Oklahoma Monthly Climate Summary

MAY 2017



May gets top billing as Oklahoma's rowdiest weather month, and it certainly lived up to that notoriety this year. At least three major severe weather outbreaks occurred during May. These short but intense periods of disturbed weather brought the state tornadoes, severe winds, hail to the size of grapefruits, and widespread flooding. Data from the National Weather Service suggest as many as 50 tornadoes touched down during the month, a number that could rise as more possible twisters are investigated. The state's first tornado death since May 9, 2016, occurred with a large EF2 tornado that struck the Elk City area on May 16. The tornado, which reached 1000 yards wide at one point, was on the ground for 18 miles. The fatality occurred as it struck a vehicle, killing the driver who was fleeing the tornado. As many as eight businesses and 200 homes were damaged or destroyed along the twister's path in Beckham County. The Oklahoma Mesonet site at Walters recorded a thunderstorm related

May 2017 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	102°F	Altus, Grandfield	27
Low Temperature	29°F	Kenton	1
High Precipitation	10.05 in.	Tishomingo	
Low Precipitation	0.97 in.	Hooker	

wind gust of 104 mph on the 18th, the seventh highest wind gust recorded by the network since its inception in 1994. The small town then suffered a flash flood the following evening. The last severe outbreak of the month hit the state on the 27th into the 28th with damaging hail, severe winds and numerous tornado warnings.

According to preliminary data from the Oklahoma Mesonet, the statewide average precipitation total was just a tad below normal at 4.66 inches. The rainfall totals were quite variable across the state, however. Mesonet sites in the Panhandle and a broad swath from south central into the northeast ranged from 1-4 inches above normal. Interspaced in between was an even larger area of below normal totals, with deficits of 1-4 inches. The far southeast also came in 2-3 inches below normal. Tishomingo led the Mesonet with 10.05 inches while Tipton brought up the rear with an inch. May's totals end a climatological spring season (March-May)

that saw impressive surpluses erase equally impressive deficits. The spring statewide average was 13.78 inches, nearly 3 inches above normal to rank as the 19th wettest on record. The northeast and Panhandle areas experienced their fifth and sixth wettest spring on record, respectively. The totals exceeded normal by 8-10 inches across the northeast. There were small pockets of 1-4 inch deficits across southern Oklahoma. The January-May statewide average ended at 18.4 inches, 3.89 inches above normal to rank as the 14th wettest such period on record. The wet spring eradicated the last traces of drought within Oklahoma by the end of May, per the U.S. Drought Monitor. It was the first drought-free report for the state since June 21, 2016. Over 73 percent of the state was in drought at the beginning of March.

The wet, stormy weather ensured Oklahoma's first cooler than normal month since December 2016. The statewide

May 2017 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2017)
Month (May)	66.6°F	-1.6°F	34th Coolest
Season-to-Date (Mar-May)	61.3°F	2.0°F	17th Warmest
Year-to-Date (Jan-May)	55.0°F	3.3°F	3rd Warmest

Precipitation

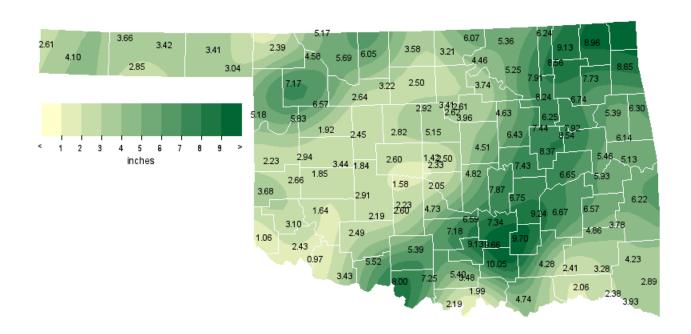
	Total	Depart.	Rank (1895-2017)
Month (May)	4.66 in.	0.16 in.	2nd Driest
Season-to-Date (Mar-May)	13.78 in.	2.66 in.	19th Wettest
Year-to-Date (Jan-May)	18.40 in.	3.89 in.	14th Wettest

