OKLAHOMA MONTHLY CLIMATE SUMMARY
MAY 2005

OKLAHOMA CLIMATOLOGICAL SURVEY

May earned its place in weather lore, both for its excesses and the lack thereof. For the first time since accurate record-keeping began in 1950, the state of Oklahoma was bereft of tornadoes during the month of May. Prior to 2005, the record for fewest tornadoes during May was two, which occurred in 1988. The average number of tornadoes for the month is 21, and the record high is 90, set in 1999. From January-May, the state has only experienced 15 tornadoes, far below the average of 36 for that same period. While tornadoes were lacking, heat was not. Some 50 records for extreme heat were broken during the month at various locations across the state, according to data from the National Weather Service. All of this occurred with the backdrop of the 19th driest May on record. Despite the extreme heat, the statewide-averaged temperature finished near normal. Rains which fell at the end of the month helped alleviate the burgeoning need for moisture across the south, but did little to alter the significant drought conditions which appeared during the previous two months, exemplified by the ranking as the 2nd driest spring on record for the state.

Precipitation

The rains which fell during the month's final three days helped avert a disastrous month precipitation-wise for southern Oklahoma, but not all areas of the state were as fortunate. Portions of central, east central, and northwestern Oklahoma were left dry for the month, in some cases falling more than four inches below normal. Virtually the entire state was below normal for the month, contributing to a nearly 2.5-inch deficit for the state as a whole. Southeast and east central Oklahoma had the largest shortfalls, both ending more than three inches below normal. The Oklahoma Panhandle fared the best, on the other hand, with a deficit of just under an inch. The only localized areas with precipitation surpluses were the central Panhandle, a small portion of Harper and Beaver counties, and far southwestern Oklahoma. The six-inch precipitation deficit for the spring as a whole reflects the dryness of the previous two months. South central and central Oklahoma fell a staggering eight inches below normal for the March-May time period, the 1st and 2nd ranked driest springs on record for those areas, respectively. All areas of the state – save for the Oklahoma Panhandle – were in the top-11 for driest springs since 1895. The year-to-date precipitation total of just over 10 inches ranks the January-May period as the 18th driest on record, nearly five inches below normal.

May 2005 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	103ºF	Altus/ Grandfield	May 22nd
Low Temperature	30ºF	Antlers/ Nowata	May 1st/ May 3rd
High Precipitation	5.81 in.	Ringling	
Low Precipitation	0.54 in.	Freedom	

Temperature

The statewide-averaged temperature failed to reflect the drastic switching between heat and cold during the month. May was actually made up of three distinct periods temperature-wise, with the first and last portions of the month being significantly cool, and the middle of the month displaying a July-like tendency for extreme heat. In totality, the month finished just a bit below normal, but north central and the Panhandle managed to finish at or above normal. The spring season as a whole finished in a similar fashion. The year-to-date period of January-May was still significantly warm at over 1.7 degrees above normal, the 19th warmest such period on record.

May Daily Highlights

May 1-5: Cloudy and cool conditions dominated the month's first five days. The heaviest rain was concentrated in the west on the 2nd, with Cheyenne topping the one-inch mark, and various other locations in west central Oklahoma nearing that total. The month's last freezing temperatures occurred in the northwest on the 4th; Buffalo fell to 31 degrees and several other Oklahoma Mesonet stations recorded 32 degrees. High temperatures were unseasonably cool throughout this period, struggling to reach 70 degrees. Antlers recorded the highest temperature of the period at 75 degrees on the 1st. The low cloudiness began to break up over the state on the 5th, and temperatures warmed up a bit. Lows were in the upper 40s and 50s, and a few glimpses of the sun allowed the highs to reach the upper 70s in some places. The winds picked up from the south that afternoon, gusting to over 20 mph.

May 6-11: Temperatures became more spring-like during this period, and at times approached early-summer levels. Rainfall was spotty, other than a well-organized system of storms on the 8th. Formed along a dryline, those storms dumped over an inch of rain in the southeast. Hail up to the size of golfballs was reported in southwestern and south central portions of the state, and a couple of instances of flash flooding were reported from Comanche County. Temperatures had reached a muggy 90 degrees and beyond by the 8th, staying that way throughout the end of the period. Prompted by an upper-level storm system to the west, southerly winds kicked up to near 40 mph in western Oklahoma.

May 12-15: A cold front entered northwestern Oklahoma on the 12th, stalling out and providing a chance for rain the next three days. Fueled by ample moisture from the Gulf of Mexico, the storms on the 12th and 13th at times exceeded severe limits. Hail up to two inches in diameter fell in Harper County near Laverne on the 12th, and a 90 mph wind gust was reported west of Martha in Jackson County the following day. Several other reports from western Oklahoma noted winds of 70-75 mph with the storms. After that stormy period, the state enjoyed tranquil weather for a couple of days. Surface high pressure dominated, with highs in primarily in the 70s and 80s. Lows reached unseasonably cool levels on the 15th, some 5-10 degrees below normal. Mutual reported a low of 39 degrees on the 15th, and other locations fell into the 40s and 50s.

May 16-22: The ridge of high pressure lingered across the state on the 16th and 17th, providing the state with pleasant spring-like conditions. Sunny skies and temperatures in the 80s dominated the weather during these two days. An upper-level storm approached overnight on the 18th, bringing thick cloud cover along with it. Showers and storms on the 19th brought beneficial rainfall to north central Oklahoma. The Burbank Mesonet site recorded nearly four inches of rain, with surrounding areas reporting between one and two inches. May 20th-22nd amounted to the hottest weather seen in the state since September, 2004. Fifty records for heat were either tied or broken at various locations around Oklahoma according to National Weather Service data. Temperatures climbed into triple-digit territory across a significant portion of the state all three days. The state's highest temperature of the month, 103 degrees, occurred at both Altus and Grandfield on the 22nd.

May 23-25: A stationary front generated showers and thunderstorms in north central Oklahoma on the morning of the 23rd, dropping more than an inch of rainfall in the area. An outflow boundary from those storms produced severe storms in central Oklahoma later that morning, with quarter-sized hail and gusty winds plaguing the Norman area. More severe weather was in store on the 24th, as storms fired up in the high plains of Kansas and Colorado and made their way southeast into the state. The hardest hit area was the northeast, where flooding due to heavy rainfall was exacerbated by tennis ball size hail and winds of at least 70 mph. The flooding occurred in Cherokee, Le Flore and Sequoyah counties, a result of up to three inches of rainfall in those areas. Storms struck once again on the 25th in western Oklahoma, with over an inch of rainfall being recorded by the Slapout Mesonet station. The temperatures throughout this period were generally dependent upon the location relative to the frontal system in the area. Locales north of the front had highs in the 80s, while south of the front temperatures soared into the upper 90s and 100s. On the 25th, however, highs across nearly the entire state remained in the 80s.

May 26-31: The month's final 6 days were similar to the first five; cloudy, below normal temperatures and plenty of rain for select portions of the state. A cool front which passed through the state early morning on the 26th triggered showers and storms in northwestern Oklahoma, which later moved into central and southwestern parts of the state. Lows in northwestern Oklahoma dropped into the low 50s behind the front, and winds swung around to the north-northeast at 10-20 mph. Daytime highs fell in the low-mid 70s, some 5-10 degrees below normal. The following days were similar, making for a cool and wet Memorial Day weekend. Heavy storms finished off the month with a nice soaking rain the southwestern Oklahoma. In addition to the heavy precipitation, golfball sized hail fell in Jackson County. Daytime highs behind the front on the 31st remained in the 60s and 70s, 10-20 degrees below normal for that time of the year.

