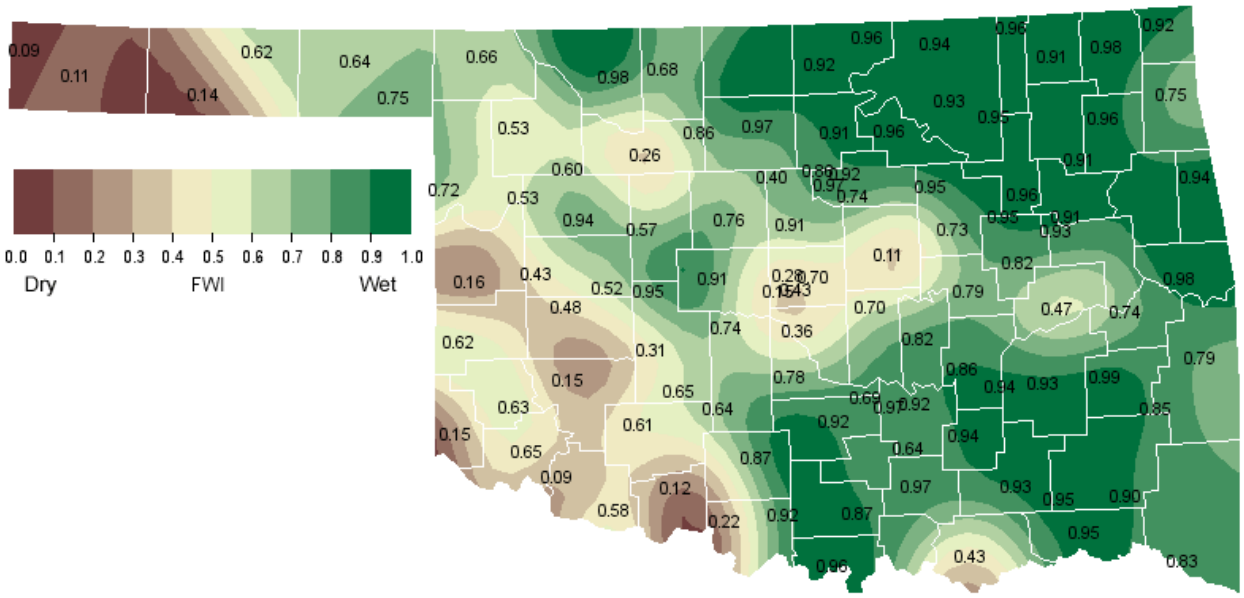
June Normal Daily Minimum Temperature (1971-2000)



June Normal Precipitation (1971-2000)



June 1, 2008 Soil Moisture Conditions at 25cm



June 2008 Drought Indices

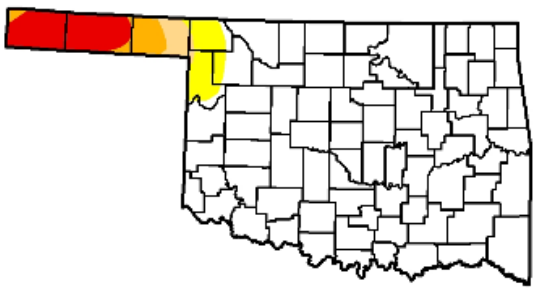
U.S. Drought Monitor

Oklahoma

May 27, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	88.7	11.3	8.2	6.9	5.1	0.0
Last Week (05/20/2008 map)	85.4	14.6	8.0	6.1	3.5	0.0
3 Months Ago (03/04/2008 map)	75.3	24.7	10.6	0.0	0.0	0.0
Start of Calendar Year (01/01/2008 map)	83.4	16.6	7.1	0.0	0.0	0.0
Start of Water Year (10/02/2007 map)	95.6	4.4	0.0	0.0	0.0	0.0
One Year Ago (05/29/2007 map)	96.9	3.1	0.0	0.0	0.0	0.0



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

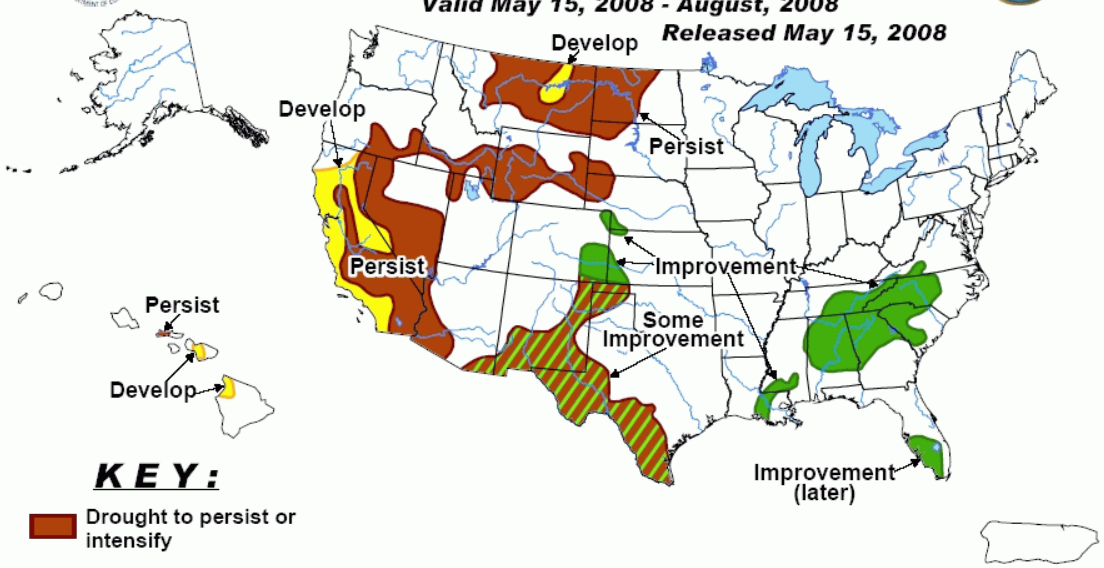
http://drought.unl.edu/dm

USDA · National Drought Mitigation Center

Released Thursday, May 29, 2008
Author: David Miskus, JAWF/CPC/NOAA

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period
Valid May 15, 2008 - August, 2008
Released May 15, 2008

