# oklahoma monthly climate summary **MAY 2005**



May earned its place in weather lore, both for its excesses and the lack thereof. For the first time since accurate recordkeeping 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 2<sup>nd</sup> 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 1<sup>st</sup> and 2<sup>nd</sup> 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	103°F	Altus/ Grandfield	May 22nd								
Low Temperature	30°F	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 19<sup>th</sup> 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 2<sup>nd</sup>, 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 4<sup>th</sup>; 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 1<sup>st</sup>. The low cloudiness began to break up over the state on the 5<sup>th</sup>, 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 8<sup>th</sup>. 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 8<sup>th</sup>, 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 12<sup>th</sup>, 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 12<sup>th</sup> and 13<sup>th</sup> 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 15<sup>th</sup>, some 5-10 degrees below normal. Mutual reported a low of 39 degrees on the 15<sup>th</sup>, and other locations fell into the 40s and 50s.

May 16-22: The ridge of high pressure lingered across the state on the 16<sup>th</sup> and 17<sup>th</sup>, providing the state with pleasant spring-like conditions. Sunny skies and temperatures in the 80s dominated the weather during these two days. An upperlevel 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 22<sup>nd</sup>.

**May 23-25:** A stationary front generated showers and thunderstorms in north central Oklahoma on the morning of the 23<sup>rd</sup>, 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 24<sup>th</sup>, 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 25<sup>th</sup> 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 25<sup>th</sup>, 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)	67.7°F	-0.2°F	50th Coolest									
Season-to-date (Mar-May)	58.8°F	-0.3°F	50th Warmest									
Year-to-Date (Jan-May)	52.9°F	1.7°F	19th Warmest									
	Precip	itation	D. 1 (1992 2005)									
	lotal	Depart.	Rank (1892-2005)									
Month (May)	2.75 in.	-2.47 in.	19th Driest									
Season-to-Date	5 15 in	-6 53 in	2nd Driest									
(Mar-May)	5.15 m.	0.55 III.	2nd Direst									
(Mar-May) 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	<b>Previous Record</b>	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

