Oklahoma Monthly Climate Summary

MAY 2012

OKLAHOMA CLIMATOLOGICAL SURVEY

A pleasantly cool final day and scattered heavy rains during the month's final week were too little and too late, and May entered the record books as one of the warmest and driest in state history. According to data from the Oklahoma Mesonet, the statewide average temperature finished at 72.2 degrees, 4.3 degrees above normal. That ranks May as the fifth warmest on record. Statewide average records date back to 1895. That heat, combined with the state's warmest March and tenth warmest April, propelled the spring season to the warmest on record at 65.1 degrees, 6 degrees above normal. The climatological spring runs from March through May for record purposes. The previous record mark for spring was 62.9 degrees from 2006. The January-May statewide average of 56.3 degrees also tops the record books at 5.2 degrees above normal. Despite the violent weather during its last week, May was actually one of the quietest on record for tornadoes. Preliminary numbers from the National Weather Service (NWS) estimate May's total at four. While that number could rise, it would not be by much. May 2010 had a record-tying 90 tornadoes and May 2011 had 46. The preliminary total for the year currently stands at 52. The average tornado count for May is 22 and the annual average is 55. Accurate tornado statistics date back to 1950.

PRECIPITATION

Scattered heavy rainfall at the end of the month helped May to avoid becoming the driest on record and finished with the rank of fourth driest. The statewide average precipitation total was 1.8 inches, 3.4 inches below normal. Rainfall totals from the Mesonet ranged from around 6 inches in Grady County to a dusty 0.01 inches from both Arnett and Slapout. Much of the northern third of the state had trouble keeping the rain gauge wet and recorded less than an inch for the month. Drought relief that began last fall faded in the dry, hot weather of April and May for some areas. The latest U.S. Drought Monitor report, released on May 31, finds moderate drought creeping back into eastern Oklahoma from Arkansas. A broader area of "abnormally dry" conditions, a drought pre-cursor, covered much of eastern and southern Oklahoma. The Panhandle and southwestern Oklahoma continue with drought conditions labeled from "moderate" to "extreme."

TEMPERATURE

The recent warmth is a continuation of what the state has experienced since early 2010. Of the last 26 months, starting with April 2010, 21 have been warmer than normal. Three of the last 11 months (July and August, 2011, and March 2012) and two out of the last four seasons (summer 2011 and spring 2012) eclipsed their respective all-time heat records as well. June 2011 barely missed that month's top mark, settling for the rank of second warmest. Oklahoma's July and summer statewide average temperatures in 2011 were record marks for the United States as well. There were blasts of wintry revenge during that period, of course. Oklahoma saw its all-time lowest minimum temperature and 24-hour snowfall records fall in February 2011. Just prior to the string of warm months, the winter of 2009-10 finished as the eighth coldest – and one of the snowiest – on record at more than 4 degrees below normal.

May 2012 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	106°F	Altus	5
Low Temperature	38°F	Beaver	9
High Precipitation	6.17 in.	Ninnekah	--
Low Precipitation	0.01 in.	Arnett, Slapout	--

May 2012 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2012)
Month (May)	72.2°F	4.3°F	5th Warmest
Season-to-Date (Mar-May)	65.1°F	6.0°F	1st Warmest
Year-to-Date (Jan-May)	56.3°F	5.2°F	1st Warmest

Precipitation

	Average	Depart.	Rank (1895-2012)
Month (May)	1.82 in.	-3.39 in	4th Driest
Season-to-Date (Mar-May)	10.52 in.	-1.16 in.	25th Driest
Year-to-Date (Jan-May)	14.27 in.	-0.62 in.	46th Wettest

MAY DAILY HIGHLIGHTS

MAY 1-6: The month began on a violent note with storms continuing into May from April. The tornadic thunderstorms that produced tornadoes on April 30 produced two more just after midnight on May 1. One of those tornadoes was rated as an EF-2 on the Enhanced Fujita Scale, damaging buildings in Craig County. The other tornado was an EF-1 and struck near Nowata. Those storms also produced straight-line winds of up to 70 mph. Decent rains fell during those storms, but most totals were below an inch. Following that excitement, the next five days were relatively boring. A dryline that extended through western Oklahoma brought strong southerly winds to the area, gusting to over 40 mph at times. The dry air in the west allowed temperatures to rise into the upper 90s and low 100s. The higher humidities meant more muggy air in the east.

MAY 7-8: A cold front entered the state overnight on the seventh and plunged its way through to Texas. The front generated showers and storms along its way and dropped temperatures below normal, a rarity during the month. High temperatures on the seventh only reached into the 60s, rising into the 70s on the eighth. The rainfall was mostly confined to the northeast and southeast, and most amounts were fairly light.

MAY 9-12: An upper-level storm system that moved across Texas brought 1-2 inches of rain across parts of southern Oklahoma during thing period. Temperatures were in the 70s and 80s the first couple of days but cooled with the rain on the 11th and 12th. No severe weather was reported with the showers and storms.

MAY 13-18: Dry and benign weather ruled these six days. Highs were in the 70s and 80s for the first couple of days before warming into the 80s and 90s over the last few days. It did get windy as well. Winds gusted to 45 mph in western Oklahoma on the 18th.

MAY 19-21: A cold front and upper-level storm system brought severe storms to the state on the 19th and 20th. Hail to the size of baseballs was reported in western Oklahoma on the 19th and winds up to 70 mph were noted early on the 20th. Most of the severe weather occurred in western and central Oklahoma. Highs reached into the 80s and 90s on the 19th, but cooled into the 70s and 80s on the 20th and 21st. There were even some 60s for highs on the 20th in western Oklahoma. The heaviest rains fell in Grady County. Ninnekah and Chickasha recorded more than 3 inches. Other areas across the state recorded less than an inch for the most part.

MAY 22-27: This period saw a rapid warm up into the 90s and 100s. A cold front entered the state on the 24th and stalled, then retreated to the north as a warm front. Storms that fired along a dryline in western Oklahoma on the 25th quickly went severe and produced large hail and winds of over 70 mph. Heat bursts also produced severe winds across northwest Oklahoma. Woodward recorded a wind gust of 75 mph and damaged the roof of the Dairy Queen, and damage was noted to some outbuildings in Roger Mills County. Temperatures cooled somewhat on the 26th and 27th, but were still above normal for late May.

MAY 28-31: The month ended on a definite violent note thanks to an outbreak of severe weather. The period saw a lot of hot weather as well with high temperatures well into the 90s and, at times, triple digits. The big storms started on the 28th. Large hail, to the size of baseballs, was reported in south central and central Oklahoma. Over 3 inches of rain fell in Vinita. The 29th was an even more violent day with a catastrophic hailstorm striking central Oklahoma. A 5-inch diameter hailstone was reported near Piedmont in Canadian County, and lots of baseball-softball size hail was reported across the area. Damage to roofs, trees and automobiles was significant. An 85 mph wind gust was reported near Minco, with an 80 mph gust noted near Newcastle. Two tornadoes were thought to have touched down in Canadian County, based on media reports. The storms continued overnight into the 30th with more big hail and severe winds. Nearly 3 inches of rain fell at the Oklahoma City West Mesonet site. A strong cold front moved through the state early on the 31st and brought an end to the big storms and the hot weather. Highs that day rose into the 70s and low 80s.