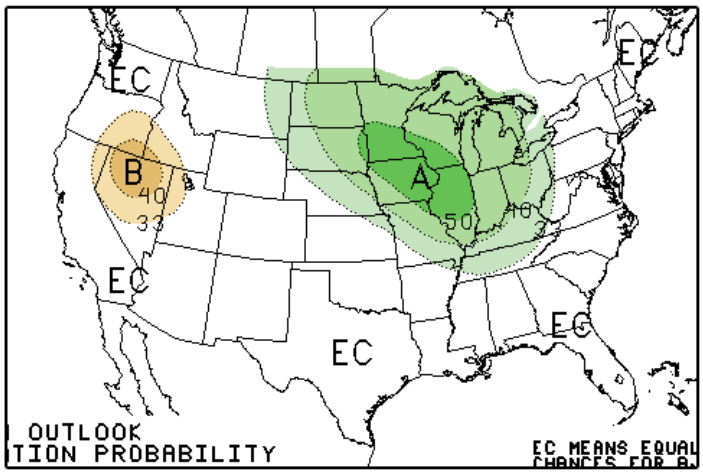


KEY:

- 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.

June 2008 U.S. Precipitation Forecast



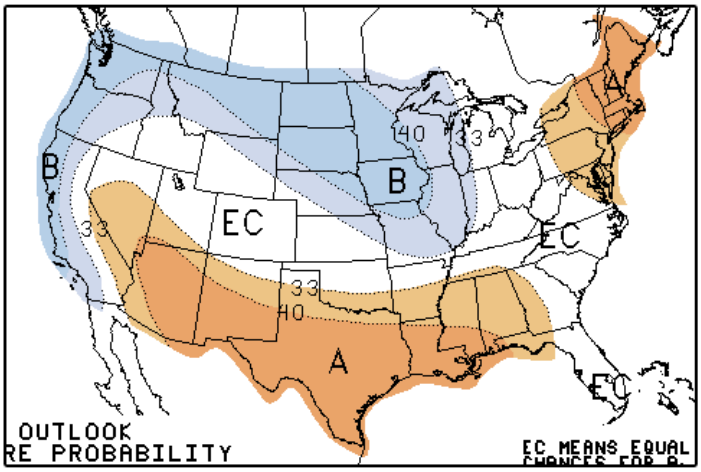
Percent Likelihood of Above or Below Average Precipitation*

5% - 10%
0% - 5%
A = Above

0% - 5%
5% - 10%
B = Below

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

June 2008 U.S. Temperature Forecast



Percent Likelihood of Above and Below Average Temperatures*

10% - 20%
5% - 10%
0% - 5%
A = Above

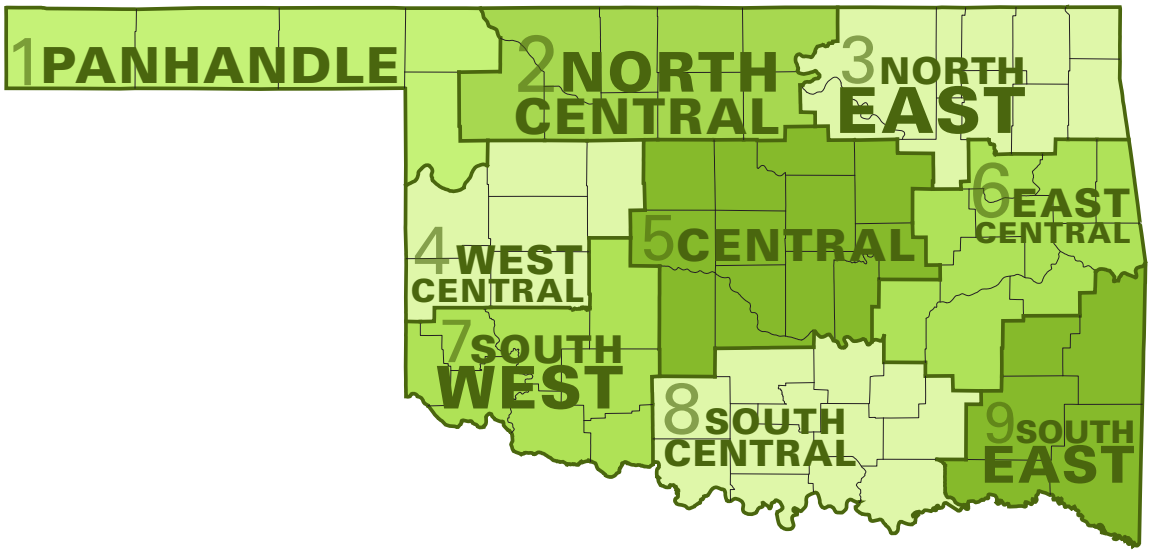
0% - 5%
5% - 10%
B = Below

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

June Climate Normals

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	88.9	60.6	74.8	2.90
2	88.9	64.5	76.7	3.92
3	86.8	65.3	76.1	4.59
4	88.6	64.7	76.6	3.78
5	87.7	66.0	76.8	4.45
6	86.8	65.9	76.3	4.70
7	90.5	65.9	78.3	4.01
8	88.5	66.9	77.7	4.56
9	87.9	65.2	76.6	4.63
Statewide	88.2	65.1	76.7	4.26

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

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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