Nome         There Table Poxt Tabl		MEAN	HIGH		LOW				TOT	HIGH			MEAN	HIGH		LOW				TOT	HIGH	
Description         Control         Contro         Control <thcontrol< th=""></thcontrol<>	NAME	TEMP	TEMP	DAY	TEMP	DAY	HDD	CDD	PPT	24-HR	DAY	NAME	TEMP	TEMP	DAY	TEMP	DAY	HDD	CDD	PPT	24-HR	DAY
Arrow         66, 6         70         31         84         2, 46         91         91         94         2         2, 16         92         71         34         2         15         74	DANHANDLE																					
masses         64.2         100         21         22         100         24         22         Nonker         64.8         101         21 <th21< th=""></th21<>	Arnett	66 6	96	21	38	4	* * * *	* * * *	2 16	5.8	25	Goodwell	63 0	99	21	34	2	135	74	2 85	78	31
Dispective         60.7         90         21         30         1         21         30         1         20	Beaver	66.2	100	21	32	4	98	134	1 99	41	25	Hooker	64 6	101	21	35	4	113	99	3 00	90	28
Bulffair         61.3         91         20         31         4         61         32         3.7         1.23         2.9         31appet         (5.3)         90         21         31         1.21         2.48         1.28           Backbard         68.1         97         21         33         4         90         23         1.4         1.23         2.44         1.31         Medfact         67.0         1.02         2.2         3         4         91         2.43         3.9         1.03         2.43         3.9         1.03         2.43         3.9         1.03         2.43         3.9         2.10         2.47         7.97           Cherose         64.2         7.0         3.3         4         81         1.12         2.20         1.33         1.41         2.20         2.21         3.9         1.12         2.48         1.41         2.43         1.41         2.22         2.4         8         1.64         1.03         1.03         1.03         2.20         1.23         1.21         2.41         1.41         1.20         1.22         2.43         1.41         1.20         1.21         1.21         1.21         1.21         1.21         1.2	Boise City	60.7	96	21	32	2	173	41	2.86	1.49	29	Kenton	61.0	97	21	32	1	169	45	1.29	.35	2
NUME         Number of the set of	Buffalo	67.9	99	20	31	4	84	173	3.77	1.23	29	Slapout	65.9	99	21	38	3	103	132	2.49	1.29	25
NORTH CALL         Image of the second s																						
Bischerling Gell, B., 20, 31, 4, 79, 173, 174, 174, 175, 175, 174, 174, 175, 175, 175, 175, 175, 175, 175, 175	NORTH CENTRAL																					
BreckLindge       68.2       97       21       33       4       80       1.20       34       1.60       1.20       35       2       2       33       3       2       1.71       <	Blackwell	68.1	97	21	33	4	79	173	1.47	.65	31	Medford	69.0	100	21	34	4	74	197	1.68	.67	13
Cheresker 6, 9, 0, 00, 11, 22, 4, 8, 22, 00, 22, 44, 11, 84, 86, 86, 2, 66, 2, 66, 21, 33, 3, 68, 88, 12, 17, 29, 17, 26, 18, 24, 17, 29, 17, 26, 18, 24, 24, 24, 24, 24, 24, 24, 24, 24, 24	Breckinridge	68.3	97	21	33	4	80	182	3.04	1.57	13	Newkirk	67.0	92	21	36	2	77	139	2.67	1.77	19
Alertical         Or, 7	Cherokee	69.0	100	21	32	4	82	205	. 92	.44	31	Red Rock	68.2	96	21	33	3	82	181	2.17	. 97	31
rieman t. e. 100 2.1. 2.5 4 32 1.14 2.34 1.19 2.34 1.19 2.3 40.00 2.1 32 4 2.5 1.20 2.3 Xay Barch T. 7. 39 2.0 35 4 89 160 2.51 1.17 30 Arc 86.1 91 2.0 2.1 32 4 9.2 189 .69 .20 3.2 Kay Barch T. 7. 39 2.0 35 4 89 160 2.51 1.17 30 Arc 86.1 91 2.0 2.1 32 4 9.2 180 .40 1.2 BLXD, 67.2 93 2.2 35 3 71 193 4.4 1.3 1 DXD, 67.2 93 2.2 35 3 91 122 2.40 1.27 30 Arc 86.4 99 2.2 32 3 91 112 2.46 1.34 1.3 Poster 66.4 90 2.2 32 3 3 70 112 2.32 1.43 19 Wynona 66.4 90 2.2 32 3 3 91 112 2.46 1.3 4.7 Poster 66.4 90 2.2 32 3 17 120 2.22 1.10 2.0 1.0 120 3.24 1.41 1.3 Poster 66.4 90 2.2 35 3 78 120 2.22 1.10 2.0 1.0 1.3 1.1 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	Fairview	*****	***	***	***	***	****	****	*****	*****	***	Seiling	67.3	99	22	34	3	96	169	*****	*****	***
Latoma 6.6.2 97 22 30 3 4 6 2 10 2 11 10 10 2 2 2 4 4 8 11 2 2 8 1 1 2 2 1 4 1 12 12 2 1 4 1 12 12 2 1 1 2 1 1 2 1 2	Freedom	6/./	100	21	32	4	92	1/4	.54	.1/	26	Woodward	67.4	100	20	35	4	92	105	.89	.46	26
Max Hand         Origonal Solution         Origonal Solution         Operation         Solution         So	Lanona Mari Banah	60.2	90	21	25	4	00	160	2.1/	.99	10	Alva	00.1	100	21	32	4	00	TOD	.00	.20	20
Normal         Unita         U <thu< td=""><td>May Ranch</td><td>07.3</td><td>90</td><td>20</td><td>50</td><td>4</td><td>09</td><td>100</td><td>2.01</td><td>1.1/</td><td>30</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></thu<>	May Ranch	07.3	90	20	50	4	09	100	2.01	1.1/	30											
Bixby       67,9       92       22       35       3       72       163       2,42       1,41       13       Pryor       66,0       93       22       35       3       74       4,66       74	NORTHEAST																					
Barbank       67.2       92       21       33       3       77       14       4,66       3.76       19       Skiatock       67.4       90       22       23       34       11       2.11         Peraker       66.4       90       20       35       3       71       122       2.02       1.30       Number       66.4       90       22       34       3       3       11       3.11       11.10       3.11       11.10       3.11       3.12       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11       3.11	Bixby	67.9	93	22	36	3	72	163	2.42	1.41	13	Pryor	66.0	93	22	32	3	91	122	2.89	1.21	23
Copan         66.7         89         20         3         78         129         5.00         2.00         310         Vinita         65.4         90         22         32         3         94         108         2.33         1.33           day         65.2         93         21         31         310         1.13         1.14         1.83         74         1.05         21         1.05	Burbank	67.2	92	21	35	3	77	147	4.86	3.76	19	Skiatook	67.4	92	22	35	3	68	141	2.56	.70	19
Processer         66.4         90         20         36         3         78         12.2         3.2         1.43         1.48         23         Porter         66.4         90         22         34         3         77         16.1         3.3         3.4           Miani         66.2         90         22         32         3         3         10         3.6         1.5         3.5         3         11         3.3         3.4           Mass         GC         GA         90         22         3         3         50         16.6         1.6         3.6         2.2         3         3         70         165         1.81         3.8           Mest         CMTMAN         Bessle         66.4         96         22         3         3         71         160         1.01         1.3         3.8         Retrop         67.7         92         22         40         1.1         153         Retrop         66.1         96         22         9         177         160         1.01         173         1.01         1.01         103         100         100         100         100         100         100         100         100	Copan	66.7	89	20	35	3	78	129	5.00	2.02	13	Vinita	65.4	90	22	32	3	94	108	2.33	1.36	23
day       65.2       90       21       31       91       1.1       1.8       23       Porter       68.0       93       22       53       3       11       1.6       1.3       7.4         Nowate       66.2       90       22       33       38       1.6       1.1       1.8       23       Claremore       67.8       93       22       33       3       7.1       1.6       1.6         Numate       66.2       90       22       43       3       85       1.6       1.7       1.6       1.7	Foraker	66.4	90	10	36	3	78	122	3.21	1.43	19	Wynona	66.4	90	22	34	3	* * * *	* * * *	1.61	.67	19
Hiani       66.2       90       22       33       38       7       125       2.92       110       24       Incla       66.8       93       22       33       3       82       137       7       156       3.60       1.60	Jay	65.2	89	21	31	3	104	111	3.11	1.85	23	Porter	68.0	93	22	35	3	71	164	1.33	.74	13