Significant Tornadoes (EF2 or greater)

EF2-rating	County	Day
2	Craig	1

Flooding

Location	County	Day
9 W Hollow	Craig	1
Ralston	Pawnee	1

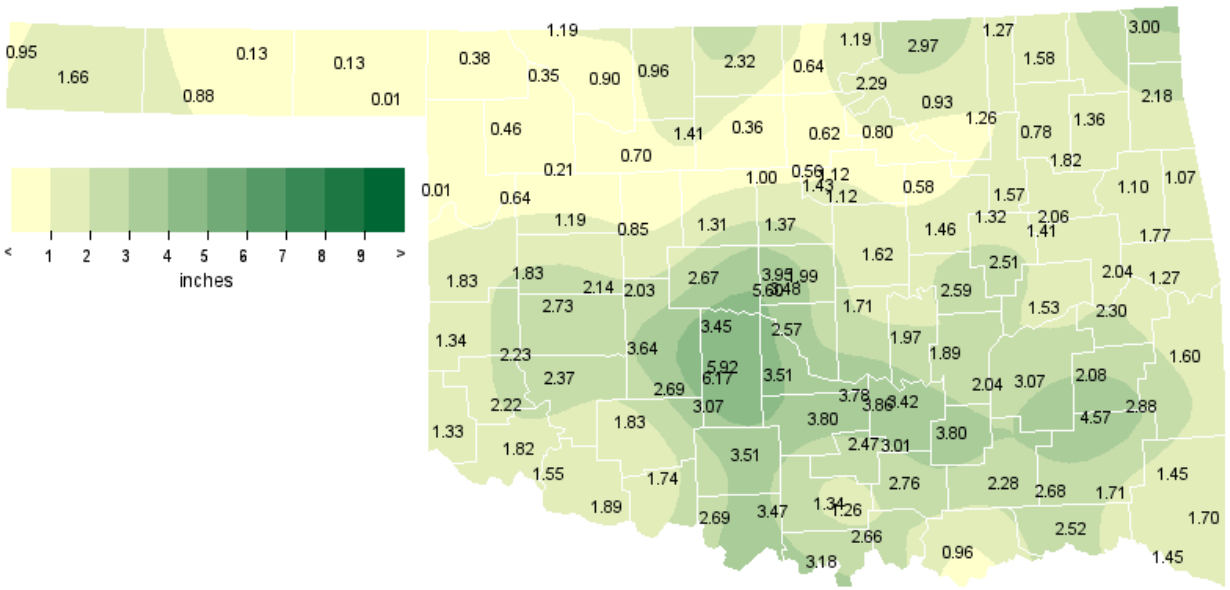
Hail
(2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.75	Grandfield	Tillman	4
2.75	5 SW Randlett	Cotton	4
2.75	3 S Elk City	Beckham	19
2.50	3 NW Mangum	Greer	19
2.75	7 S Sterling	Comanche	28
2.00	Erin Springs	Garvin	28
2.50	5 ESE Lindsay	Garvin	28
2.50	3 NW Maysville	Garvin	28
2.00	2 N Warwick	Lincoln	28
2.00	3 N Okeene	Blaine	29
2.75	2 W Lacey	Kingfisher	29
3.00	6 E Okeene	Blaine	29
2.00	1 WNW Lahoma	Major	29
3.00	2 ENE Meno	Major	29
2.00	5 SW Dover	Kingfisher	29
2.75	5 E Loyal	Kingfisher	29
4.25	5 E Kingfisher	Kingfisher	29
2.75	1 E Kingfisher	Kingfisher	29
3.00	2 S Kingfisher	Kingfisher	29
4.50	6 SE Kingfisher	Kingfisher	29
5.00	6 NNW Piedmont	Canadian	29
4.00	4 N Piedmont	Canadian	29
2.50	6 N Tuttle	Canadian	29
2.75	Nichols Hills	Oklahoma	29
2.25	5 SSE Piedmont	Canadian	30
3.00	4 SW Edmond	Oklahoma	29
2.75	Oklahoma City	Oklahoma	29
3.00	Oklahoma City	Oklahoma	29

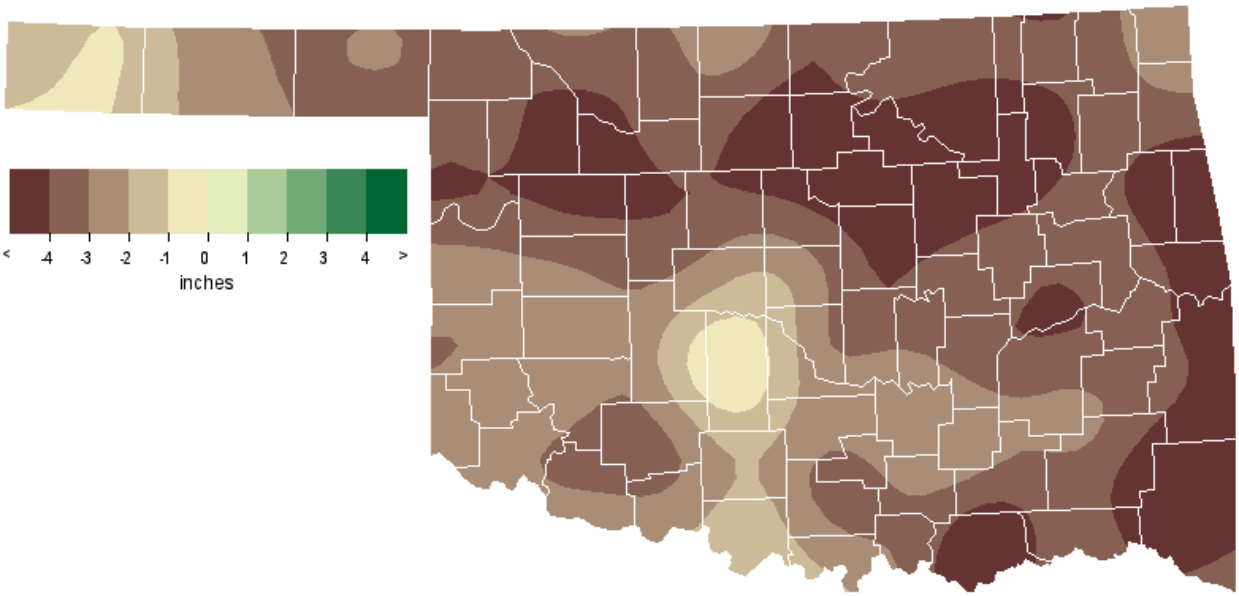
Wind Gusts (70 mph or greater)

Speed (m.p.h.)	Location	County	Day
70	Earlsboro	Pottawatomie	1
70	Wynona	Osage	1
70	2 ENE Broken Arrow	Wagoner	1
70	Oklahoma City	Oklahoma	20
72	8 WSW Arnett	Ellis	25
75	2 WSW Woodward	Woodward	25
70	4 WSW Guthrie	Logan	29
71	2 SSW Minco	Grady	29
70	Tuttle	Grady	29
76	Oklahoma City	Oklahoma	29
70	2 S Amber	Grady	29
80	1 SW Newcastle	McClain	29
70	2 NW Norman	Cleveland	29
70	Norman	Cleveland	29
85	2 SSW Minco	Grady	29
70	4 SW Edmond	Oklahoma	29
75	Oklahoma City	Oklahoma	29
71	4 S McAlester	Pittsburg	29
70	12 SSW Wilson	Love	30
75	Carmen	Alfalfa	30
74	2 NNW Ninnekah	Grady	31