Depart. = departure from 30-year normal

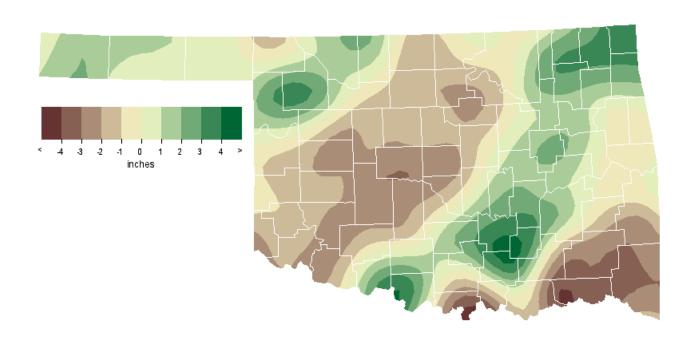
average temperature of 66.6 degrees fell 1.6 degrees below normal to rank as the 34th coolest May on record. While the month itself was mild, one weekend was befitting of midsummer. Temperatures rose into the upper 90s and 100s from the 25th through the 27th. Combined with a strong flow of moisture from the Gulf of Mexico, the heat index rose even higher, prompting a heat advisory for central and southern

Oklahoma. Burneyville registered a heat index of 110 degrees on the 27th. Altus and Grandfield recorded the highest actual air temperature of 102 degrees that same day. The lowest reading was 29 degrees at Kenton on May 1 – also the state's last freeze. The first five months of the year ended at 55 degrees, the third warmest such period on record.

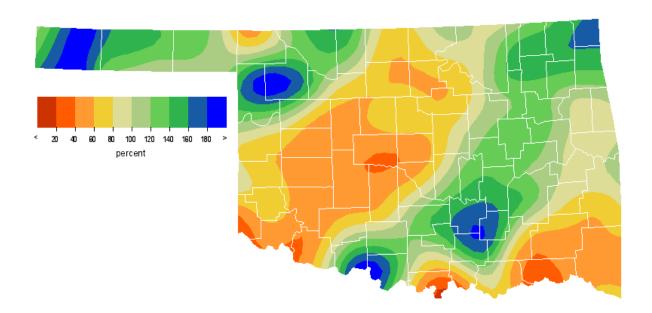
MAY 2017 OBSERVED PRECIPITATION



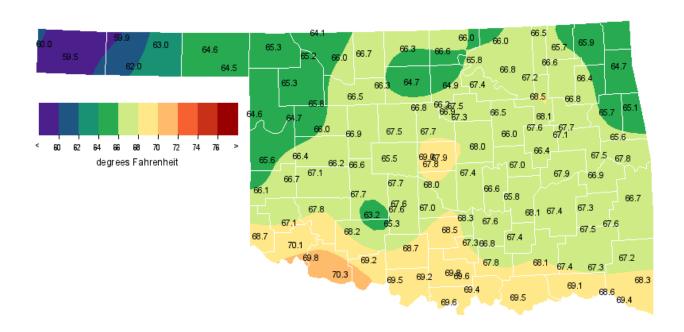
MAY 2017 DEPARTURE FROM NORMAL PRECIPITATION



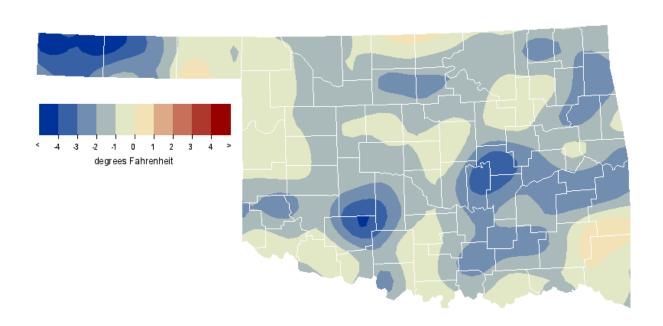
MAY 2017 PERCENT OF NORMAL PRECIPITATION



MAY 2017 AVERAGE TEMPERATURE



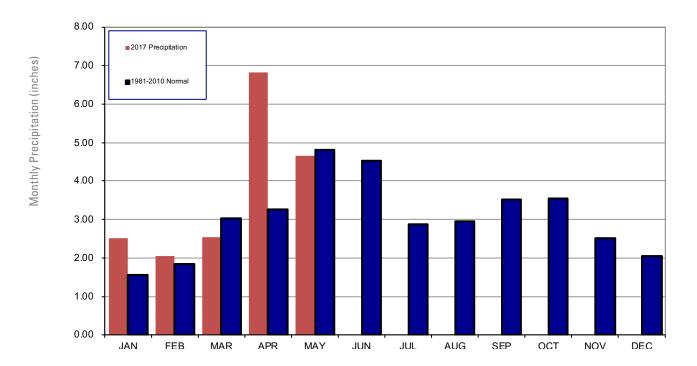
MAY 2017 DEPARTURE FROM NORMAL TEMPERATURE