Nowata         66.4         90         22         30         3         86         130         3.56         1.41         23         Claremore         67.8         93         22         35         3         70         156         3.60         1.65           MEST CONTRAL         Bessia         67.6         96         20         38         1         90         169         4.16         1.11         3         Retrop         66.1         98         22         41         2         83         160         4.04         1.25           Cheyenne         66.4         96         22         3         7         165         1.61         5.7         98         22         40         1         175         3.65         1.64         2.7         1.15         3.65         1.64         2.0         2.0         3.7         165         1.61         2.7         1.15         3.6         1.61         2.7         1.15         3.6         1.61         2.7         1.15         3.6         1.61         2.7         1.15         3.6         1.61         2.7         1.15         3.6         3.7         3.6         2.2         3.7         163         2.7         1.61	Miami	66.2	90	22	32	3	87	125	2.92	1.10	24	Inola	66.8	92	22	33	3	82	137	2.35	.83	23
Pavnee 6.7, 9 94 21 34 3 7/7 18 2.09 .62 13 West CENTRAL Bassis Butler 67.6 96 22 97 22 42 3 85 164 3.93 .99 26 Putnam 67.2 97 22 39 3 97 165 1.81 .55 Putner 66.4 98 22 36 3 107 149 1.92 1.03 31 Watonga 67.7 98 22 40 1 91 175 3.65 1.94 Erick **** *** **** **** 2.83 .81 12 CENTRAL Bowlegs 68.3 97 22 35 1 72 173 1.10 .40 13 Bowlegs 68.3 97 22 35 1 72 173 1.10 .40 13 Bowlegs 68.3 97 22 35 1 72 173 1.10 .40 13 Bowlegs 68.3 97 22 35 1 72 173 1.10 .40 13 Bowlegs 68.3 97 22 35 1 72 173 1.10 .40 13 Bowlegs 68.3 97 22 37 1 72 173 1.10 .40 13 Bowlegs 68.3 97 22 37 1 72 173 1.20 143 .85 1.64 2 Brick **** *** **** **** 2.83 .81 12 CENTRAL Bowlegs 68.3 97 22 37 1 72 173 1.20 143 .85 1.64 2 Brick **** *** **** **** 2.83 .81 12 CENTRAL Bowlegs 68.3 97 22 37 1 72 173 1.20 1.42 .85 2.00 Chandler 68.2 97 20 33 1 1 70 173 2.33 1.42 13 Bowlegs 68.3 97 22 37 1 72 173 1.25 1.62 13 Chandler 69.3 98 22 37 1 72 173 2.65 1.04 12 Shawnee 68.9 97 22 43 1 77 188 2.54 1.07 Sublegs 68.4 97 20 33 1 1 07 137 2.35 1.64 1.31 Numewah 68.3 99 22 37 1 72 2.06 1 7 71 33 2.54 1.07 Kinog 67.6 96 22 43 2 80 161 2.32 .95 2 Norman 68.4 95 22 37 1 72 2.06 1 7 71 33 2.54 1.07 Kinog 67.6 96 22 43 2 80 161 2.32 .95 2 Norman 68.8 96 22 38 1 72 189 2.14 .60 Cockaon 65.9 90 22 33 1 1 00 115 5.17 2.75 2.4 Studier 67.7 93 22 36 1 1 ********************************	Nowata	66.4	90	22	30	3	86	130	3.56	1.41	23	Claremore	67.8	93	22	35	3	70	156	3.60	1.66	19
New Service	Pawnee	67.9	94	21	34	3	77	168	2.09	.82	13											
Name         68.2         97         22         42         3         85         144         3.83         99         26         Puttam         67.2         70         22         30         3         97         165         1.81         1.55           Camargo         66.4         96         22         30         3         97         165         1.81         1.55         1.64         1.2         1.03         31         Watchage         66.1         98         22         41         4         92         1.77         3.65         1.63           CENTRL         Enclow         66.4         96         22         3         1         1.10         .40         13         Perkins         67.7         94         22         36         1         79         161         2.72         1.12           Boolege         68.3         97         22         37         1         73         1.10         .40         13         Stateherford         67.7         94         22         36         1         79         161         2.72         1.12         1.12         1.12         1.11         1.11         1.11         1.11         1.11         1.11 <t< td=""><td>WEST CENTRAL</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	WEST CENTRAL																					
Intlic         67,6         68         20         38         1         90         169         4.16         111         13         Petrop         64,1         98         12         41         2         83         100         40.0         1,55         1,35           Cheyenne         66,4         96         22         30         2         100         143         3,85         1,04         2         Weatherford         67,7         99         22         41         4         92         177         2,63         ,85           Erick         ***************         2,83         81         12         Weatherford         67,7         99         22         41         4         92         177         2,63         ,85           Erick         ***************         2,83         ,81         12         Netherford         67,7         94         22         36         1         71         132         14         130         Shawnee         67,7         94         22         36         1         71         33         14         13         Mathington         64,2         97         22         33         17         12         172         178 <td< td=""><td>Ressie</td><td>68 2</td><td>97</td><td>22</td><td>42</td><td>З</td><td>85</td><td>184</td><td>3 83</td><td>99</td><td>26</td><td>Putnam</td><td>67 2</td><td>97</td><td>22</td><td>39</td><td>З</td><td>97</td><td>165</td><td>1 81</td><td>55</td><td>26</td></td<>	Ressie	68 2	97	22	42	З	85	184	3 83	99	26	Putnam	67 2	97	22	39	З	97	165	1 81	55	26
Camarop         66.4         98         22         36         3         107         149         1.92         1.03         31         Watchang         67.7         98         22         40         1         91         175         3.66         1.03           Cheyenne         66.4         62         23         23         100         143         85         1.04         1.03         Natherford         67.7         99         22         41         4         92         177         2.63         .65           Bristow         66.5         92         22         37         170         3.23         1.62         1.72         1.73         1.72         1.75         1.73         2.23         1.62         1.79         1.61         2.72         1.71         1.74	Butler	67 6	96	20	38	1	90	169	4 16	1 11	13	Retrop	68 1	98	22	41	2	83	180	4 04	1 29	12
Cheyenne       66.4       96       22       39       2       101       133       3.85       1.04       2       Weatherford       67.7       99       22       41       4       92       177       2.63       .85         Erick       *********************************       2.83       .81       12         CMNRAL       Bowlegs       68.3       97       22       35       1       72       173       1.10       .40       13       Perkins       69.2       23       1       79       161       2.72       1.10         Chickasha       66.2       95       22       37       174       1.32       1.62       1.33       Shawnee       67.9       95       22       39       1.72       1.75       1.63       Spencer       68.9       97       22       31       79       168       1.44       1.3       Ninnekah       69.3       99       22       37       1.72       20.6       3.00       .95       2.03       3.78       1.97       3.33       2.20         Marena       68.4       95       22       34       77       1.72       1.65       1.65       1.72       75       24       Stuart </td <td>Camargo</td> <td>66.4</td> <td>98</td> <td>22</td> <td>36</td> <td>3</td> <td>107</td> <td>149</td> <td>1.92</td> <td>1.03</td> <td>31</td> <td>Watonga</td> <td>67.7</td> <td>98</td> <td>2.2</td> <td>40</td> <td>1</td> <td>91</td> <td>175</td> <td>3.65</td> <td>1.93</td> <td>13</td>	Camargo	66.4	98	22	36	3	107	149	1.92	1.03	31	Watonga	67.7	98	2.2	40	1	91	175	3.65	1.93	13
Erick       *****       ****       ****       ****       2.83       2.81       12         CENTAL       Bewlegs       66.3       97       22       35       1       72       173       1.10       .40       13       Okemah       67.7       94       22       36       1       79       161       2.72       1.12         Bristow       66.5       92       22       32       1       71       173       2.32       1.62       1.33       Shawee       67.9       92       23       1       71       101       2.83       1.71       1.72	Chevenne	66.4	96	22	39	2	100	143	3.85	1.04	2	Weatherford	67.7	99	22	41	4	92	177	2.63	.85	2