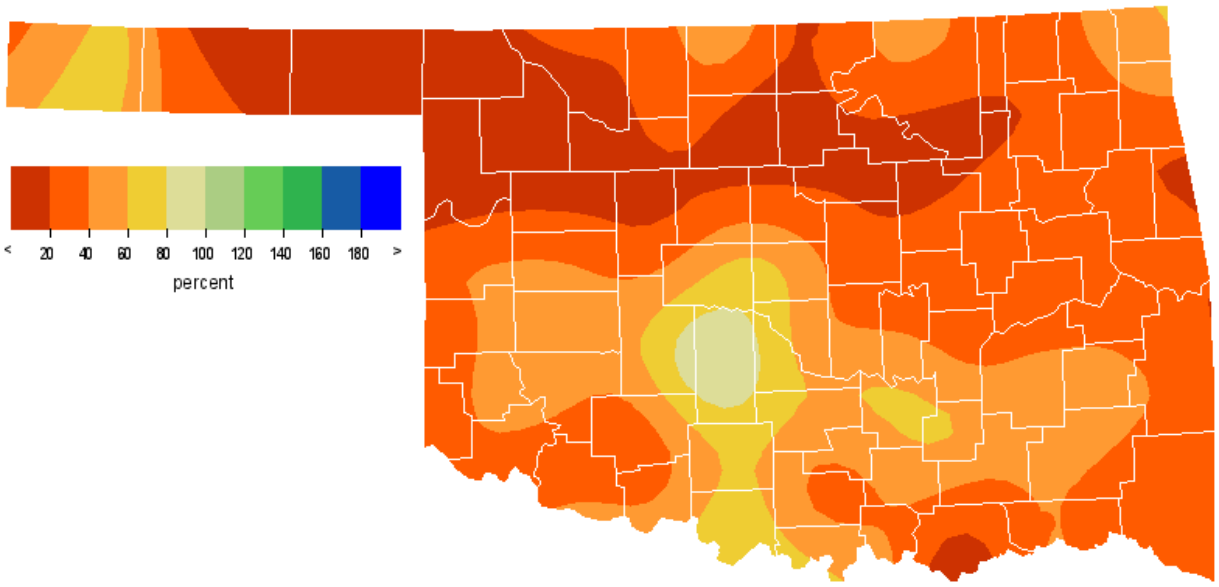
MAY 2012 OBSERVED PRECIPITATION



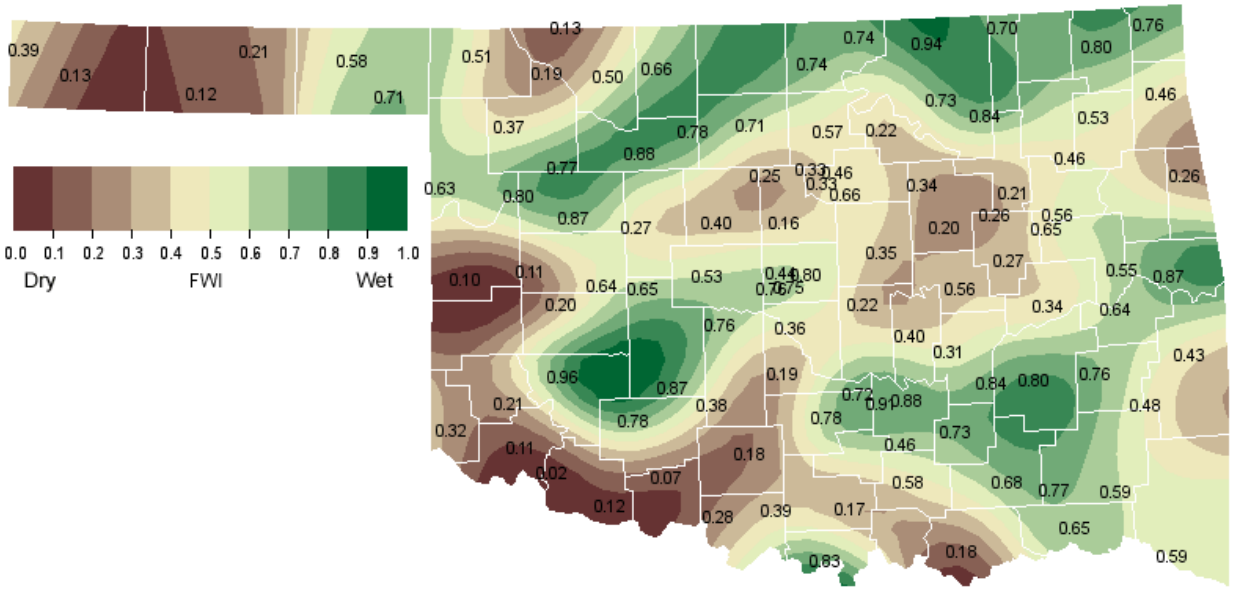
MAY 2012 DEPARTURE FROM NORMAL PRECIPITATION



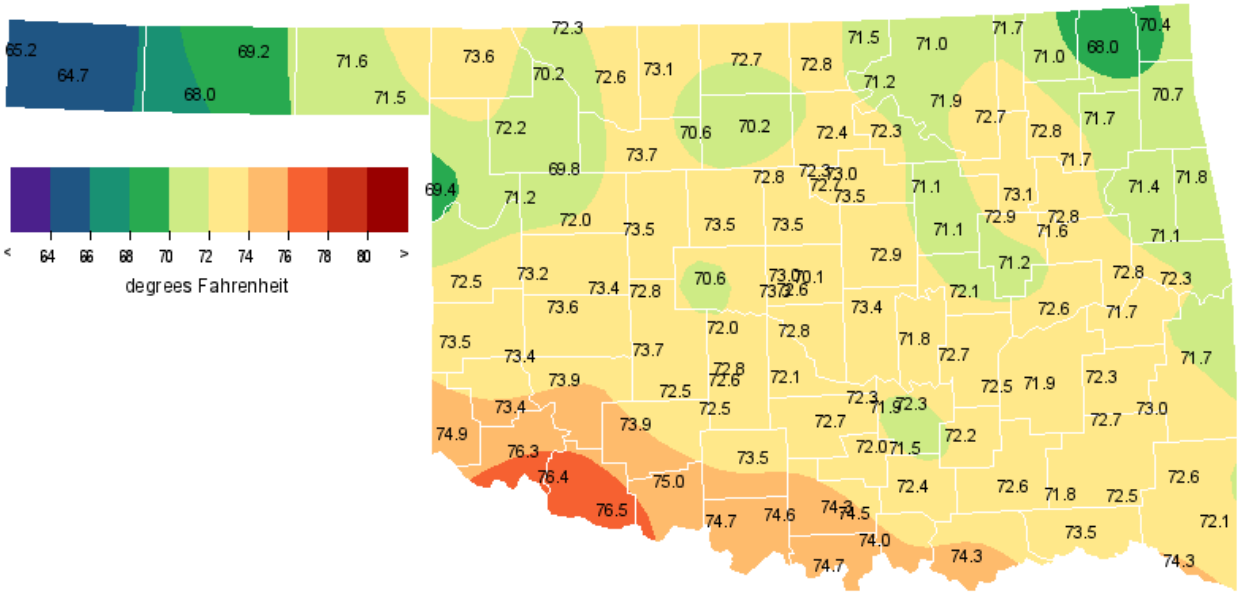
MAY 2012 PERCENT OF NORMAL PRECIPITATION