May 2005 Statewide Statistics

Temperature

	Average	Depart.	Rank (1892-2005)
Month (May)	67.7ºF	-0.2ºF	50th Coolest
Season-to-date (Mar-May)	58.8ºF	-0.3ºF	50th Warmest
Year-to-Date (Jan-May)	52.9ºF	1.7ºF	19th Warmest

Precipitation

	Total	Depart.	Rank (1892-2005)
Month (May)	2.75 in.	-2.47 in.	19th Driest
Season-to-Date (Mar-May)	5.15 in.	-6.53 in.	2nd Driest
Year-to-Date (Jan-May)	10.29 in.	-4.60 in.	18th Driest

Depart. = Departure from 30-year normal

May 2005 Severe Weather

Significant Tornadoes (F2 or greater)

No significant tornadoes were reported in the state.

Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Date
2.50	2 E Schulter	Okmulgee	05/24/05
2.00	Arapaho	Custer	05/13/05
2.00	Laverne	Harper	05/12/05

Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Date
90	W Martha	Jackson	05/13/05
75	3 S Perkins	Lincoln	05/13/05
70	3 E Panama	Le Flore	05/24/05
70	Buffalo	Harper	05/24/05
70	Heavener	Le Flore	05/24/05
70	6 SE Custer City	Custer	05/13/05

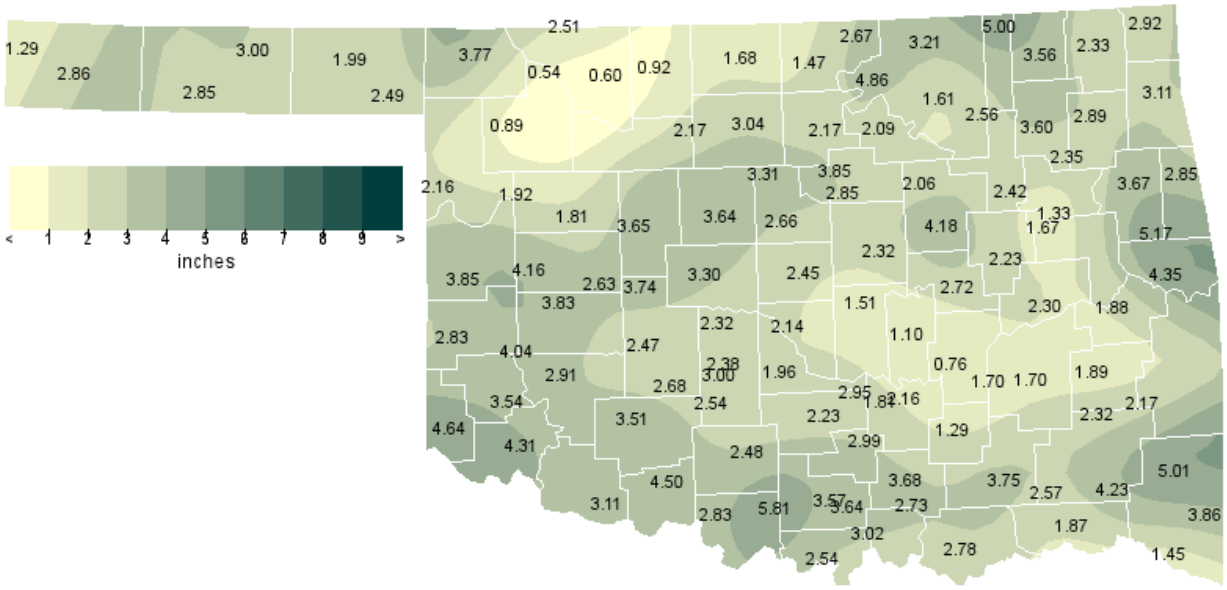
Flooding

Location	County	Date
3 W Elgin	Comanche	05/08/05
3 W Fletcher	Comanche	05/08/05
Panama	Le Flore	05/24/05
Vian	Sequoyah	05/24/05
2 N Panama	Le Flore	05/24/05
Tahlequah	Cherokee	05/24/05

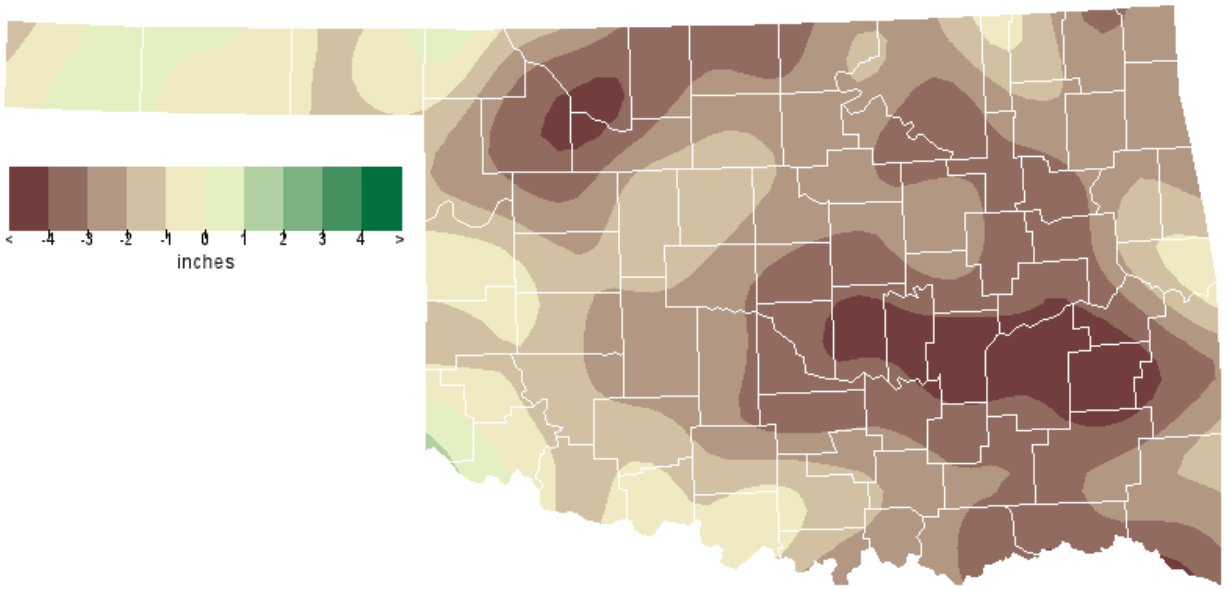
Record Event Reports

Description	Day	Location	Record	Previous Record	Year
Warmest Maximum Temperature	20	Oklahoma City	97	94	1990
Warmest Maximum Temperature (tied)	21	McAlester	91	91	1987
Warmest Maximum Temperature	21	Oklahoma City	98	95	1953
Warmest Maximum Temperature	22	McAlester	94	91	1987
Warmest Maximum Temperature	22	Oklahoma City	99	98	1939
Warmest Maximum Temperature	22	Tulsa	94	93	1953