CATTRAL         Bowlegs         63.3         97         22         35         1         72         173         1.10         .40         13         Okemah         67.7         94         22         36         1         79         161         2.72         1.10           Chandler         66.2         95         22         37         1         75         173         2.32         1.62         13         Spencer         68.3         95         22         39         1         79         168         1.53         .43         1.71         1.72         2.43         1.76         13         Spencer         68.3         99         22         37         1         72         102         .44         1.3         Stillwater         66.8         97         22         39         1         72         172         120         .40         .99         22         37         1         72         120         .40         .99         22         37         1         72         120         .40         .90         .23         1         72         120         .30         .24         1.03         .20         31         .20         3.00         .103         .20	Erick	****	* * *	* * *	* * *	* * *	****	* * * *	2.83	.81	12											
CENTERL         Bowlegs         66.3         97         22         35         1         72         13         1.10         .40         13         Okemah         67.7         94         22         36         1         73         1.10         .40         13         Okemah         67.7         94         22         36         1         73         120         1.2         1.6         1.5         1.3         Shannee         67.7         95         22         31         176         13.3         Stannee         67.6         95         22         31         179         180         1.5         1.6         1.5         1.7         180         2.4         1.7         180         2.4         1.7         193         2.5         1.70         133         Mashington         66.8         97         22         31         172         172         172         172         172         172         173         1.00         100         153         17         133         Mashington         66.8         97         22         36         1         77         133         2.54         1.00           Kinogisher         61.6         95         22         31         16																						
Bowlegs       66.3       97       22       35       1       72       173       1.10       .40       13       Okemah       67.7       94       22       36       1       79       16.2       .72       1.12         Chandler       66.2       95       22       37       1       75       173       2.32       1.62       13       Shawnee       67.9       95       22       39       1       79       168       1.51       .86         Chickasha       66.2       97       22       33       1       71       168       2.45       1.77       173       Vashington       68.2       97       22       33       1       72       1.72       1.73       1.30       Nainigton       68.7       99       22       37       1       79       1.63       2.00       1.79       1.73       1.80       2.45       1.00       1.5       1.70       1.73       1.73       1.73       1.73       1.71       1.72       1.76       1.73       1.73       1.73       1.71       1.73       1.71       1.73       1.71       1.73       1.74       1.73       1.71       1.73       1.74       1.74       1.73 <td< td=""><td>CENTRAL</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	CENTRAL																					
Britow       66.5       92       22       32       3       97       144       4.18       3.05       1.3       Perkins       69.2       98       22       34       4       7.3       204       2.85       2.00         Chickasha       68.2       97       20       34       1       71       75       17       71       73       71<	Bowlegs	68.3	97	22	35	1	72	173	1.10	.40	13	Okemah	67.7	94	22	36	1	79	161	2.72	1.12	19
Chandler 68.2 95 22 37 1 75 173 2.32 1.62 13 Shawne 67.9 95 22 39 1 79 168 1.51 .51 .51 .51 .51 .51 .51 .51 .51 .5	Bristow	66.5	92	22	32	3	97	144	4.18	3.05	13	Perkins	69.2	98	22	34	4	73	204	2.85	2.00	13
Chickasha 68.2 97 20 34 1 74 14 2.38 .76 31 Spencer 68.3 96 22 40 3 77 180 2.45 1.77 Guthrie 69.3 98 22 37 4 73 206 2.66 1.97 13 Washington 68.2 97 22 33 3 71 71 2 72 ***** .74 Kingfisher 69.1 10 22 34 4 78 206 2.66 1.97 13 Washington 68.2 97 22 39 1 72 172 ***** .74 Marena 68.4 95 22 37 3 74 180 ***** ***** **** Acme 68.8 97 22 36 1 77 183 2.54 1.07 Minco 67.6 95 22 43 2 80 16 1.2.2 95 2 Norman 68.8 96 22 43 2 81 172 189 .76 .33 2 Calvin 67.8 95 22 31 3 96 149 2.06 1.24 13 Marshall 68.7 99 22 32 4 81 197 3.31 2.20 EAST CENTRAL Calvin 67.8 95 22 34 1 72 158 .76 .33 2 Calvin 67.8 95 22 36 1 **** **** 1.88 .76 Cokson 65.5 90 20 33 1 100 115 5.17 2.75 24 Baskall 67.3 93 22 36 1 69 165 1.70 .46 Baskall 67.3 93 22 36 3 75 146 1.67 .73 13 Wabbers Falls 68.4 93 22 38 1 67 172 ***** **** McAlester 68.5 94 22 35 1 71 179 1.70 .37 14 Wastville 65.2 89 20 31 3 106 103 .6.7 1.42 Souther 67.9 92 22 42 2 75 187 3.51 1.34 Fort Cobb 68.4 99 22 42 3 7 1 84 1.48 2.23 .33 19 Hatcar 67.9 92 22 42 2 75 187 3.51 1.34 Fort Cobb 68.4 99 22 42 3 7 184 2.47 .63 13 Tipton 70.3 100 22 43 1 61 227 3.42 1.53 Souther 70.4 103 22 40 1 81 148 2.23 .33 19 Hatcar 67.9 92 22 39 1 61 227 3.42 1.53 Marena 68.6 99 22 40 1 81 179 3.54 1.51 13 Souther 70.4 103 22 40 1 81 179 3.54 1.51 13 Souther 70.4 100 22 40 1 81 179 3.54 1.51 13 Souther 68.6 99 22 40 1 81 179 3.54 1.51 13 Souther 68.6 99 22 40 1 81 179 3.54 1.51 13 Souther 68.7 96 22 38 1 65 180 2.99 .44 Mary 68.2 100 22 40 1 81 179 3.54 1.51 13 Souther 68.7 96 22 38 1 65 180 2.99 .44 Mary 68.2 100 22 40 1 81 179 3.54 1.51 13 Souther 68.7 96 22 38 1 61 247 3.11 .99 Margum 68.2 100 22 40 1 81 179 3.54 1.51 13 Souther 68.7 96 22 38 1 65 180 2.99 .42 Margum 68.2 100 22 40 1 81 179 3.54 1.51 13 Souther 70.4 100 22 34 1 60 127 2.54 .77 13 Ringling 69.9 99 22 40 1 61 214 5.81 3.44 Park 68.6 96 20 34 1 67 178 1.29 .40 14 Waatkar 70.0 99 22 38 1 65 180 2.99 .52 Margum 68.7 96 22 38 1 55 2.17 1.72 Margum 68.6 96 20 34 1 50 2.77 2.54 1.77 13 Sulphur 67.9 99 22 40 1 61	Chandler	68.2	95	22	37	1	75	173	2.32	1.62	13	Shawnee	67.9	95	22	39	1	79	168	1.51	.88	13
El Reho 61,2 99 20 34 1 90 158 3.30 1.47 13 Stillwäre 68.9 97 22 33 3 7 6 197 3.55 3.17 Kingfisher 69.1 101 22 34 4 78 206 2.66 1.97 13 Mashington 66.2 97 22 39 1 72 172 206 3.00 .99 Marena 68.4 95 22 37 3 74 180 ***********************************	Chickasha	68.2	97	20	34	1	74	174	2.38	.76	31	Spencer	68.3	96	22	40	3	77	180	2.45	1.77	13
Guttnie       69.3       98       22       37       4       73       206       3.66       1.97       13       Wasnington       68.2       97       22       39       1       72       216       3.00       39         Marena       68.4       95       22       37       3       74       180       30       61       2.32       52       30       1       72       216       3.00       39       2.44       61       30       97       22       33       1       72       216       3.00       39       2.24       1.61       2.30       3       2.14       1.60       30       22       34       1       72       216       1.61       2.32       31       22       34       1       72       216       1.61       2.32       31       22       36       1       77       193       2.24       1.00       13.00       13       Marshall       66.8       97       22       36       1       77       133       2.00       13       100       13.00       130       130       130       130       130       130       130       130       130       130       130       130       1	El Reno	67.2	95	20	34	Ţ	90	158	3.30	1.4/	13	Stillwater	68.9	97	22	33	3	/8	197	3.85	3.1/	13
Alligible bit 101 22 34 4 7 70 200 3.04 1.43 13       Allight bit 1.42 200 3.00 4.39         Marena 68.4 95 22 37 3 74 180 **********       Allight bit 1.24 13         Marena 68.4 96 22 38 1 77 193 2.54 1.07         Minco 67.6 96 22 43 2 1 3 96 149 2.06 1.24 13         Marena 68.8 96 22 38 1 77 189 2.14 .68         Calvin 67.8 95 22 34 1 72 158 .76 .33 2         Stigler 67.7 93 22 36 1 *********         Marena 68.8 96 22 38 1 66 197 2.33 1 100 115 5.17 2.75 24 5tuart         Gookson 65.5 94 22 35 1 71 179 1.70 .37 14         Webbers Falls 68.4 98 20 31 3 106 103 3.67 1.44         Marena 67.9 92 22 32 4 6 1 197 7.15 2.45 1.08         Marena 67.9 92 20 33 3 100 115 5.17 7.3 13         Webbers Falls 68.4 98 20 31 3 106 103 2.67 1.44         Marena 67.9 92 20 35 3 68 159 4.35 2.89 24         SOUTHWEST         Alus 70.4 103 22 43 2 66 234 4.31 1.62 13         Medicine Park 68.6 97 22 42 2 75 187 3.51 1.34         Medicine Park 68.6 97 22 42 2 75 187 3.51 1.34         Modicine Park 68.6 97 22 42 2 75 187 3.51 1.34         Marena 68.2 100 22 40 1 81 179 3.54 1.51 13         SOUTHWEST         Ada 68.4 97 22 34 1 70 175 2.16 .77 13         Ringling 69.9 99 22 40 1 61 247 3.11 .99         Margin 68.2 100 22 40 1 81 179 3.54 1.51 13         SOUTH CENTAL         Ada 68.4 97 22 34 1 70 175 2.16 .77 13       Suphore 67.9 92 22 38	Guthrie	69.3	101	22	3/	4	/3	206	2.66	1.9/	13	Washington	68.2	97	22	39	1	72	1/2	2 00	. / 4	13