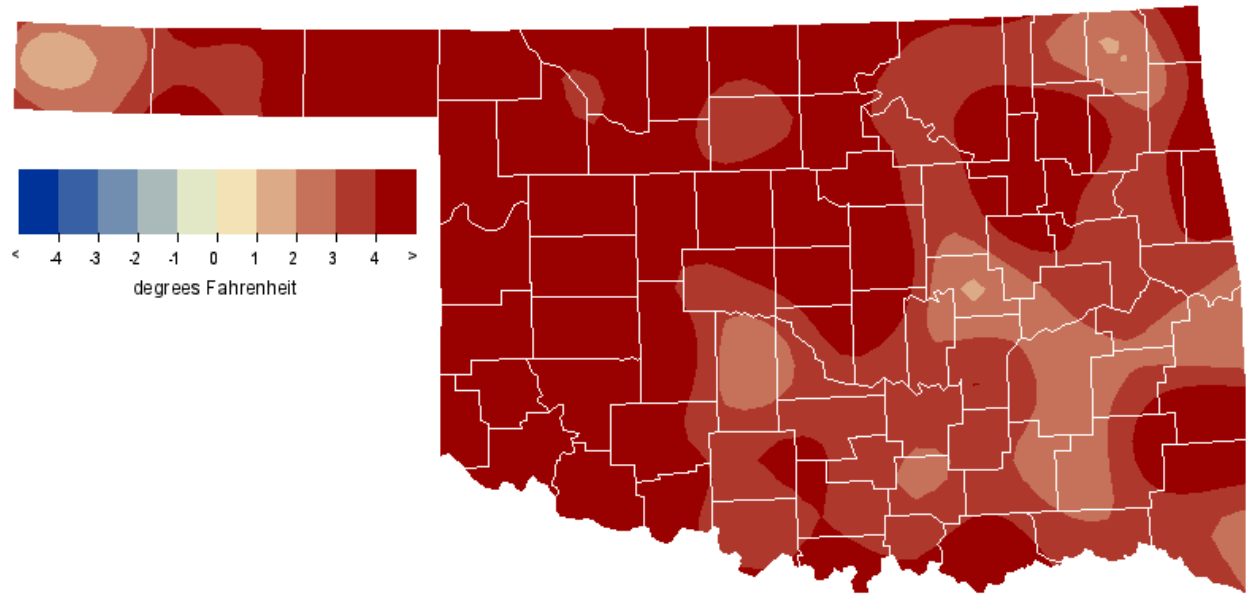
MAY 2012 AVERAGE SOIL MOISTURE AT 25CM



MAY 2012 AVERAGE TEMPERATURE



MAY 2012 DEPARTURE FROM NORMAL TEMPERATURE

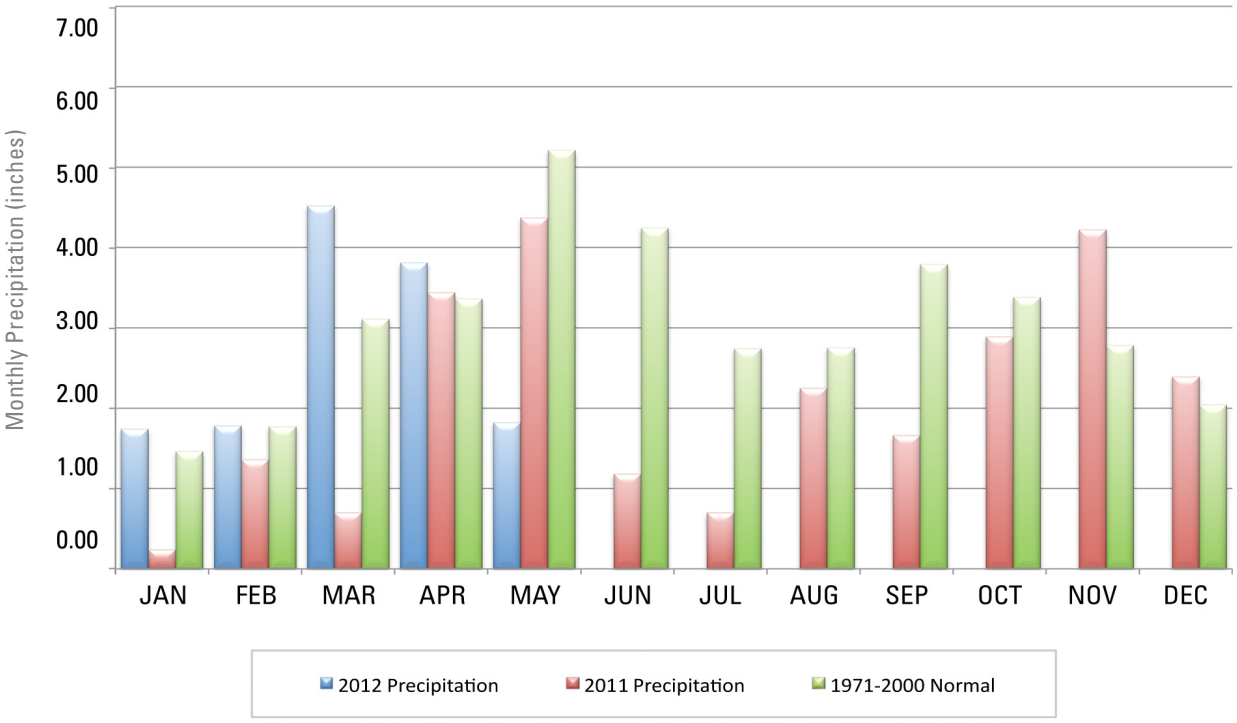


MESONET MONTHLY SUMMARY FOR MAY 2012

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	71.7	96	5	46	9	****	****	.01	.01	20
Beaver	71.6	103	25	38	9	29	234	.13	.12	30
Boise City	64.7	97	23	41	8	90	79	1.66	.93	26
Buffalo	73.6	99	5	46	9	11	277	.38	.24	30
NORTH CENTRAL										
Alva	72.6	97	23	45	9	16	253	.90	.61	30
Blackwell	72.8	95	28	49	9	9	250	.64	.49	30
Breckinridge	72.5	96	28	49	14	****	****	.36	.29	30
Cherokee	73.1	97	26	45	9	16	267	.96	.76	30
Fairview	73.7	97	5	47	9	15	283	.70	.27	30
Freedom	72.6	97	25	45	9	****	****	.35	.35	30
Lahoma	72.9	94	28	48	9	****	****	1.41	1.03	29
NORTHEAST										
Bixby	73.2	95	29	48	9	5	259	1.57	.81	1
Burbank	71.2	93	28	47	9	16	208	2.29	1.73	29
Claremore	72.7	93	29	50	22	4	244	.78	.51	31
Copan	71.7	94	28	49	22	10	218	1.27	.75	28
Foraker	71.0	93	28	48	22	16	203	2.97	1.92	28
Inola	71.7	93	29	47	9	10	219	1.82	1.23	1
Jay	70.8	93	29	45	22	21	200	2.18	.95	1
Miami	70.4	89	26	44	22	21	188	3.00	1.26	7
WEST CENTRAL										
Bessie	73.7	101	5	47	9	13	282	2.73	1.36	11
Butler	73.2	99	5	42	9	19	275	1.83	.82	11
Camargo	71.2	96	29	43	9	25	217	.64	.51	19
Cheyenne	72.5	98	5	50	9	20	253	1.83	.74	11
Erick	73.5	103	5	42	9	22	286	1.34	.70	11
CENTRAL										
Acme	72.4	93	28	42	9	16	245	3.07	1.61	20
Bowlegs	71.8	93	28	45	9	10	221	1.97	.45	11
Bristow	71.1	93	29	43	9	18	208	1.46	.47	29
Lake Carl Blac	72.3	96	28	44	9	17	242	.56	.23	30
Chandler	72.9	93	28	47	9	6	252	1.62	.56	28
Chickasha	72.8	97	28	42	9	10	252	5.92	3.11	20
El Reno	70.6	92	28	42	9	30	203	2.67	.80	20
Guthrie	73.5	95	28	47	9	11	274	1.37	.59	28
Kingfisher	73.5	97	28	44	9	11	274	1.31	.83	29
Marena	72.6	94	28	51	10	8	244	1.43	1.09	28
Minco	72.0	92	28	52	10	9	224	3.45	.99	11
Marshall	72.8	96	28	45	9	13	255	1.00	.66	30
EAST CENTRAL										
Cookson	71.1	92	28	44	22	15	205	1.77	.81	1
Eufaula	72.6	94	29	49	22	5	242	1.53	.60	12
Haskell	71.6	92	29	46	22	10	214	1.41	.36	31
Hectorville	72.9	93	29	49	22	5	249	1.32	.50	1
Holdenville	72.7	91	29	51	9	4	243	1.89	.59	12
McAlester	71.9	93	29	48	9	8	221	3.07	.80	11
Okmulgee	71.1	93	28	45	22	15	204	2.51	.60	28
SOUTHWEST										
Altus	76.4	106	5	45	9	5	358	1.82	.65	11
Apache	72.5	95	28	48	10	9	241	2.69	1.93	11
Fort Cobb	73.7	97	5	46	9	9	278	3.64	1.45	20
Grandfield	76.5	103	5	48	9	3	360	1.89	1.06	11
Hinton	72.8	96	5	47	9	14	255	2.03	1.02	11
SOUTH CENTRAL										
Ada	72.4	93	29	46	9	8	237	3.42	1.03	29
Ardmore	74.5	94	28	51	10	1	295	1.26	.67	30
Burneyville	74.7	96	28	47	10	1	303	3.18	1.65	30
Byars	72.4	91	28	51	9	7	235	3.78	1.21	11
Centrahoma	72.2	94	29	48	9	6	229	3.80	1.66	29
Durant	74.3	95	29	52	10	1	288	.96	.68	11
Fittstown	71.5	92	29	50	10	6	207	3.01	1.36	11
Ketchum Ranch	73.5	95	24	49	9	4	268	3.51	1.33	11
Lane	72.6	94	29	49	9	2	237	2.28	1.01	11
SOUTHEAST										
Antlers	71.8	92	29	48	22	2	213	2.68	1.16	11
Antlers	*****	***	***	***	***	****	****	*****	*****	***
Broken Bow	72.1	94	29	47	10	1	220	1.70	.76	7
Clayton	72.7	95	29	48	22	2	241	4.57	1.52	8
Cloudy	72.5	93	29	47	10	2	234	1.71	.67	12
Hugo	73.5	93	29	51	10	1	263	2.52	1.30	11