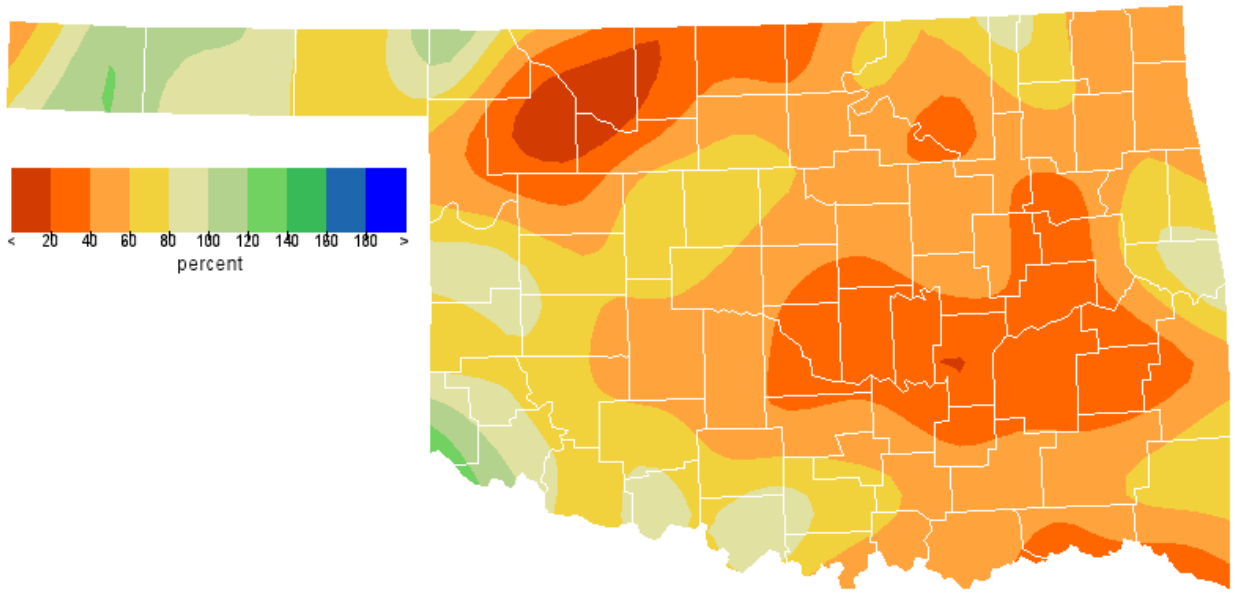
May 2005 Observed Precipitation



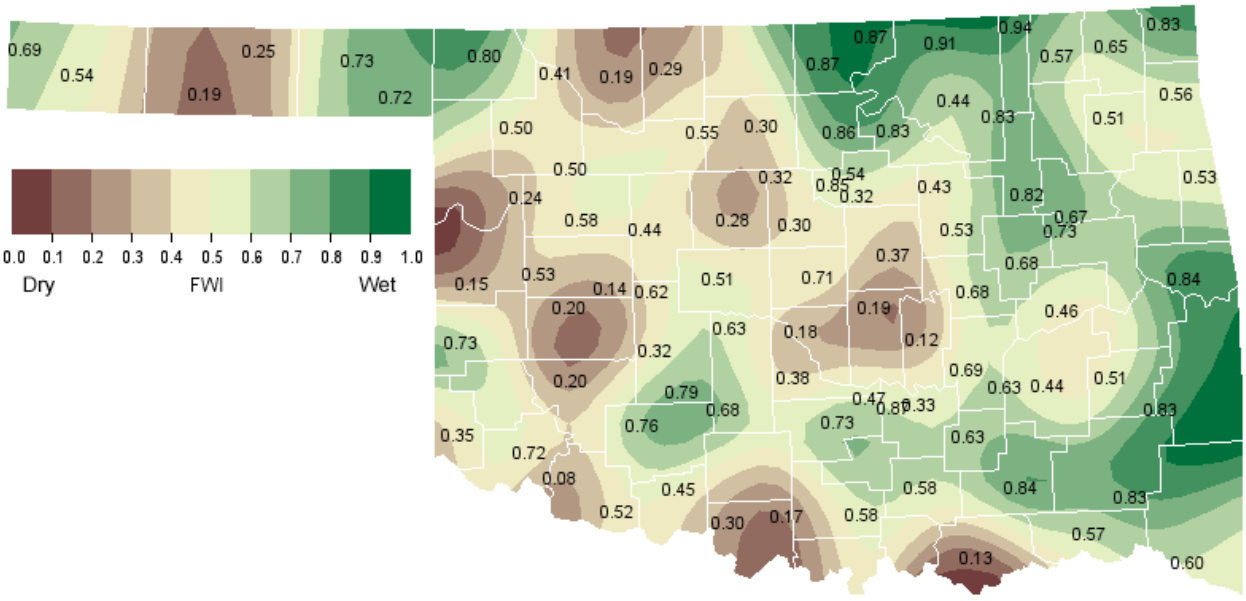
May 2005 Departure from Normal Precipitation



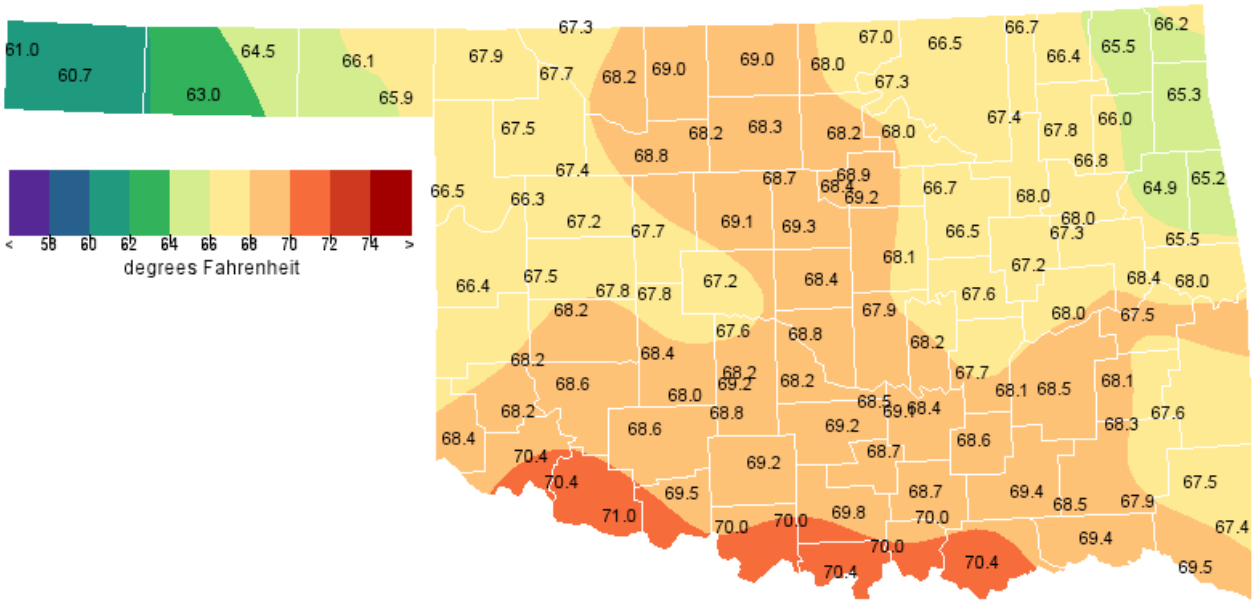
May 2005 Percent of Normal Precipitation