Marting       Oil 1       Jo       Los       Jo       Los       Jo       Los       Jo       Los       Jo       Los       Los       Los       Los       Jo       Los       Lo <thlos< th=""> <thlo< th=""> <thlo< td="" th<=""><td>Marena</td><td>68 /</td><td>101</td><td>22</td><td>34</td><td>4</td><td>70</td><td>206</td><td>3.04 *****</td><td>1.43 ****</td><td>±5 ***</td><td>Acme</td><td>68 8</td><td>99</td><td>22</td><td>36</td><td>1</td><td>72</td><td>200</td><td>2 54</td><td>1 07</td><td>13</td></thlo<></thlo<></thlos<>	Marena	68 /	101	22	34	4	70	206	3.04 *****	1.43 ****	±5 ***	Acme	68 8	99	22	36	1	72	200	2 54	1 07	13
Oliton       6.7.7       93       22       34       1       1       1       Marshall       60.7       99       22       32       4       81       107       1.3.1       2.00         EAST CENTRAL       Calvin       67.8       95       22       34       1       72       158       .76       .33       2       Stigler       67.7       93       22       36       1       ************************************	Minco	67 6	96	22	43	2	80	161	2 32	95	2	Norman	68 8	96	22	38	1	72	189	2.54	1.07	2
Contrail       Contrained and the final final field of the final field of the final field of the final field of the field	Oilton	66.7	93	22	31	3	96	149	2.06	1.24	13	Marshall	68.7	99	22	32	4	81	197	3.31	2.20	13
ENST CENTRAL           Calvin         6         Stigler         67.7         9         22         36         1           Cookson         65.5         90         20         33         2         Stigler         67.7         9         22         36         1         1         67.7         9         20         31         6         1         6         7         7         9         20         31         3         1         67.7         9         20         31         3         1         1         1         6         1         7         22         3         100         20         31         3         1         6         6         6         6         6         6          6 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>																						
Calvin       67.8       95       22       34       1       72       158       .76       .33       2       Stigler       67.7       93       22       36       1       ************************************	EAST CENTRAL																					
Cookson       65.5       90       20       33       1       100       115       5.17       2.75       2.4       Stuart       68.1       93       22       36       1       69       165       1.70       .46         Bufaula       61.0       93       22       37       1       68       1.67       .73       13       Webbers Falls       68.4       93       22       38       1       67       172       ************************************	Calvin	67.8	95	22	34	1	72	158	.76	.33	2	Stigler	67.7	93	22	36	1	* * * *	* * * *	1.88	.76	24
Eufaula       68.0       93       22       37       1       68       162       2.30       .69       8       Tahlequah       64.9       89       20       31       3       106       103       3.67       1.46         McAlester       68.5       94       22       35       1       71       179       1.70       .37       14       Westville       68.4       93       20       31       3       102       108       2.85       1.08         Sallisaw       67.9       92       20       35       3       68       159       4.35       2.89       24         SOUTHMEST       Altus       70.4       103       22       43       2       66       234       4.31       1.62       13       Medicine Park       68.6       97       22       42       7       1.87       3.51       1.34         Fort Cobb       68.4       99       22       43       1       64       1.41       1.2       Apache       67.9       97       22       41       1       82       1.2       1.34         Hobart       68.6       99       22       40       1       1       1.33 <th< td=""><td>Cookson</td><td>65.5</td><td>90</td><td>20</td><td>33</td><td>1</td><td>100</td><td>115</td><td>5.17</td><td>2.75</td><td>24</td><td>Stuart</td><td>68.1</td><td>93</td><td>22</td><td>36</td><td>1</td><td>69</td><td>165</td><td>1.70</td><td>.48</td><td>31</td></th<>	Cookson	65.5	90	20	33	1	100	115	5.17	2.75	24	Stuart	68.1	93	22	36	1	69	165	1.70	.48	31
Haskell       67.3       93       22       36       3       75       146       1.67       .73       13       Webbers Falls       68.4       93       22       38       1       67       172       ******       *******       ******       *****       ************************************	Eufaula	68.0	93	22	37	1	68	162	2.30	.69	8	Tahlequah	64.9	89	20	31	3	106	103	3.67	1.43	24
McAlester       68.5       94       22       35       1       71       1/9       1.70       .37       14       Westville       65.2       89       20       31       3       102       108       2.85       1.08         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       Medicine Park       68.6       97       22       42       2       75       187       3.51       1.34         Fort Cobb       68.4       99       22       42       3       9       173       3.74       1.71       13       Medicine Park       68.6       97       22       42       2       75       1.74       1.34         Hobart       68.6       99       22       41       177       178       2.91       .76       12       Apache       67.9       97       22       41       1.82       1.72       2.68       1.10         Mangum       68.2       100       22       34       1       60	Haskell	67.3	93	22	36	3	75	146	1.67	.73	13	Webbers Falls	68.4	93	22	38	1	67	172	*****	*****	***
Okmungde       67.2       94       22       34       1       61       148       2.23       .93       19       Hectorville       And the	McAlester	68.5	94	22	35	1	71	179	1.70	.37	14	Westville	65.2	89	20	31	3	102	108	2.85	1.08	23
SAILISAW       67.9       92       20       35       3       66       139       4.33       2.69       24         SOUTHWEST       Altus       70.4       103       22       42       3       79       184       2.47       .63       13       Tipton       70.3       100       22       42       2       75       187       3.51       1.34         Hinton       67.8       98       22       39       1       87       173       3.74       1.71       13       Walters       69.6       98       22       39       1       65       206       4.50       1.86         Hobart       68.6       99       22       41       1       77       188       2.91       .76       12       Apache       67.9       97       22       41       1       82         Mangum       68.2       100       22       40       1       81       179       3.54       1.51       13         SOUTH CENTRAL       A       A       68.4       97       22       34       1       67       13       Sulphur       68.7       96       22       30       1       61       214	Okmulgee	67.2	94	22	34	1	81	148	2.23	.93	19	Hectorville	* * * * *	* * *	* * *	* * *	* * *	* * * *	* * * *	****	* * * * *	* * *
SOUTHWEST         Altus       70.4       103       22       43       2       66       234       4.31       1.62       13       Tipton       70.3       100       22       42       2       75       187       3.51       1.34         Fort Cobb       68.4       99       22       41       1       77       188       2.91       .76       12       Apache       67.9       97       22       41       1       82       1.02       2.68       1.10         Hollis       68.4       99       22       41       1       77       188       2.91       .76       12       Apache       67.9       97       22       41       1       82       1.02       2.68       1.10         Mangum       68.2       100       22       40       1       81       179       3.54       1.51       13       Canadfield       71.0       103       22       39       1       61       247       3.11       3.99         Mangum       68.4       97       22       34       1       70       175       2.16       .77       13       Ringling       69.9       99       22	Sallisaw	07.9	92	20	50	2	00	109	4.50	2.09	24											