MESONET MONTHLY SUMMARY FOR MAY 2017

NAME	MEAN TEMP		DAY	LOW TEMP	DAY	HDD	CDD		HIGH 24-HR	DAY	NAME	MEAN TEMP		DAY	LOW TEMP	DAY	HDD	CDD		HIGH 24-HR	DAY
PANHANDLE Arnett Beaver Boise City Buffalo Eva	64.5 64.5 59.5 65.3 59.8	88 98 91 92 93	15 25 25 25 25	35 31 30 33 31	1 1 1 1	93 112 189 99 189	78 97 18 107 28	5.18 3.41 4.10 2.39 3.66	1.46 1.18 1.01 .73 .80	10 27 9 2	Goodwell Hooker Kenton Slapout	62.0 63.0 60.0 64.4	94 95 90 93	25 25 25 14	31 31 29 34	1 1 1 1	141 127 185 106	48 64 30 89	2.85 3.42 2.61 3.04	.65 .62 .54	2 15 9 2
NORTH CENTRAL Alva Blackwell Breckinridge Cherokee Fairview Freedom Lahoma	65.9 66.7 66.9 66.6 66.5 65.3	91 90 93 90 90 92 91	15 31 27 31 31 31 31	37 41 36 37 37 33 35	1 4 1 1 1 1	75 68 **** 67 64 85 68	105 120 **** 118 111 95 112	5.69 3.21 2.47 6.05 2.64 4.58 3.22	2.33 1.02 .94 1.93 1.10 1.05	10 3 3 3 11 18	May Ranch Medford Newkirk Red Rock Seiling Woodward	31.9 66.4 66.0 67.1 65.8 65.2	90 91 88 93 90 88	15 31 31 27 15 15	*** 38 40 40 36 35	24 1 4 4 1 1	71 73 74 **** 73 86	105 116 104 **** 98 93	5.17 3.58 6.07 2.90 6.57 7.17	1.09 1.31 1.95 1.38 3.36 1.62	18 3 10 3 16 18
NORTHEAST Bixby Burbank Copan Foraker Inola Jay Miami Nowata	68.1 65.8 66.5 66.0 66.8 64.7 ****	92 91 88 89 90 86 ***		44 40 41 40 43 40 ***	2 4 4 1 1 1 ***	42 77 65 75 56 95 ****	138 100 112 105 110 85 ****	6.25 4.46 6.24 5.36 6.74 8.65 *****	2.94 1.20 2.17 1.88 2.83 3.59 *****	19 3 3 3 19 19 ***	Pawnee Porter Pryor Skiatook Talala Tulsa Vinita Wynona	67.3 67.7 66.4 67.2 66.6 68.5 65.8	94 91 90 90 92 92 90	27 26 27 27 27 27 27 27	40 44 42 42 42 42 41 42	4 1 2 1 4 1 1	63 45 67 58 62 46 72 59	134 129 109 126 113 156 98 116	3.74 7.92 7.73 7.91 8.56 8.24 8.96 5.25	.94 4.35 2.40 2.39 2.31 2.19 2.01 1.64	10 19 19 19 19 19
WEST CENTRAL Bessie Butler Camargo Cheyenne Elk City	67.1 66.4 64.7 65.6 66.7	92 91 88 89 91	27 27 15 27 27	36 34 32 38 35	1 1 1 1	55 66 87 73 52	122 110 78 93 104	1.85 2.94 5.83 2.23 2.66	.71 1.06 3.18 1.01	18 10 16 16 22	Erick Putnam Watonga Weatherford	66.1 66.0 66.8 66.3	95 89 91 90	27 27 27 27	33 35 36 34	1 1 1 1	68 75 71 70	103 106 128 109	3.68 1.92 2.45 3.44	1.40 1.12 1.15 2.11	16 10 10
CENTRAL Acme Bowlegs Bristow Lake Carl Blac Chandler Chickasha El Reno Guthrie Kingfisher Marena Minco Marshall	33.2 66.6 66.0 66.1 68.0 67.6 65.4 67.6 67.4 67.7 66.8	94 91 91 94 92 96 92 96 93 94 95	27 27 27 27 27 27 27 27 27 27 27 27	*** 42 40 40 42 36 37 37 38 40 37 36	1 1 2 1 1 1 1 1 1 1 1	51 60 70 77 47 51 83 59 62 60 46 78	125 108 101 112 139 131 96 141 137 121 129	2.18 7.87 6.43 3.41 4.51 2.23 2.60 5.15 2.82 2.62 1.58 2.92	.80 5.33 2.12 1.17 .93 .81 1.04 2.66 1.03 .58 .89 1.37	10 19 19 10 10 10 10 19 11 10 16 11	Ninnekah