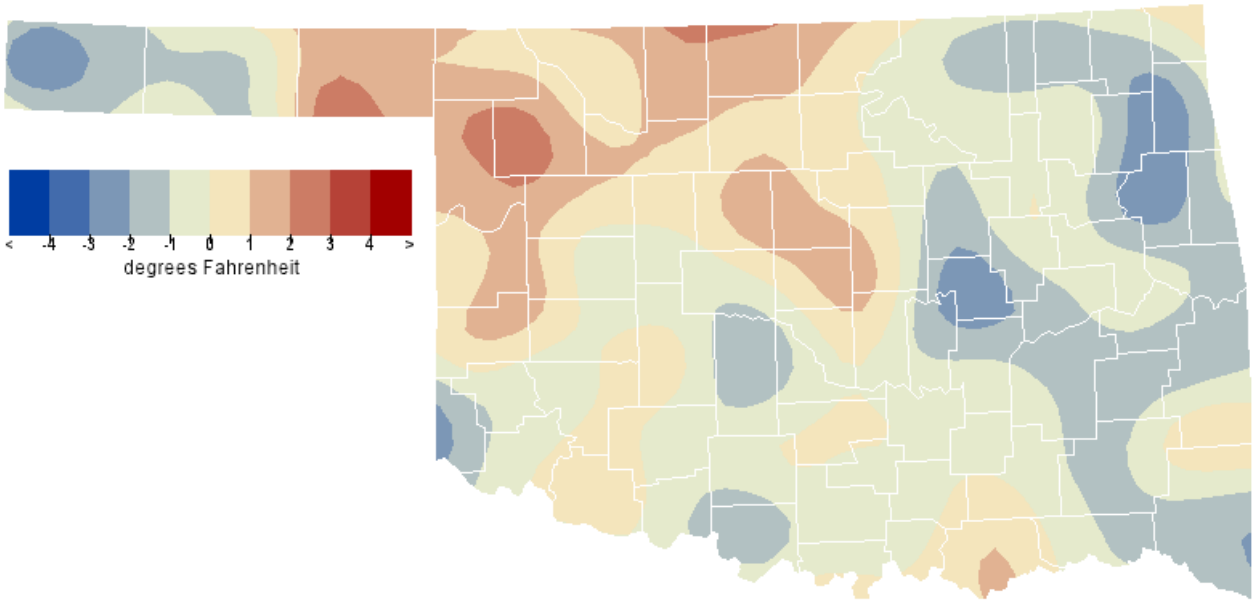
May 2005 Average Soil Moisture at 25cm



May 2005 Average Temperature



May 2005 Departure from Normal Temperature



Mesonet Monthly Summary for May 2005

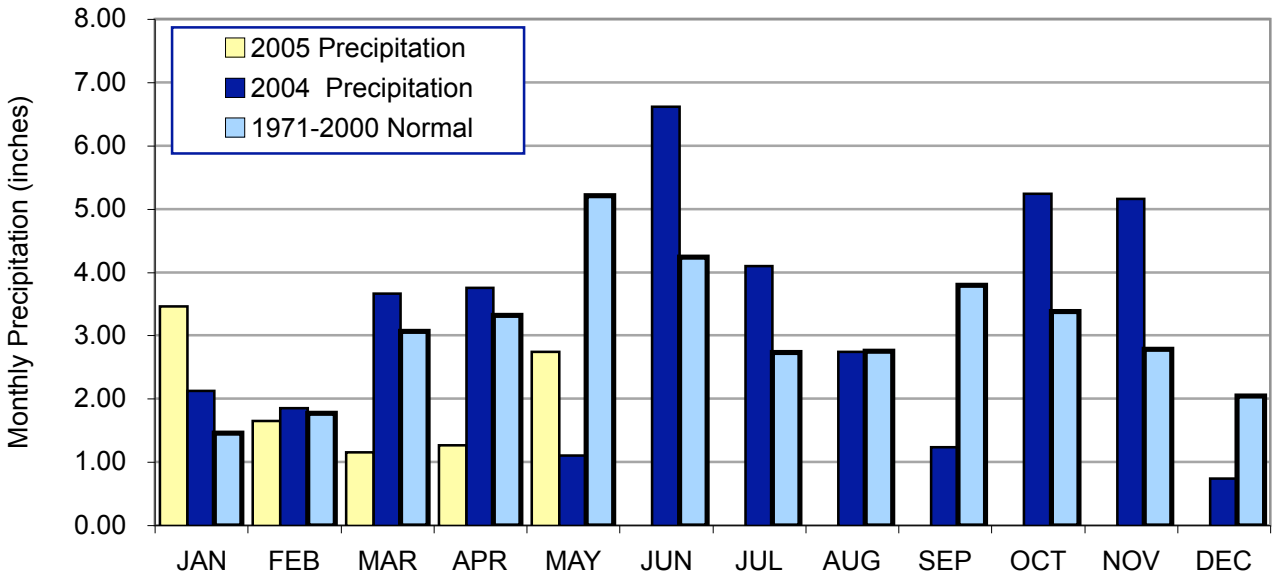
NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	66.6	96	21	38	4	****	****	2.16	.58	25
Beaver	66.2	100	21	32	4	98	134	1.99	.41	25
Boise City	60.7	96	21	32	2	173	41	2.86	1.49	29
Buffalo	67.9	99	20	31	4	84	173	3.77	1.23	29
NORTH CENTRAL										
Blackwell	68.1	97	21	33	4	79	173	1.47	.65	31
Breckinridge	68.3	97	21	33	4	80	182	3.04	1.57	13
Cherokee	69.0	100	21	32	4	82	205	.92	.44	31
Fairview	*****	***	***	***	***	****	****	*****	*****	***
Freedom	67.7	100	21	32	4	92	174	.54	.17	26
Lahoma	68.2	98	21	35	4	81	181	2.17	.99	13
May Ranch	67.3	98	20	35	4	89	160	2.51	1.17	30
NORTHEAST										
Bixby	67.9	93	22	36	3	72	163	2.42	1.41	13
Burbank	67.2	92	21	35	3	77	147	4.86	3.76	19
Copan	66.7	89	20	35	3	78	129	5.00	2.02	13
Foraker	66.4	90	10	36	3	78	122	3.21	1.43	19
Jay	65.2	89	21	31	3	104	111	3.11	1.85	23
Miami	66.2	90	22	32	3	87	125	2.92	1.10	24
Nowata	66.4	90	22	30	3	86	130	3.56	1.41	23
Pawnee	67.9	94	21	34	3	77	168	2.09	.82	13
WEST CENTRAL										
Bessie	68.2	97	22	42	3	85	184	3.83	.99	26
Butler	67.6	96	20	38	1	90	169	4.16	1.11	13
Camargo	66.4	98	22	36	3	107	149	1.92	1.03	31
Cheyenne	66.4	96	22	39	2	100	143	3.85	1.04	2
Erick	*****	***	***	***	***	****	****	2.83	.81	12
CENTRAL										
Bowlegs	68.3	97	22	35	1	72	173	1.10	.40	13
Bristow	66.5	92	22	32	3	97	144	4.18	3.05	13
Chandler	68.2	95	22	37	1	75	173	2.32	1.62	13
Chickasha	68.2	97	20	34	1	74	174	2.38	.76	31
El Reno	67.2	95	20	34	1	90	158	3.30	1.47	13
Guthrie	69.3	98	22	37	4	73	206	2.66	1.97	13
Kingfisher	69.1	101	22	34	4	78	206	3.64	1.43	13
Marena	68.4	95	22	37	3	74	180	*****	*****	***
Minco	67.6	96	22	43	2	80	161	2.32	.95	2
Oilton	66.7	93	22	31	3	96	149	2.06	1.24	13
EAST CENTRAL										
Calvin	67.8	95	22	34	1	72	158	.76	.33	2
Cookson	65.5	90	20	33	1	100	115	5.17	2.75	24
Eufaula	68.0	93	22	37	1	68	162	2.30	.69	8
Haskell	67.3	93	22	36	3	75	146	1.67	.73	13
McAlester	68.5	94	22	35	1	71	179	1.70	.37	14
Okmulgee	67.2	94	22	34	1	81	148	2.23	.93	19
Sallisaw	67.9	92	20	35	3	68	159	4.35	2.89	24
SOUTHWEST										
Altus	70.4	103	22	43	2	66	234	4.31	1.62	13
Fort Cobb	68.4	99	22	42	3	79	184	2.47	.63	13
Hinton	67.8	98	22	39	1	87	173	3.74	1.71	13
Hobart	68.6	99	22	41	1	77	188	2.91	.76	12
Hollis	68.4	99	22	42	2	75	181	4.64	1.41	12
Mangum	68.2	100	22	40	1	81	179	3.54	1.51	13
SOUTH CENTRAL										
Ada	68.4	97	22	34	1	70	175	2.16	.77	13
Burneyville	70.4	100	22	34	1	60	227	2.54	.75	13
Byars	68.5	96	22	42	1	68	177	2.95	1.15	13
Centrahoma	68.6	96	20	34	1	67	178	1.29	.40	14
Durant	70.4	96	22	38	1	51	217	2.78	1.37	28
Ketchum Ranch	69.1	97	22	40	1	****	****	2.48	1.01	8
Lane	69.4	95	22	35	1	54	190	3.75	.98	28
Madill	70.1	99	22	35	1	59	216	3.02	.72	31
Pauls Valley	69.1	96	22	38	1	65	193	2.23	.87	13
SOUTHEAST										
Antlers	68.4	96	22	30	1	60	167	2.57	.88	28
Clayton	68.3	94	22	33	1	67	168	2.32	1.02	14
Cloudy	67.9	94	20	35	1	60	148	4.23	1.51	29
Hugo	69.4	95	20	38	1	49	185	1.87	.62	8
Idabel	69.4	95	22	38	1	46	184	1.45	.81	29