Altus       70.4       103       22       43       2       66       234       4.31       1.62       13       Medicine Park       68.6       97       22       42       2       75       187       3.51       1.34         Fort Cobb       68.4       99       22       42       3       79       184       2.47       .63       13       Tipton       70.3       100       22       43       1       61       227       3.42       1.35         Hinton       67.8       98       22       39       1       67       27       58       1.65       206       4.50       1.86         Hobart       68.6       99       22       41       1       77       188       2.91       .76       1       Apache       67.9       97       22       41       182       127       3.41       1.99         Mangum       68.2       100       22       40       1       81       179       3.54       1.51       13       Sulphur       68.7       96       22       38       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34 </td <td>SOUTHWEST</td> <td></td>	SOUTHWEST																					
Fort Cobb       68.4       99       22       42       3       79       184       2.47       .63       13       Tipton       70.3       100       22       43       1       61       227       3.42       1.35         Hinton       67.8       98       22       39       1       87       173       3.74       1.71       13       Walters       69.6       98       22       39       1       65       206       4.50       1.86         Hobart       68.6       99       22       42       2       75       181       4.64       1.41       12       Grandfield       71.0       103       22       39       1       61       247       3.11       .99         Mangum       68.2       100       22       40       1       81       179       3.54       1.51       13       Sulphur       68.7       96       22       38       1       61       247       5.81       3.14         Burneyville       70.4       100       22       34       1       60       27       2.54       .75       13       Sulphur       68.7       96       22       38       1       61	Altus	70.4	103	22	43	2	66	234	4.31	1.62	13	Medicine Park	68.6	97	22	42	2	75	187	3.51	1.34	13
Hinton       67.8       98       22       39       1       87       173       3.74       1.71       13       Walters       69.6       98       22       39       1       65       206       4.50       1.86         Hobart       68.6       99       22       41       1       77       188       2.91       .76       12       Apache       67.9       97       22       41       1       82       172       2.68       1.10         Mangum       68.2       100       22       42       2       75       181       4.64       1.41       12       Grandfield       71.0       103       22       39       1       61       247       3.11       .99         Mangum       68.2       100       22       34       1       70       175       2.16       .77       13       Ringling       69.9       99       22       40       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34       1       67       178       1.37       X       1.4       Wairka       70.0       99       22       38       1       62       <	Fort Cobb	68.4	99	22	42	3	79	184	2.47	.63	13	Tipton	70.3	100	22	43	1	61	227	3.42	1.35	13
Hobart       68.6       99       22       41       1       77       188       2.91       .76       12       Apache       67.9       97       22       41       1       82       172       2.68       1.10         Hollis       68.4       99       22       42       2       75       181       4.64       1.41       12       Grandfield       71.0       103       22       39       1       61       247       3.11       .99         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       Ringling       69.9       99       22       40       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34       1       60       277       2.54       .75       13       Sulphur       68.7       96       22       38       1       65       134       14       14       14       13       13       14       13       134       <	Hinton	67.8	98	22	39	1	87	173	3.74	1.71	13	Walters	69.6	98	22	39	1	65	206	4.50	1.86	13
Hollis       68.4       99       22       42       2       75       181       4.64       1.41       12       Grandfield       71.0       103       22       39       1       61       247       3.11       .99         Mangum       68.2       100       22       40       1       81       179       3.54       1.51       13       71.0       103       22       39       1       61       247       3.11       .99         SOUTH CENTRAL       Ada       68.4       97       22       34       1       70       175       2.16       .77       13       Ringling       69.9       99       22       40       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34       1       60       227       2.54       .75       13       Sulphur       68.7       96       22       38       1       65       180       2.99       .82         Byars       68.5       96       22       38       1       51       217       2.78       1.37       28       Vanoss       69.1       97       22       34       1       64	Hobart	68.6	99	22	41	1	77	188	2.91	.76	12	Apache	67.9	97	22	41	1	82	172	2.68	1.10	13
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       Ringling       69.9       99       22       40       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34       1       60       227       2.54       .75       13       Sulphur       68.7       96       22       38       1       65       180       2.99       .82         Byars       68.6       96       20       34       1       67       178       1.29       .40       14       Waurika       70.0       99       22       38       1       62       218       2.83       1.41         Durant       70.4       96       22       38       1       51       217       2.78       1.37       28       Vanos       69.1       97       22       34       1       64       191       1.73       .66         Lane       69.4       95       22       35	Hollis	68.4	99	22	42	2	75	181	4.64	1.41	12	Grandfield	71.0	103	22	39	1	61	247	3.11	.99	13
SOUTH CENTRAL         Ada       68.4       97       22       34       1       70       175       2.16       .77       13       Ringling       69.9       99       22       40       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34       1       60       227       2.54       .75       13       Sulphur       68.7       96       22       38       1       65       180       2.99       .82         Byars       68.5       96       22       42       1       68       177       2.95       1.15       13       Tishomingo       68.7       96       22       38       1       62       218       2.88       1.41         Ourant       70.4       96       22       38       1       51       217       2.78       1.37       2.8       Vanoss       69.1       97       22       34       1       64       191       1.73       .66         Lane       69.4       95       22       35       1       59       216       3.02       .72       31       Ardmore       *****       ****       ****	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       Ringling       69.9       99       22       40       1       61       214       5.81       3.14         Burneyville       70.4       100       22       34       1       60       227       2.54       .75       13       Sulphur       68.7       96       22       38       1       65       180       2.99       .82         Byars       68.5       96       22       42       1       68       177       2.95       1.15       13       Tishomingo       68.7       96       22       38       1       65       180       2.99       .82         Durant       70.4       96       22       38       1       67       178       1.29       .40       14       Waurika       70.0       99       22       34       1       64       191       1.73       .76         Ketchum Ranch       69.1       97       22       34       1       58       213       2.73       .69         Lane       69.4       95       22       35 </td <td></td>																						