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	68.0	101	23	43	9	61	154	.88	.84	13
Hooker	69.2	100	23	40	9	45	175	.13	.07	31
Kenton	65.1	96	23	39	28	85	89	.95	.42	13
Slapout	71.5	99	25	46	9	25	225	.01	.01	31
May Ranch	72.3	96	25	45	9	18	244	1.19	1.14	30
Medford	72.7	94	29	48	8	17	255	2.32	1.66	30
Newkirk	71.5	93	28	48	9	18	219	1.19	1.08	30
Red Rock	72.4	96	28	47	9	13	241	.62	.44	30
Seiling	37.7	96	29	***	2	17	231	.21	.09	14
Woodward	72.2	94	25	49	9	20	243	.46	.34	27
Nowata	71.0	92	28	46	22	21	206	1.58	.90	30
Pawnee	72.3	94	29	46	9	10	236	.80	.71	30
Porter	72.8	93	29	48	22	4	246	2.06	.51	28
Pryor	71.7	93	29	45	10	14	220	1.36	.71	31
Skiatook	72.6	92	29	52	22	4	241	1.26	.50	30
Vinita	70.0	90	29	46	22	20	174	5.73	3.13	28
Wynona	71.9	93	28	48	22	7	222	.93	.79	30
Putnam	72.0	95	29	46	9	20	236	1.19	.41	19
Retrop	73.4	98	5	46	9	13	274	2.23	1.19	19
Watonga	73.5	95	28	51	9	14	278	.85	.46	11
Weatherford	73.4	99	5	47	9	12	274	2.14	.96	11
Ninnekah	72.6	93	28	44	9	10	244	6.17	3.60	20
Norman	72.9	92	28	48	9	6	250	2.57	1.22	29
Oilton	71.1	94	29	43	9	22	211	.58	.23	29
OKC East	72.6	92	28	48	9	9	244	3.48	.85	20
OKC North	73.1	92	28	52	9	7	258	3.95	1.59	29
OKC West	73.3	92	28	52	9	4	261	5.60	2.92	30
Okemah	72.1	94	29	46	9	9	229	2.59	.84	29
Perkins	73.5	94	28	47	9	6	271	1.12	.68	28
Shawnee	73.4	93	29	48	9	5	265	1.71	.37	20
Spencer	72.4	91	28	49	9	****	****	1.99	.60	20
Stillwater	73.0	93	28	46	9	10	256	1.12	.51	28
Washington	72.1	93	28	48	10	7	227	3.51	1.27	20
Sallisaw	72.3	93	29	48	22	2	229	1.27	.45	12
Stigler	71.7	94	29	47	22	4	210	2.30	.94	5
Stuart	72.5	93	29	51	10	5	238	2.04	.84	11
Tahlequah	71.4	92	29	44	9	15	215	1.10	.44	31
Webbers Falls	72.8	93	29	50	22	1	243	2.04	.64	5
Westville	71.7	93	29	45	9	11	220	1.07	.48	31
Hollis	75.0	103	29	46	9	8	317	1.33	.75	21
Mangum	73.4	101	29	43	9	17	277	2.22	1.06	11
Medicine Park	73.9	98	28	53	9	4	280	1.83	1.66	11
Tipton	76.3	104	5	43	9	6	357	1.55	.69	11
Walters	*****	*								
Madill	74.0	94	28	50	10	2	280	2.66	1.64	30
Newport	74.3	95	28	50	9	2	290	1.34	.51	30
Pauls Valley	72.7	92	28	48	9	5	245	3.80	1.11	20
Ringling	74.6	97	24	48	10	2	300	3.47	1.78	30
Sulphur	72.0	92	28	47	9	9	227	2.47	1.16	11
Tishomingo	72.4	93	28	49	10	4	232	2.76	1.32	11
Vanoss	71.9	92	28	45	9	9	223	3.86	1.43	29
Waurika	74.7	98	24	50	10	2	302	2.69	1.00	30
Idabel	74.3	95	29	47	10	0	290	1.45	.50	31
Mt Herman	72.7	94	29	50	22	4	241	1.45	.80	12
Talihina	73.0	97	29	46	22	2	252	2.88	1.58	8
Wilburton	72.3	95	29	48	22	4	229	2.08	.78	8
Wister	71.7	98	29	45	22	10	218	1.60	.72	8

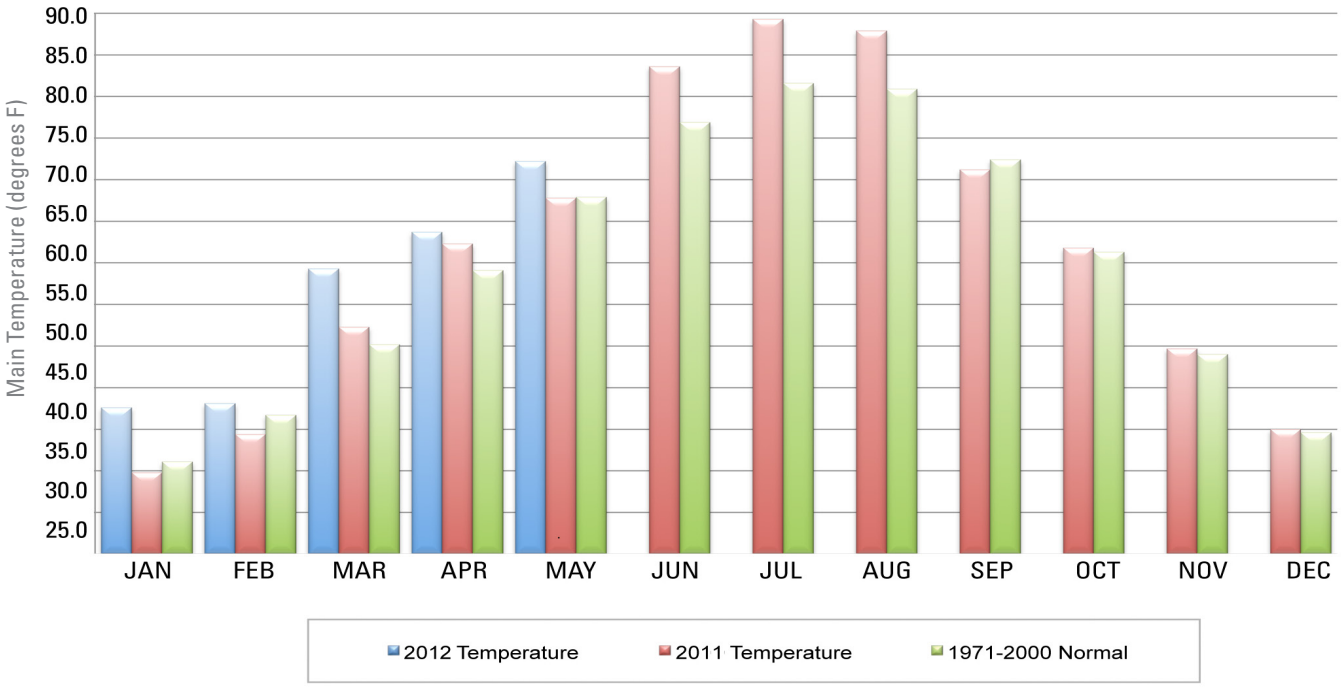
2011 AND 2012 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