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	63.0	99	21	34	2	135	74	2.85	.78	31
Hooker	64.6	101	21	35	4	113	99	3.00	.90	28
Kenton	61.0	97	21	32	1	169	45	1.29	.35	2
Slapout	65.9	99	21	38	3	103	132	2.49	1.29	25
Medford	69.0	100	21	34	4	74	197	1.68	.67	13
Newkirk	67.0	92	21	36	2	77	139	2.67	1.77	19
Red Rock	68.2	96	21	33	3	82	181	2.17	.97	31
Seiling	67.3	99	22	34	3	96	169	*****	*****	***
Woodward	67.4	97	20	35	4	92	168	.89	.46	26
Alva	68.1	100	21	32	4	88	185	.60	.25	26
Pryor	66.0	93	22	32	3	91	122	2.89	1.21	23
Skiatook	67.4	92	22	35	3	68	141	2.56	.70	19
Vinita	65.4	90	22	32	3	94	108	2.33	1.36	23
Wynona	66.4	90	22	34	3	****	****	1.61	.67	19
Porter	68.0	93	22	35	3	71	164	1.33	.74	13
Inola	66.8	92	22	33	3	82	137	2.35	.83	23
Claremore	67.8	93	22	35	3	70	156	3.60	1.66	19
Putnam	67.2	97	22	39	3	97	165	1.81	.55	26
Retrop	68.1	98	22	41	2	83	180	4.04	1.29	12
Watonga	67.7	98	22	40	1	91	175	3.65	1.93	13
Weatherford	67.7	99	22	41	4	92	177	2.63	.85	2
Okemah	67.7	94	22	36	1	79	161	2.72	1.12	19
Perkins	69.2	98	22	34	4	73	204	2.85	2.00	13
Shawnee	67.9	95	22	39	1	79	168	1.51	.88	13
Spencer	68.3	96	22	40	3	77	180	2.45	1.77	13
Stillwater	68.9	97	22	33	3	78	197	3.85	3.17	13
Washington	68.2	97	22	39	1	72	172	*****	.74	13
Ninnekah	69.3	99	22	37	1	72	206	3.00	.99	31
Acme	68.8	97	22	36	1	77	193	2.54	1.07	13
Norman	68.8	96	22	38	1	72	189	2.14	.68	2
Marshall	68.7	99	22	32	4	81	197	3.31	2.20	13
Stigler	67.7	93	22	36	1	****	****	1.88	.76	24
Stuart	68.1	93	22	36	1	69	165	1.70	.48	31
Tahlequah	64.9	89	20	31	3	106	103	3.67	1.43	24
Webbers Falls	68.4	93	22	38	1	67	172	*****	*****	***
Westville	65.2	89	20	31	3	102	108	2.85	1.08	23
Hectorville	*****	***	***	***	***	****	****	*****	*****	***
Medicine Park	68.6	97	22	42	2	75	187	3.51	1.34	13
Tipton	70.3	100	22	43	1	61	227	3.42	1.35	13
Walters	69.6	98	22	39	1	65	206	4.50	1.86	13
Apache	67.9	97	22	41	1	82	172	2.68	1.10	13
Grandfield	71.0	103	22	39	1	61	247	3.11	.99	13
Ringling	69.9	99	22	40	1	61	214	5.81	3.14	31
Sulphur	68.7	96	22	38	1	65	180	2.99	.82	13
Tishomingo	68.7	96	22	39	1	59	173	3.68	1.34	29
Waurika	70.0	99	22	38	1	62	218	2.83	1.11	13
Vanoss	69.1	97	22	34	1	64	191	1.73	.76	13
Bee	70.0	97	22	34	1	58	213	2.73	.69	28
Newport	69.9	98	22	38	1	61	212	3.57	1.15	13
Ardmore	*****	***	***	***	***	****	****	3.64	1.06	13
Fittstown	*****	***	***	***	***	****	****	*****	*****	***
Mt Herman	67.6	92	20	37	1	72	152	5.01	1.90	29
Talihina	67.8	93	22	32	1	****	****	2.17	1.21	14
Wilburton	68.1	93	22	34	1	66	163	1.89	.67	13
Wister	66.9	92	22	32	1	****	****	3.48	2.33	24
Broken Bow	67.4	96	20	35	1	67	139	3.86	2.08	29

May 2005 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	May-04
Panhandle	2.55	-0.82	50th Driest	6.37 (1951)	0.00 (1927)	0.22
North Central	1.70	-3.02	19th Driest	11.70 (1957)	0.25 (1924)	0.98
Northeast	2.92	-2.56	23rd Driest	19.10 (1943)	1.38 (1917)	3.64
West Central	3.19	-1.71	44th Driest	12.40 (1982)	0.00 (1924)	0.54
Central	2.65	-2.98	23rd Driest	12.53 (1902)	0.96 (1988)	1.38
East Central	2.57	-3.32	10th Driest	14.72 (1943)	1.25 (1941)	2.19
Southwest	3.54	-1.43	44th Driest	11.96 (1902)	0.38 (1984)	0.52
South Central	2.96	-2.64	24th Driest	12.66 (1982)	0.46 (1988)	1.60
Southeast	2.82	-3.54	13th Driest	14.36 (1990)	1.24 (1963)	3.74
Statewide	2.74	-2.47	19th Driest	10.68 (1957)	1.30 (1988)	1.64

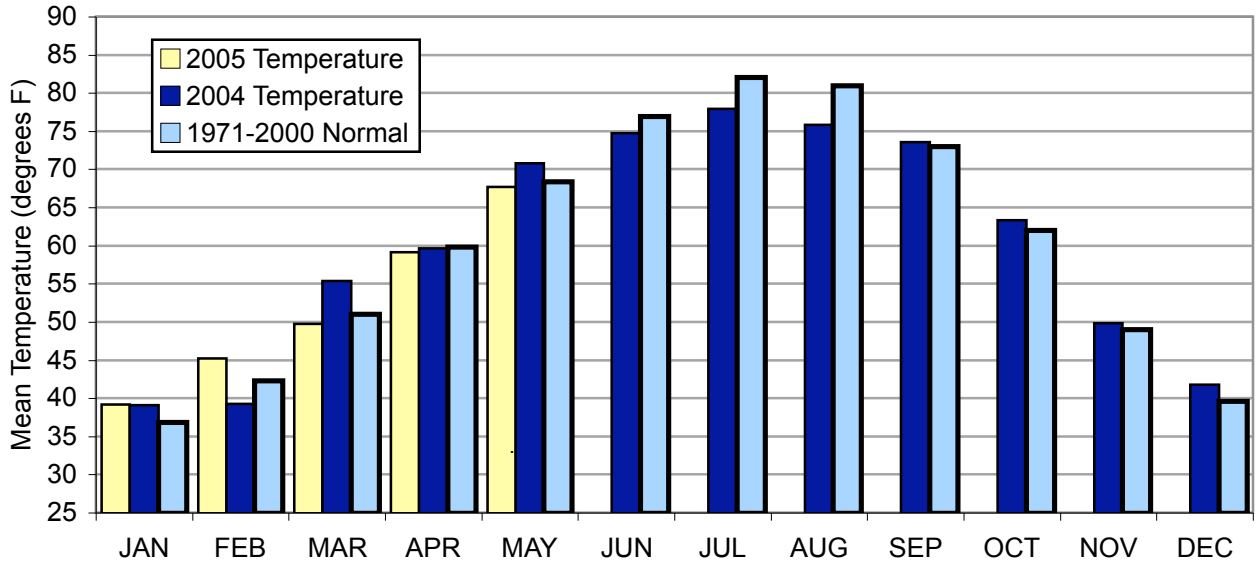
2004 and 2005 Statewide Precipitation Monthly Totals vs. Normal