Ada       68.4       97       22       34       1       70       175       2.16       .77       13       Ringling       69.9       99       22       40       1       61       214       3.1       1.1       50       2.2       3.0       1       65       1.0       2.99       .82       3.0       1.0       1.0       9.1       3.0       1.0       1.0       9.0	SOUTH CENTRAL	<u> </u>	0.7	~ ~ ~	24	1	70	175	0.10		1.0	Disuling	<u> </u>	0.0	~~~	4.0	1	<b>C</b> 1	014	F 01	2 14	21
Burneyvine       70.4       100       22       34       1       60       227       2.94       .75       13       Sulphur       68.7       96       22       38       1       65       180       2.99       .82         Byars       68.5       96       22       42       1       68       177       2.95       1.15       13       Tishomingo       68.7       96       22       39       1       59       173       3.68       1.34         Centrahoma       68.6       96       20       34       1       67       178       1.29       .40       14       Waurika       70.0       99       22       38       1       62       218       2.83       1.11         Durant       70.4       96       22       38       1       51       217       2.78       1.37       28       Vanoss       69.1       97       22       34       1       64       191       1.73       .76         Ketchum Ranch       69.1       97       22       35       1       54       190       3.75       .98       28       Newport       69.9       98       22       38       1       61	Ada	68.4	97	22	34	1	70	175 207	2.16	.77	13	Kingling	69.9	99	22	40	1	61	214	5.81	3.14	31
By ars       68.5       96       22       42       1       68       177       2.93       1.13       1	Burneyville	/0.4	100	22	34	1	60	227	2.54	./5	13	Sulphur	68.7	96	22	38	1	65	170	2.99	.82	13
Solution 2010       Solution 2010<	Dyais Centrahoma	00.0 68 6	9 G K	22	42 37	1	60 67	178	2.90	1.13 40	1 A	Waurika	70 0	90 90	22	28 29	⊥ 1	59	⊥/J 218	2 82	1 11	29 13
Ketchum Ranch       69.1       97       22       40       1 *****       ****       2.48       1.01       8       Bee       70.0       97       22       34       1       58       2.13       2.73       .69         Lane       69.4       95       22       35       1       54       190       3.75       .98       28       Newport       69.9       98       22       38       1       61       212       3.57       1.15         Madill       70.1       99       22       35       1       59       216       3.02       .72       31       Ardmore       *****       *****       *****       ****       ****       ****       ****       ****       *****       *****       *****       *****       ****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       **	Durant	70.4	96	20	38	1	51	217	2.78	1 37	2.8	Vanoss	69 1	97	22	34	1	64	191	1.73		13
Lane       69.4       95       22       35       1       54       190       3.75       .98       28       Newport       69.9       98       22       38       1       61       212       3.57       1.15         Madill       70.1       99       22       35       1       59       216       3.02       .72       31       Ardmore       *****       *****       *****       *****       *****       *****       ****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       *****       ****       *****       ****       *****       *****       *****       *****       *****       *****       *****       *****       ****       *****       *****       *****       *****       *****       *****       *****       ******       ****** </td <td>Ketchum Ranch</td> <td>69.1</td> <td>97</td> <td>22</td> <td>40</td> <td>1</td> <td>****</td> <td>* * * *</td> <td>2.48</td> <td>1.01</td> <td>- 0</td> <td>Bee</td> <td>70.0</td> <td>.97</td> <td>22</td> <td>34</td> <td>1</td> <td>58</td> <td>213</td> <td>2.73</td> <td>.69</td> <td>28</td>	Ketchum Ranch	69.1	97	22	40	1	****	* * * *	2.48	1.01	- 0	Bee	70.0	.97	22	34	1	58	213	2.73	.69	28
Madill       70.1       99       22       35       1       59       216       3.02       .72       31       Ardmore       *****       ***       ***       **** </td <td>Lane</td> <td>69.4</td> <td>9.5</td> <td>22</td> <td>35</td> <td>1</td> <td>54</td> <td>190</td> <td>3.75</td> <td>.98</td> <td>28</td> <td>Newport</td> <td>69.9</td> <td>98</td> <td>22</td> <td>38</td> <td>1</td> <td>61</td> <td>212</td> <td>3.57</td> <td>1.15</td> <td>13</td>	Lane	69.4	9.5	22	35	1	54	190	3.75	.98	28	Newport	69.9	98	22	38	1	61	212	3.57	1.15	13
Pauls Valley       69.1       96       22       38       1       65       193       2.23       .87       13       Fittstown       ***** **** **** **** **** **** ****	Madill	70.1	99	22	35	1	59	216	3.02	.72	31	Ardmore	*****	***	* * *	***	* * *	* * * *	* * * *	3.64	1.06	13
SOUTHEAST           Antlers         68.4         96         22         30         1         60         167         2.57         .88         28         Mt Herman         67.6         92         20         37         1         72         152         5.01         1.90           Clayton         68.3         94         22         33         1         67         168         2.32         1.02         14         Talihina         67.8         93         22         32         1         ****         ****         2.17         1.21           Cloudy         67.9         94         20         35         1         60         148         4.23         1.51         29         Wilburton         68.1         93         22         34         1         66         163         1.89         .67	Pauls Valley	69.1	96	22	38	1	65	193	2.23	.87	13	Fittstown	* * * * *	* * *	* * *	* * *	* * *	* * * *	* * * *	* * * * *	* * * * *	* * *
SOUTHEAST           Antlers         68.4         96         22         30         1         60         167         2.57         .88         28         Mt Herman         67.6         92         20         37         1         72         152         5.01         1.90           Clayton         68.3         94         22         33         1         67         168         2.32         1.02         14         Talihina         67.8         93         22         32         1         ****         ****         2.17         1.21           Cloudy         67.9         94         20         35         1         60         148         4.23         1.51         29         Wilburton         68.1         93         22         34         1         66         163         1.89         .67	-																					
Antlers         68.4         96         22         30         1         60         167         2.57         .88         28         Mt Herman         67.6         92         20         37         1         72         152         5.01         1.90           Clayton         68.3         94         22         33         1         67         168         2.32         1.02         14         Talihina         67.8         93         22         32         1         ****         ****         2.17         1.21           Cloudy         67.9         94         20         35         1         60         148         4.23         1.51         29         Wilburton         68.1         93         22         34         1         66         163         1.89         .67	SOUTHEAST																					
Clayton         68.3         94         22         33         1         67         168         2.32         1.02         14         Talihina         67.8         93         22         32         1         ****         ****         2.17         1.21           Cloudy         67.9         94         20         35         1         60         148         4.23         1.51         29         Wilburton         68.1         93         22         34         1         66         163         1.89         .67	Antlers	68.4	96	22	30	1	60	167	2.57	.88	28	Mt Herman	67.6	92	20	37	1	72	152	5.01	1.90	29
CLOUDY 67.9 94 20 35 1 60 148 4.23 1.51 29 Wilburton 68.1 93 22 34 1 66 163 1.89 .67	Clayton	68.3	94	22	33	1	67	168	2.32	1.02	14	Talihina	67.8	93	22	32	1	****	****	2.17	1.21	14
	CLOUDY	67.9	94	20	35	1	60	148	4.23	1.51	29	Wilburton	68.1	93	22	34	1	66 * * * *	163 ****	1.89	.67	13
nugo 0 50 20 50 1 45 160 1.02 0 WISLEL 00.5 52 22 52 1 ^^^^ / 1 45 84 2.35 Tabel 69 4 95 22 38 1 46 184 1.45 81 29 Broken Bow 67 4 06 20 25 1 67 130 2 26 2 00	Idabel	09.4 60 /	90 90	∠∪ ??	20 20	1 1	49 26	197 187	1 /5	.0Z	29	Wister Broken Bow	67 /	92 Q.A	22	32	1	67	130	3.40 3.96	2.33	24 20