May 2012 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	May-11
Panhandle	0.52	-2.85	5th Driest	6.37 (1951)	0.00 (1927)	0.83
North Central	0.87	-3.85	3rd Driest	11.70 (1957)	0.25 (1924)	2.39
Northeast	1.70	-3.78	6th Driest	19.10 (1943)	1.38 (1917)	4.60
West Central	1.64	-3.26	17th Driest	12.40 (1982)	0.00 (1924)	1.92
Central	2.51	-3.12	20th Driest	12.53 (1902)	0.96 (1988)	5.05
East Central	1.79	-4.10	5th Driest	14.72 (1943)	1.25 (1941)	5.85
Southwest	2.10	-2.87	17th Driest	11.96 (1902)	0.38 (1984)	3.74
South Central	2.84	-2.76	22nd Driest	12.66 (1982)	0.46 (1988)	5.41
Southeast	2.26	-4.10	7th Driest	14.36 (1990)	1.24 (1963)	6.63
Statewide	1.82	-3.39	4th Driest	10.68 (1957)	1.30 (1988)	4.07

2011 AND 2012 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



May 2012 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	May-11 (F)
Panhandle	69.2	4.8	6th Warmest	72.0 (1896)	56.8 (1917)	65.2
North Central	71.9	4.8	5th Warmest	75.2 (1896)	60.7 (1907)	67.0
Northeast	71.5	4.3	5th Warmest	74.1 (1962)	61.2 (1907)	66.8
West Central	72.9	5.7	4th Warmest	75.6 (1896)	60.9 (1907)	69.0
Central	72.4	3.9	6th Warmest	75.5 (1896)	62.0 (1907)	68.2
East Central	72.0	3.7	7th Warmest	74.8 (1896)	62.2 (1907)	67.5
Southwest	74.5	4.9	5th Warmest	77.8 (1896)	62.8 (1907)	71.2
South Central	73.2	3.5	8th Warmest	76.0 (1896)	63.6 (1907)	68.6
Southeast	72.7	3.9	7th Warmest	75.3 (1896)	62.8 (1907)	67.5
Statewide	72.2	4.3	5th Warmest	75.0 (1896)	61.5 (1907)	67.8

RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
High Temperature	3	McAlester	88	88	1964
High Minimum Temperature	25	McAlester	74	74	1965
High Minimum Temperature	25	Tulsa	76	73	1916
High Temperature	28	Tulsa	94	94	1926
High Temperature	28	McAlester	91	90	1959
High Temperature	29	McAlester	93	92	1998

MESONET EXTREMES FOR MAY 2012

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	103	25th	Beaver	38	9th	Beaver	1.66	Boise City	0.93	26th	Boise City
North Central	97	25th	Freedom	44	9th	Seiling	2.32	Medford	1.66	30th	Medford
Northeast	95	29th	Bixby	44	22nd	Miami	3.00	Miami	1.92	28th	Foraker
West Central	103	5th	Erick	42	9th	Erick	2.73	Bessie	1.36	11th	Bessie
Central	97	28th	Kingfisher	42	9th	El Reno	6.17	Ninnekah	3.60	20th	Ninnekah
East Central	94	29th	Eufaula	44	9th	Tahlequah	3.07	McAlester	0.94	5th	Stigler
Southwest	106	5th	Altus	43	9th	Mangum	3.64	Fort Cobb	1.93	11th	Apache
South Central	98	24th	Waurika	45	9th	Vanoss	3.86	Vanoss	1.78	30th	Ringling
Southeast	98	29th	Wister	45	22nd	Wister	4.57	Clayton	1.58	8th	Talihina
Statewide	106	5th	Altus	38	9th	Beaver	6.17	Ninnekah	3.60	20th	Ninnekah

JUNE 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.

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.

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.

Temperature

Mean	76.9 degrees
Warmest June	1953, 84.6 degrees
Coolest June	1903, 69.8 degrees
Hottest recorded	117 degrees, Hollis, June 24, 1953; Mangum, June 24, 1980; June 27-28, 2004
Coldest recorded	34 degrees, Kenton, June 13, 1919
Hottest Location	Waurika, 80.3 degrees
Coolest Location	Boise City, 72.6 degrees

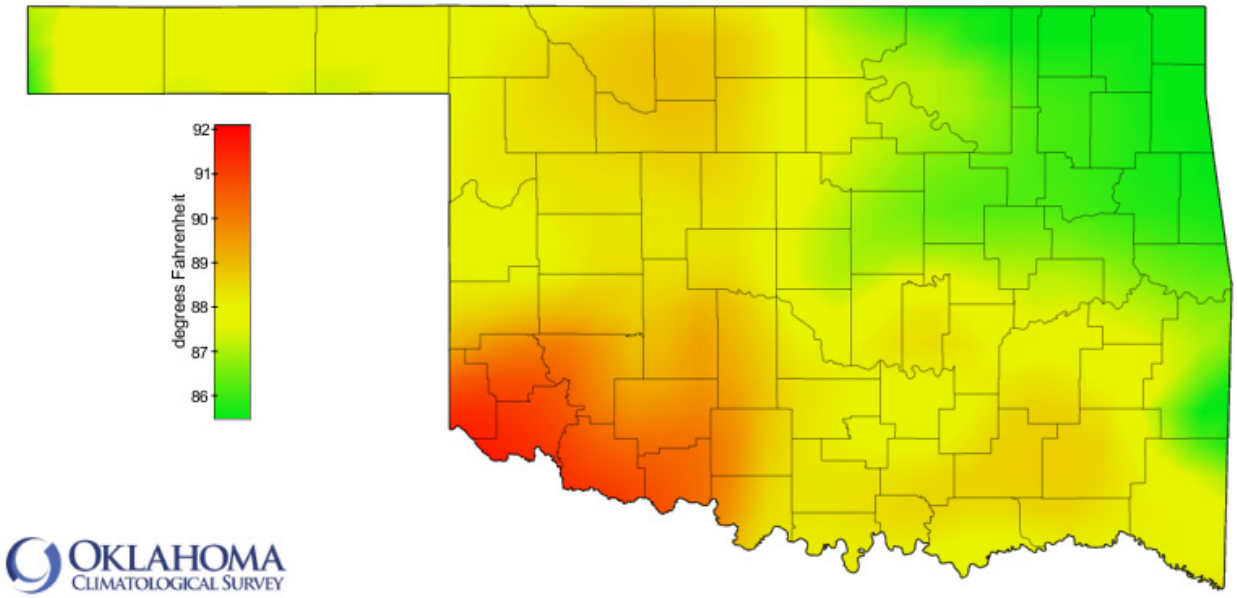
Precipitation

Mean	4.24 inches
Wettest June	2007, 9.10 inches
Driest June	1933, 0.46 inches
Wettest location	Durant, 5.49 inches
Driest location	Kenton, 2.18 inches
Most recorded	18.87 inches, Meeker, 1932