May 2005 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	May-04 (F)
Panhandle	64.5	0.0	55th Warmest	72.0 (1896)	56.8 (1917)	68.9
North Central	68.0	0.9	46th Warmest	75.2 (1896)	60.7 (1907)	70.1
Northeast	66.8	-0.4	47th Coolest	74.1 (1962)	61.2 (1907)	70.0
West Central	67.4	0.2	54th Coolest	75.6 (1896)	60.9 (1907)	70.7
Central	68.2	-0.2	54th Coolest	75.5 (1896)	62.0 (1907)	70.9
East Central	67.2	-1.1	35th Coolest	74.8 (1896)	62.2 (1907)	71.4
Southwest	69.0	-0.6	46th Coolest	77.8 (1896)	62.8 (1907)	72.6
South Central	69.4	-0.3	45th Coolest	76.0 (1896)	63.6 (1907)	71.4
Southeast	68.2	-0.6	35th Coolest	75.3 (1896)	62.8 (1907)	70.2
Statewide	67.7	-0.2	50th Coolest	75.0 (1896)	61.5 (1907)	70.7

2004 and 2005 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for May 2005

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	101	21st	Hooker	31	4th	Buffalo	3.77	Buffalo	1.49	29th	Boise City
North Central	101	22nd	Fairview	32	4th	Cherokee	3.04	Breckenridge	1.77	19th	Newkirk
Northeast	94	21st	Pawnee	30	3rd	Nowata	5	Copan	3.76	19th	Burbank
West Central	99	22nd	Weatherford	36	3rd	Camargo	4.16	Butler	1.93	13th	Watonga
Central	101	22nd	Kingfisher	31	3rd	Oilton	4.18	Bristow	3.17	13th	Stillwater
East Central	95	22nd	Calvin	31	3rd	Tahlequah	5.17	Cookson	2.89	24th	Sallisaw
Southwest	103	22nd	Grandfield	39	1st	Hinton	4.64	Hollis	1.86	13th	Walters
South Central	100	22nd	Burneyville	34	1st	Ada	5.81	Ringling	3.14	31st	Ringling
Southeast	96	22nd	Antlers	30	1st	Antlers	5.01	Mt Herman	2.08	29th	Broken Bow
Statewide	103	22nd	Grandfield	30	3rd	Nowata	5.81	Ringling	3.76	19th	Burbank

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.

Precipitation

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

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.

Temperature

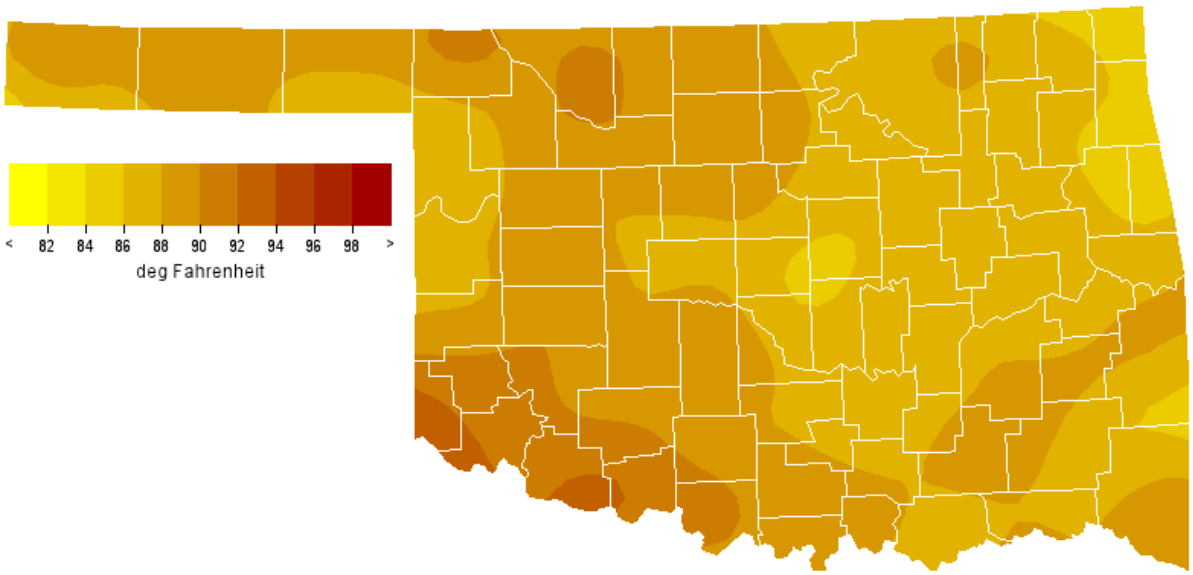
Mean: 76.9 degrees
Warmest June: 1953, 85.1 degrees
Coldest June: 1903, 70.3 degrees
Hottest location: Waurika, 80.3 degrees
Coolest location: Boise City, 72.6 degrees
Hottest recorded: 120 degrees, Tipton, June 27, 1994
Coldest recorded: 34 degrees, Kenton, June 13, 1919

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.

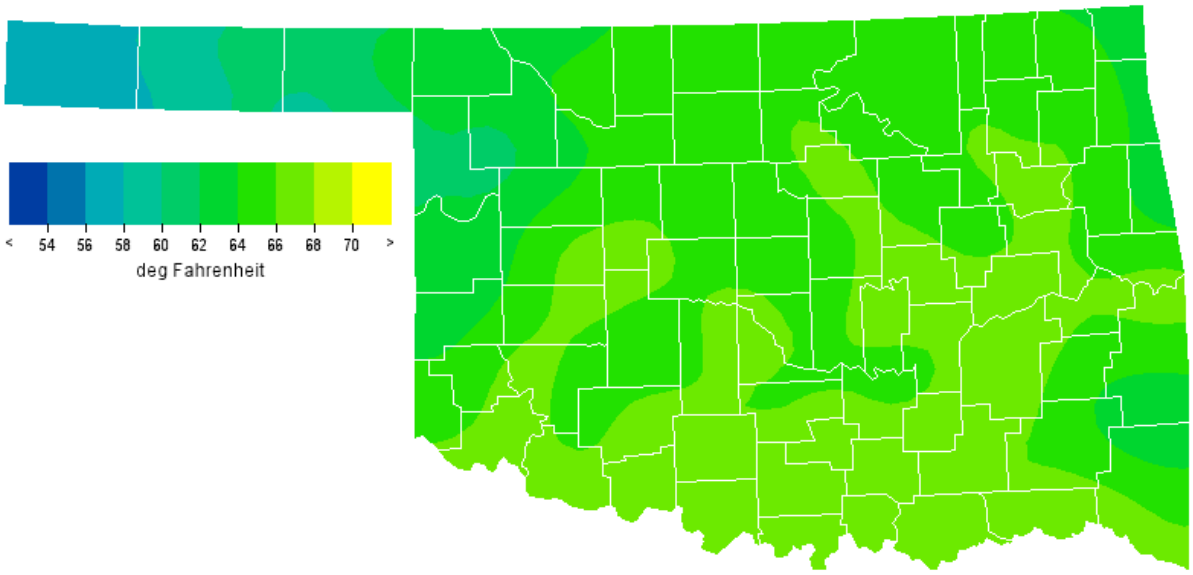
Tornadoes

Average June Tornadoes: 8.4
Most: 28 (1995)