Norman Oilton OKC East OKC West Okemah Perkins Shawnee Spencer Stillwater Washington	67.6 68.0 66.5 67.8 69.0 67.0 67.4 67.3 67.9 67.4	96 93 91 93 94 92 93 91 92 93	27 27 27 27 27 27 27 27 27 27 27	37 38 41 41 41 42 41 41 40 41 38	1 1 5 1 1 2 4 1 1 4 1	48 51 69 54 42 58 60 56 57 59	128 143 114 141 165 121 133 128 147 134	2.60 2.05 4.63 2.33 1.42 7.43 3.96 4.82 2.50 2.61 4.73	.89 .68 1.54 .58 .53 4.88 1.96 2.18 .72 .63	10 17 19 17 18 19 19 19
EAST CENTRAL Cookson Eufaula Haskell Hectorville Holdenville McAlester Okmulgee	65.6 67.9 67.1 67.6 68.0 67.4 66.4	89 90 92 89 92 91 90	27 26 26 27 26 26 26 26	42 43 43 44 41 42 41	5 1 5 1 1 5 2	77 44 55 46 **** 46 62	96 133 121 127 **** 122 105	6.14 6.65 8.54 7.44 6.34 6.67 8.37	3.02 4.05 4.49 3.67 4.20 2.25 4.46	19 19 19 19 19 19	Sallisaw Stigler Stuart Tahlequah Webbers Falls Westville	67.7 66.9 68.2 65.7 67.5	91 90 92 88 94 87	27 27 26 26 27 27	43 42 43 43 43	2 2 1 6 2	42 56 39 76 47 86	126 114 137 99 125 89	5.13 5.93 9.24 5.39 5.46 6.30	1.55 2.46 5.16 2.50 2.78 2.61	19 19 19 19 19
SOUTHWEST Altus Apache Fort Cobb Grandfield Hinton Hobart	70.1 67.6 67.6 70.2 66.6 67.8	102 96 96 102 92 95	27 27 27 27	37 36 37 37 37 35	1 1 1 1 1	25 **** 50 23 64 54	182 **** 132 185 114 141	2.43 2.19 2.91 3.43 1.84 1.64	2.03 1.13 2.32 1.52 .64	10 16 10 18 10	Hollis Mangum Medicine Park Tipton Walters	68.7 67.0 68.2 69.8 69.2	100 97 96 100 98	25 27 27 27 27	35 33 39 35 39	1 1 1 1 1	34 52 38 31 28	148 116 138 179 158	1.06 3.10 2.49 .97 5.52	.99 1.46 .92 .50 2.13	10 16 10 10
SOUTH CENTRAL Ada Ardmore Burneyville Byars Centrahoma Durant Fittstown Ketchum Ranch	67.6 69.6 69.7 68.4 67.3 69.5 66.8	92 95 100 92 93 92 95	26 26 27 26 26 26	41 39 35 39 41 43 38	1 5 1 1	52 27 37 42 53 24 54 36	133 168 183 148 126 165 109 149	7.34 3.48 2.19 6.59 9.70 4.74 9.66 5.39	4.88 1.23 .94 4.05 4.63 2.73 4.92 3.37	19 19 28 19 19 20 19	Lane Madill Newport Pauls Valley Ringling Sulphur Tishomingo Waurika	68.0 69.3 69.8 68.5 69.2 67.3 67.8	92 97 96 94 95 92 94 98	26 26 27 27 27 27 27 26 27	42 40 37 40 38 38 38 37	6 1 1 1 5 1	36 32 28 37 34 58 43 27	131 167 178 147 164 128 131 169	4.28 1.99 5.40 7.18 7.25 9.13 10.05 8.00	1.74 .61 2.04 4.08 3.64 4.51 4.57 3.10	20 28 19 19 19 19
SOUTHEAST Antlers Broken Bow Clayton Cloudy Hugo Idabel	67.3 68.3 67.5 67.2 69.2	92 88 90 88 91 92	27 26 26 26	40 42 42 42 44 44	2 1 1	39 30 41 42 25 25	111 134 119 110 154 159	2.41 2.89 4.86 3.28 2.06 3.93	.53 1.52 1.92 1.15 .70 2.15	27 11 20 20 11	Mt Herman Talihina Valliant Wilburton Wister	67.1 67.6 68.6 67.3 66.8	89 90 90 90	27 27 26 26 27	41 41 42 42 40	1 2 6 5 2	48 41 31 49 50	115 121 142 120 105	4.23 3.78 2.38 6.57 6.22	1.90 1.76 .98 2.63 3.64	