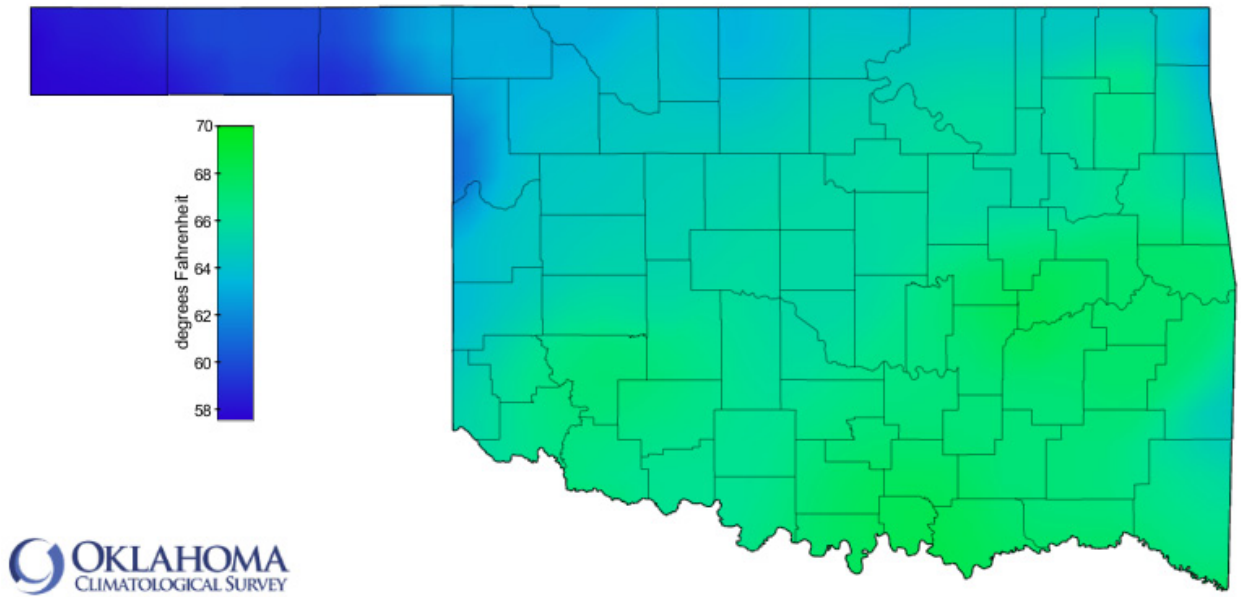
Tornadoes

Average June Tornadoes	8.0
Most	28 (1995)

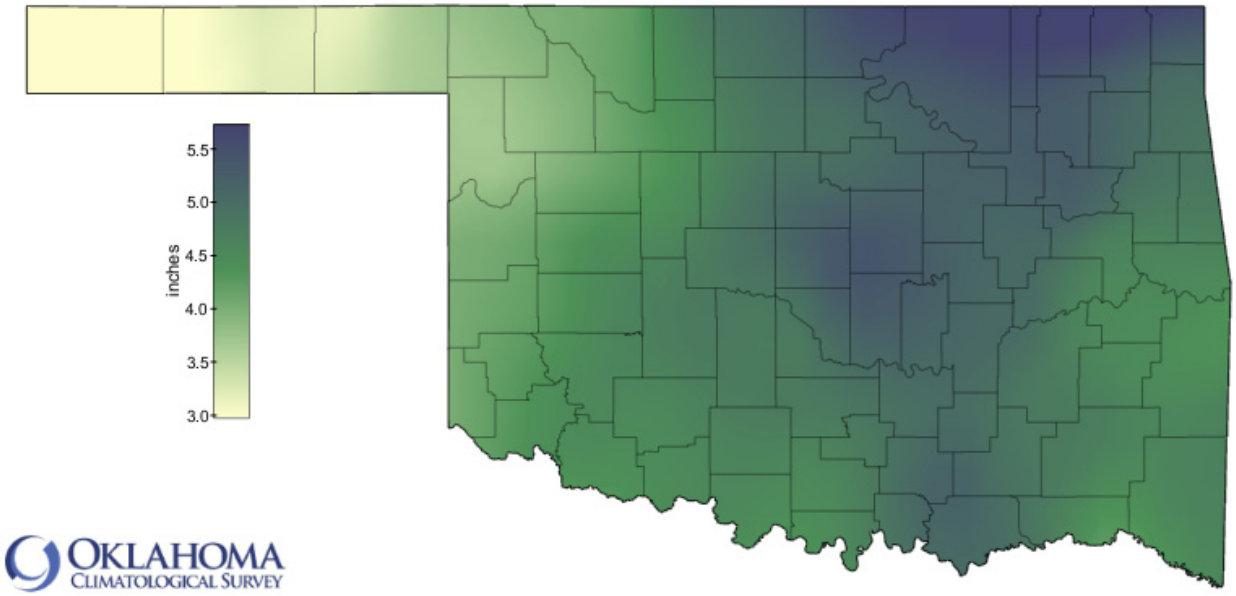
JUNE NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



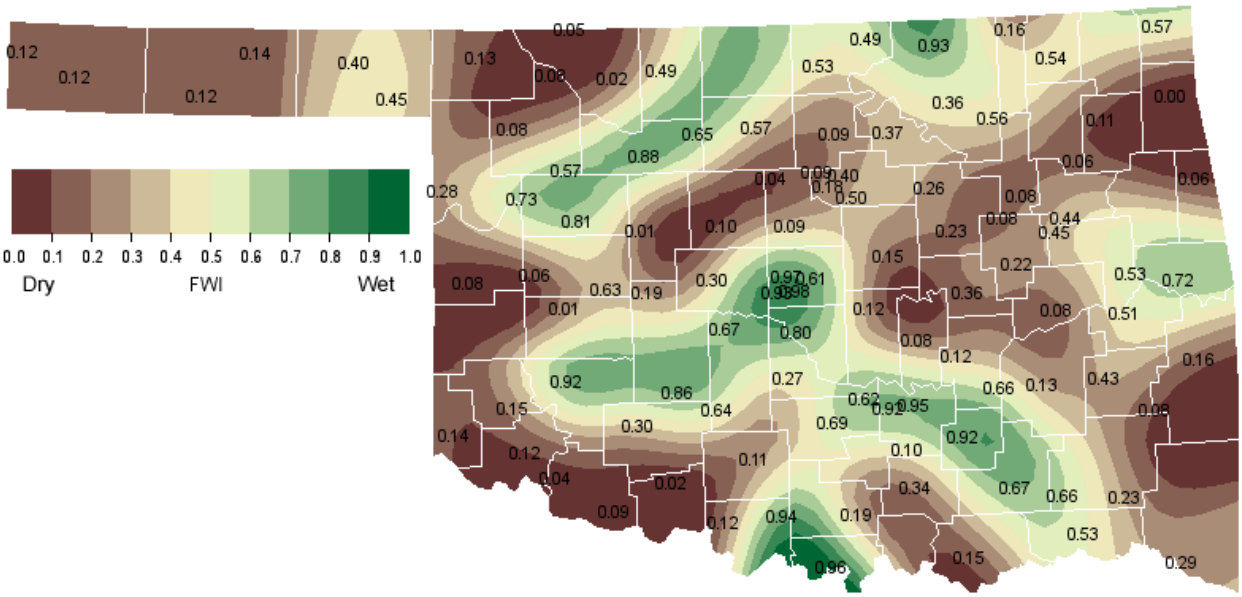
JUNE NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



JUNE NORMAL PRECIPITATION (1981-2010)



JUNE 1, 2012 SOIL MOISTURE CONDITIONS AT 25CM



JUNE 2012 DROUGHT INDICES

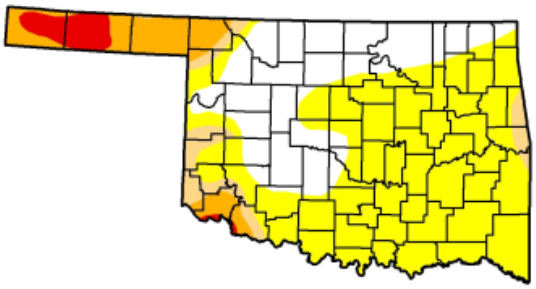
U.S. Drought Monitor

May 29, 2012
Valid 7 a.m. EST

Oklahoma

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	27.30	72.70	16.50	11.14	3.26	0.00
Last Week (05/22/2012 map)	31.44	68.56	13.99	9.34	3.54	0.00
3 Months Ago (02/28/2012 map)	24.91	75.09	66.46	41.79	19.03	3.78
Start of Calendar Year (12/27/2011 map)	14.83	85.17	78.76	50.55	27.48	3.33
Start of Water Year (09/27/2011 map)	0.00	100.00	100.00	100.00	78.97	66.42
One Year Ago (05/24/2011 map)	32.30	67.70	55.37	41.31	29.09	10.26