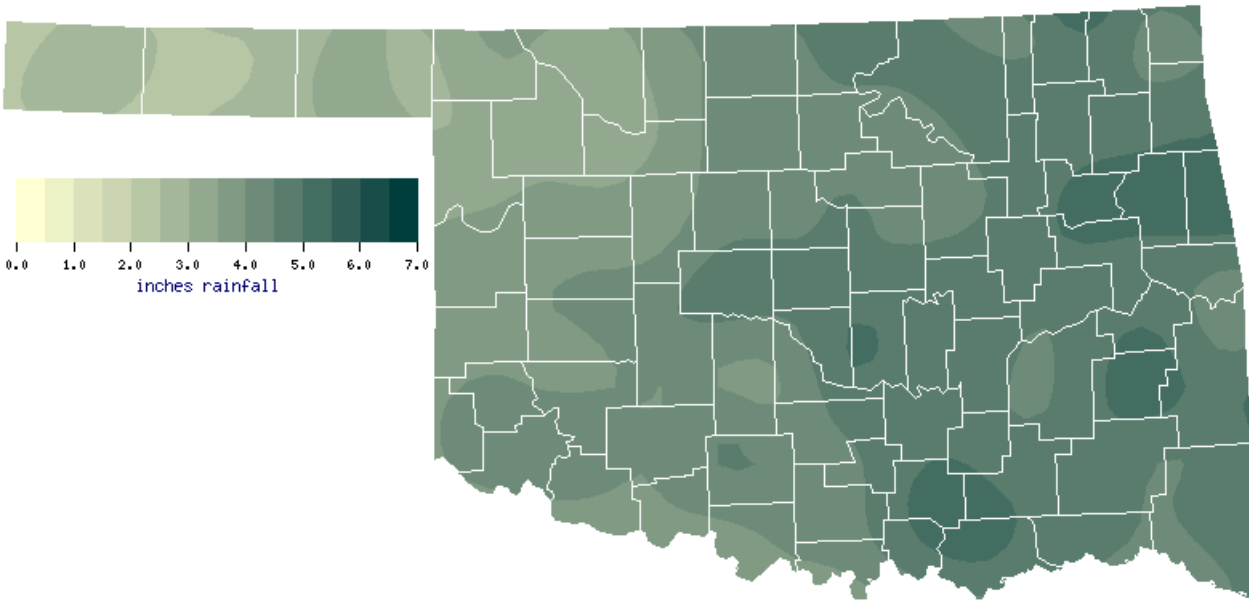
June Normal Monthly Maximum Temperature (1971-2000)



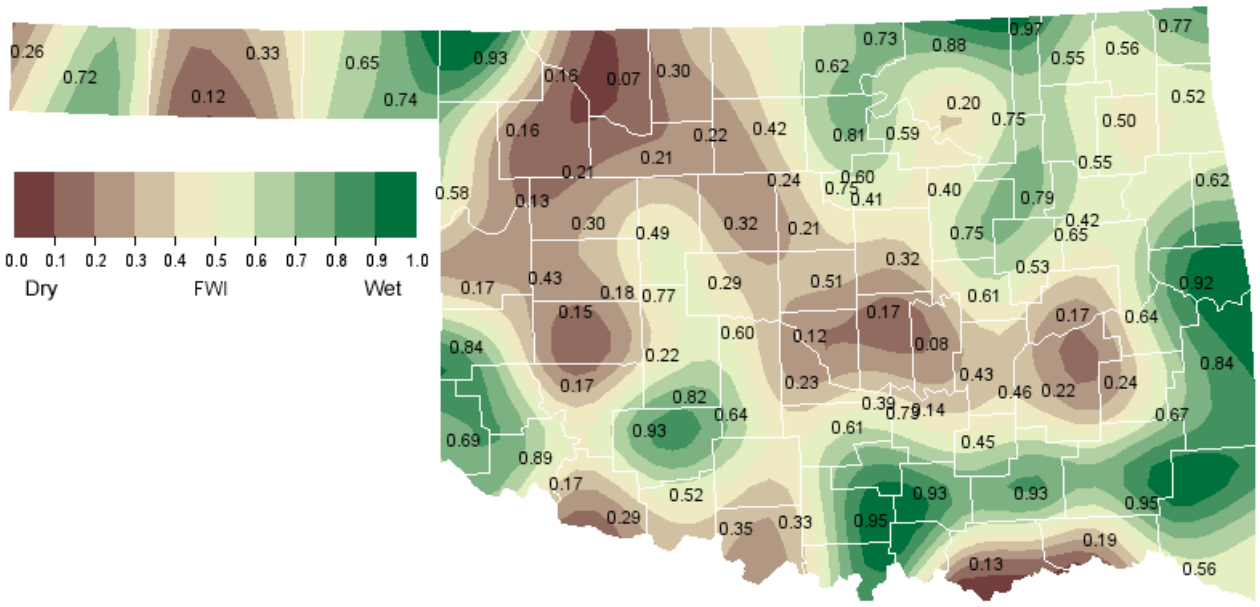
June Normal Monthly Minimum Temperature (1971-2000)



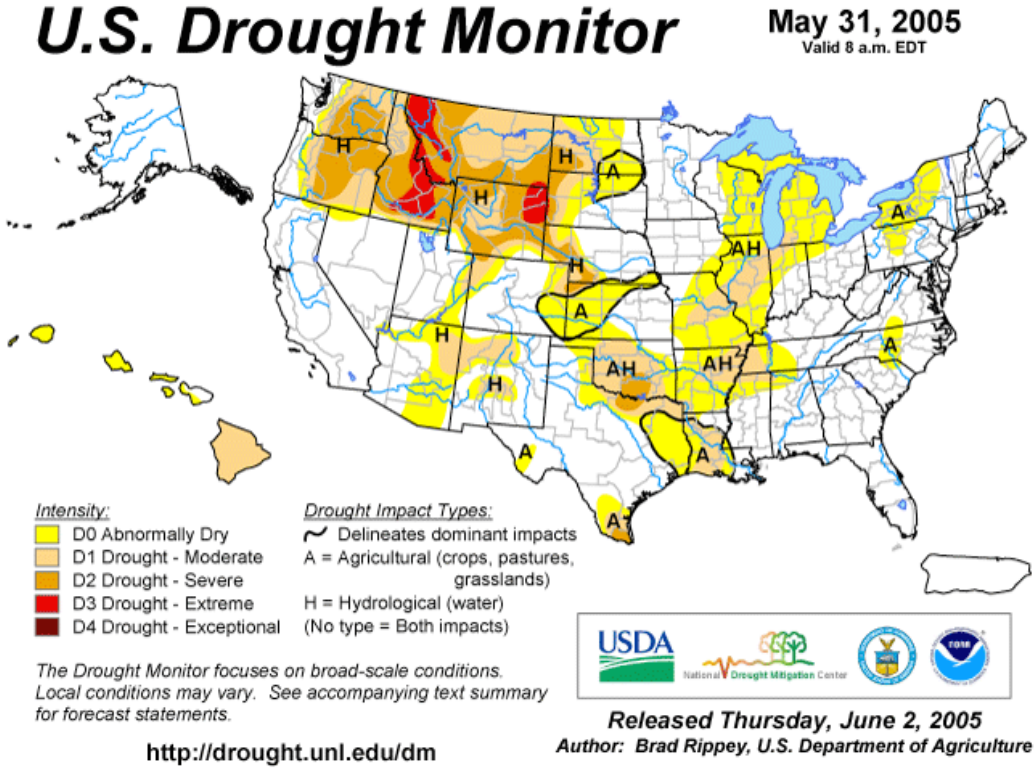
June Normal Precipitation (1971-2000)