<b>Climate Division</b>	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

## May 2005 Mesonet Precipitation Comparison

2004 and 2005 Statewide Precipitation Monthly Totals vs. Normal



<b>Climate Division</b>	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

## May 2005 Mesonet Temperature Comparison

2004 and 2005 Statewide Temperature Monthly Averages vs. Normal



## Mesonet Extremes for May 2005

Climate	High Temp (F)	Day	Station	Low Temp	Dov	Station	High Monthly Rainfall (inchos)	Station	High Daily Rainfall (inchos)	Dev	Station
Division	(1)	Day	Julia	(1)	141	D C.1		D C.1.	(Inches)	Day	Deline Cit
Panhandle	101	21st	Hooker	31	4th	Buffalo	3.//	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 Minimum Temperature (1971-2000)



## June Normal Precipitation (1971-2000)



June 1, 2005 Soil Moisture Conditions at 25cm









June 2005 U.S. Temperature Forecast



#### June Climate Normals

<b>Climate Division</b>	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: <u>http://aa.usno.navy.mil/data</u>

Severe Storm Reports Storm Prediction Center: <u>http://spc.noaa.gov/climo/</u>

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: <u>http://climate.ocs.ou.edu</u> or <u>http://www.ocs.ou.edu/</u>

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



Oklahoma Climatological Survey is the State Climate Office for Oklahoma

Dr. Renee McPherson, Acting Director

Editor

Gary D. McManus, Climatologist

Contributors

Gary D. McManus Mark A. Shafer, Director of Climate Information Derek S. Arndt, Acting State Climatologist Howard Johnson, Associate State Climatologist (Ret.)

Design

Stdrovia Blackburn, Visual Communications Specialist

> For more information, contact: Oklahoma Climatological Survey The University of Oklahoma 100 East Boyd Street, Suite 1210 Norman, OK 73019-1012 tel: 405-325-2541 fax: 405-325-2550 e-mail: ocs@ou.edu http://www.ocs.ou.edu