Intensity:

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

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

http://droughtmonitor.unl.edu

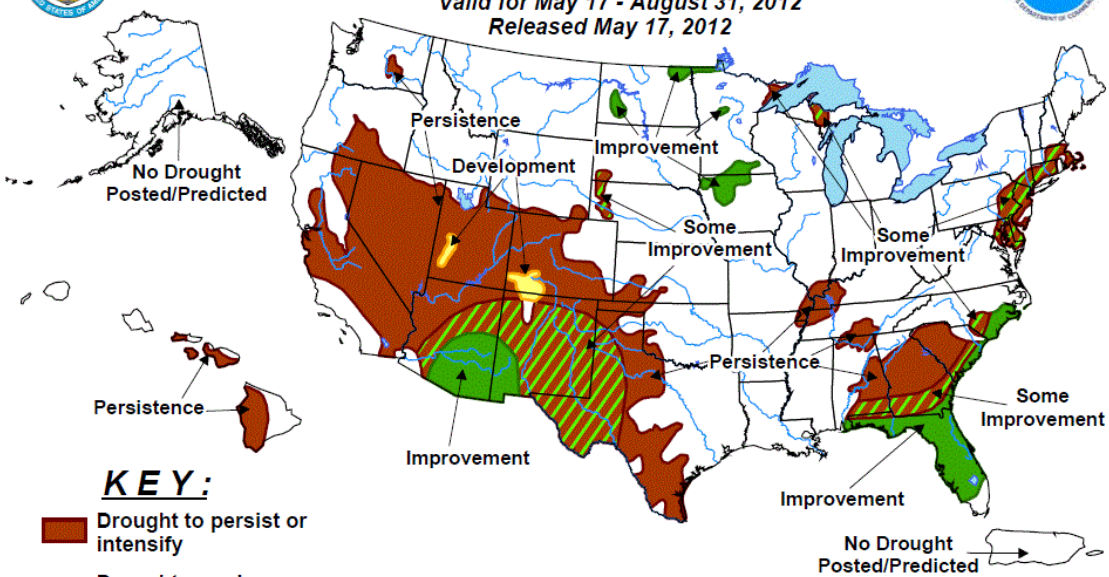
USDA · National Drought Mitigation Center

Released Thursday, May 31, 2012
Brad Rippey, U.S. Department of Agriculture

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for May 17 - August 31, 2012
Released May 17, 2012

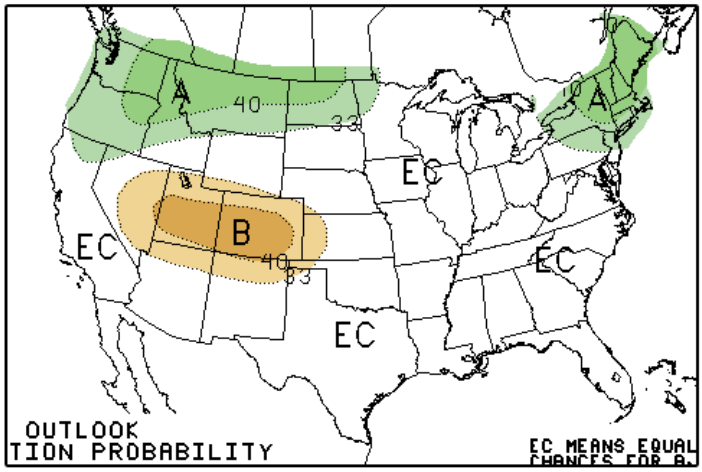


KEY:

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

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

JUNE 2012 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

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

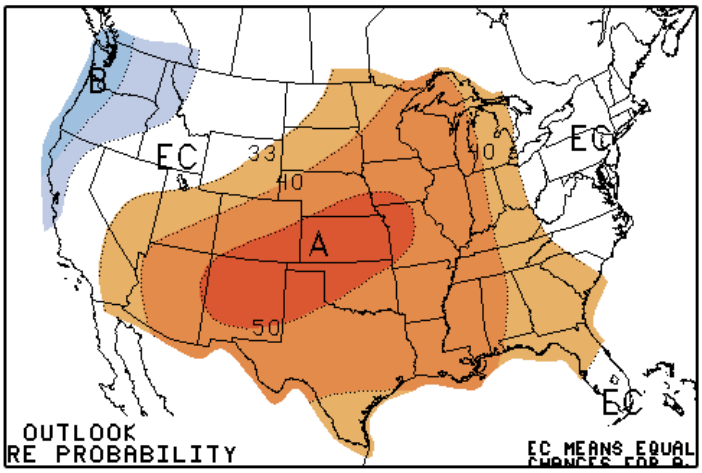
A = Above

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

B = Below

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

JUNE 2012 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

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

A = Above

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

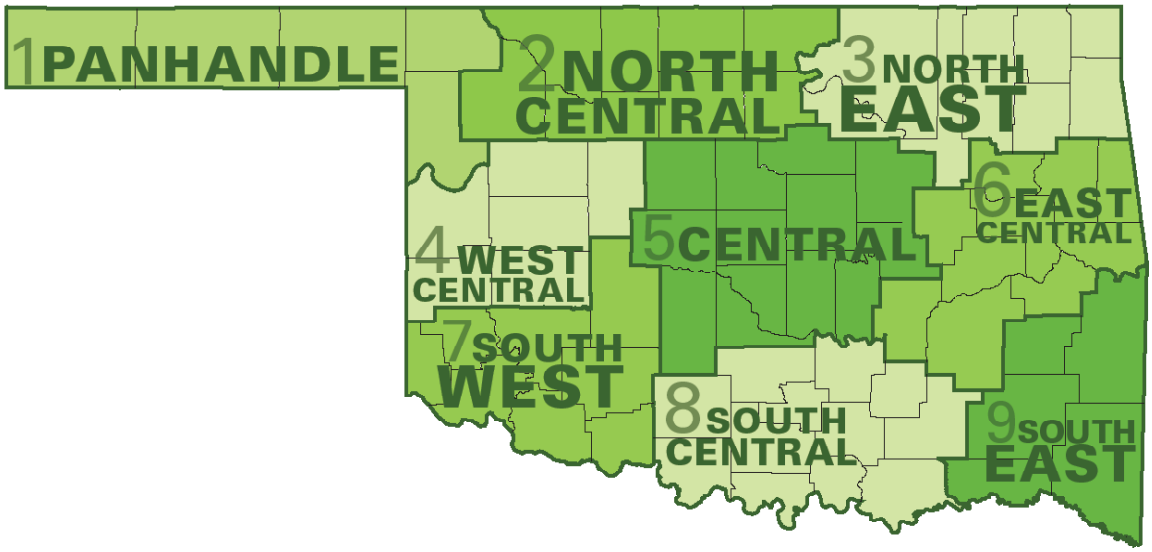
B = Below

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

JUNE CLIMATE NORMALS

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

Oklahoma Climate Divisions



INTERPRETATION INFORMATION

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

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

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

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

ADDITIONAL RESOURCES

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

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

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

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

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

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

Dr. Kevin Kloesel Director
Dr. Renee McPherson State Climatologist

EDITOR
Gary D. McManus Associate State Climatologist

CONTRIBUTORS
Gary D. McManus
Dr. Mark A. Shafer Director of Climate Services
Howard Johnson Associate State Climatologist (Ret.)

DESIGN
Ada Shih Graphic Designer
Lacie Webb Graphic Designer Student Assistant

For more information, contact:
Oklahoma Climatological Survey
The University of Oklahoma
120 David L. Boren Blvd., Suite 2900
Norman, OK 73072-7305

TEL: 405-325-2541
FAX: 405-325-2550
E-MAIL: ocs@ou.edu
WEBSITE: http://climate.ok.gov