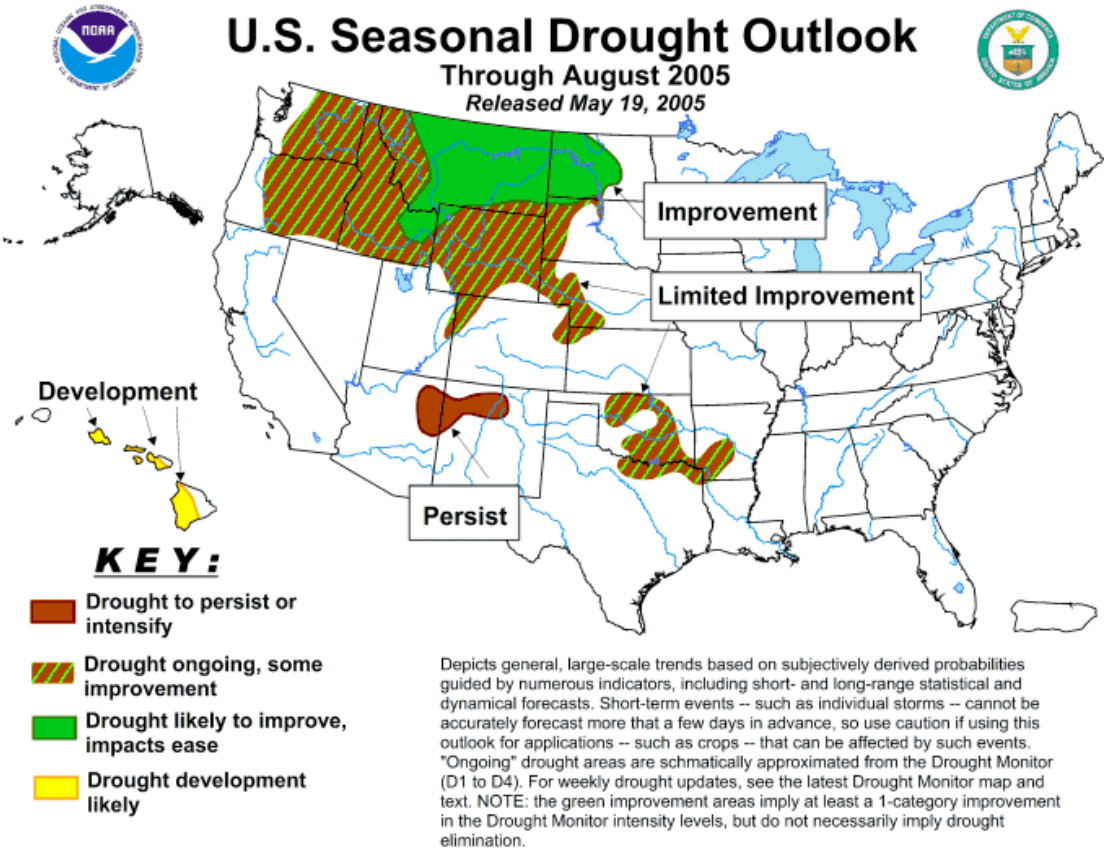


June 1, 2005 Soil Moisture Conditions at 25cm

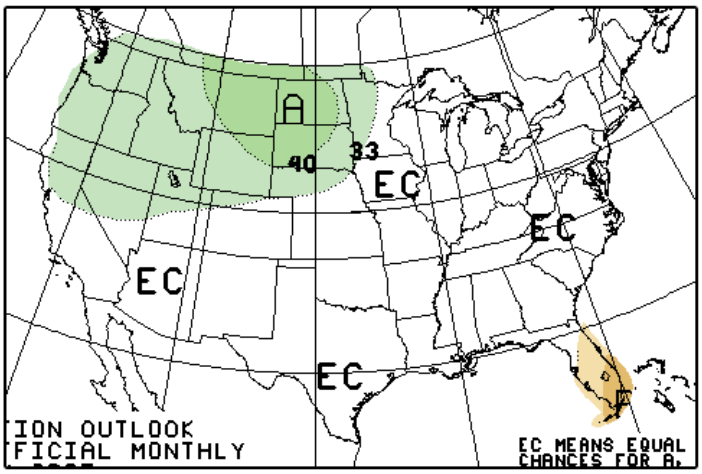


June 2005 Drought Indices





June 2005 U.S. Precipitation Forecast



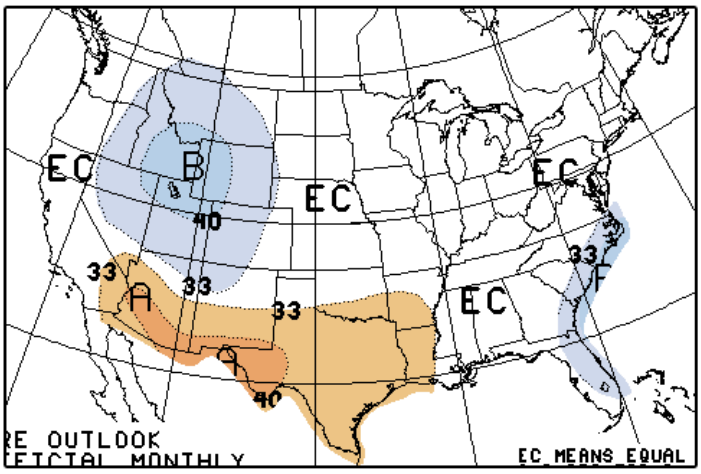
Percent Likelihood
of Above or Below
Average Precipitation*

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

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

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

June 2005 U.S. Temperature Forecast



Percent Likelihood
of Above and Below
Average Temperatures*

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

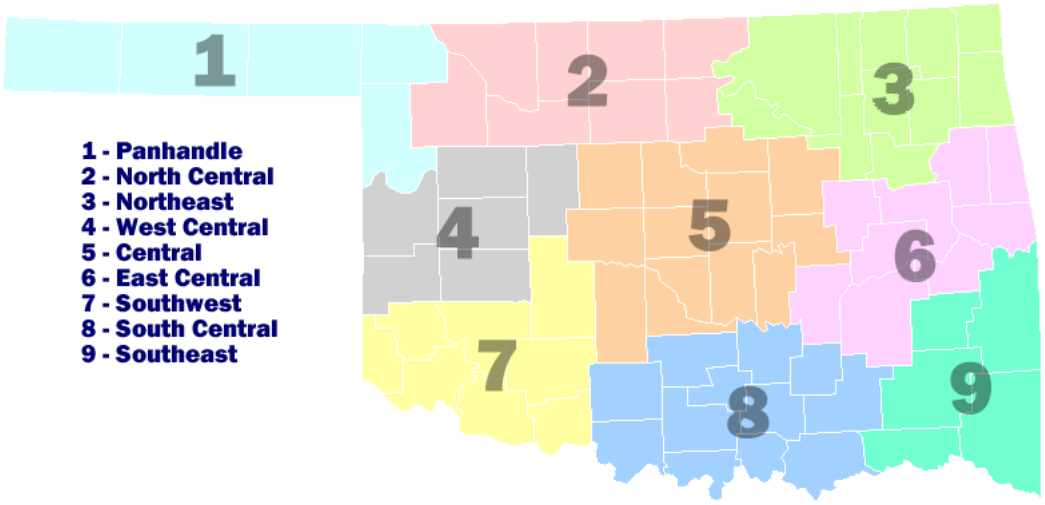
0% - 5%
5% - 10%
B = Below

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

June Climate Normals

Climate Division	Max. Temperature	Min. Temperature	Avg. Temperature	Precipitation
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.ocs.ou.edu or
http://www.ocs.ou.edu/
E-mail (ocs@ou.edu) or telephone (405/325-2541)

OKLAHOMA CLIMATOLOGICAL SURVEY

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