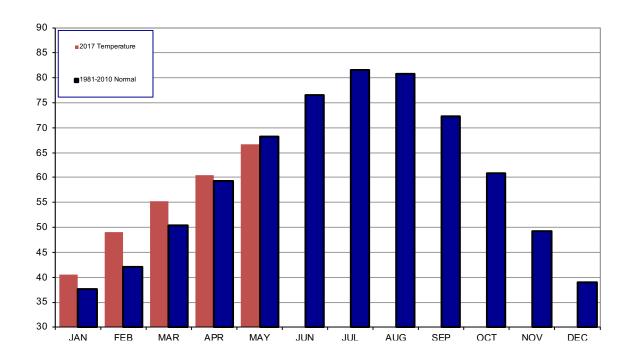
2017 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



May 2017 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	May-16 (inches)
Panhandle	3.41	0.71	41st Wettest	7.12 (2015)	0.19 (2004)	1.68
North Central	4.70	0.34	42nd Wettest	11.11 (1957)	0.63 (1970)	3.59
Northeast	7.01	1.32	26th Wettest	17.98 (1943)	1.45 (1911)	5.03
West Central	3.00	-1.07	51st Driest	12.10 (1982)	0.42 (1966)	2.40
Central	3.69	-1.33	43rd Driest	15.50 (2015)	0.92 (1988)	3.44
East Central	6.77	0.94	42nd Wettest	17.48 (2015)	1.56 (1921)	4.13
Southwest	2.51	-1.70	35th Driest	16.40 (2015)	0.44 (1966)	4.47
South Central	6.40	1.08	43rd Wettest	20.69 (2015)	0.58 (1988)	5.87
Southeast	3.87	-2.28	28th Driest	20.03 (2015)	1.21 (1988)	3.77
Statewide	4.66	-0.16	62nd Driest	14.42 (2015)	1.23 (1988)	3.85

2017 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



May 2017 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	May-16 (F)
Panhandle	62.6	-2.5	29th Coolest	71.1 (1896)	58.0 (1907)	62.5
North Central	65.7	-1.7	41st Coolest	74.5 (1962)	60.6 (1907)	65.3
Northeast	66.7	-0.8	45th Coolest	74.4 (1962)	61.7 (1917)	65.0
West Central	66.2	-1.7	34th Coolest	75.0 (1896)	60.9 (1907)	66.2
Central	67.2	-1.4	34th Coolest	74.6 (1962)	62.0 (1907)	66.9
East Central	66.8	-1.7	28th Coolest	74.3 (1962)	63.2 (1917)	66.5
Southwest	68.1	-1.9	30th Coolest	76.4 (1996)	63.5 (1907)	68.2
South Central	68.6	-1.5	28th Coolest	75.1 (1996)	63.5 (1907)	67.7
Southeast	67.9	-0.7	44th Coolest	73.1 (1899)	62.8 (1917)	67.2
Statewide	66.6	-1.6	34th Coolest	74.0 (1962)	61.9 (1907)	66.1

MESONET EXTREMES FOR MAY 2017

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	98	25th	Beaver	29	1st	Kenton	5.18	Arnett	1.46	10th	Arnett
North Central	93	27th	Breckinridge	33	1st	Freedom	7.17	Woodward	3.36	16th	Seiling
Northeast	94	27th	Pawnee	40	4th	Pawnee	9.13	Nowata	4.35	19th	Porter
West Central	95	27th	Erick	32	1st	Camargo	5.83	Camargo	3.18	16th	Camargo
Central	96	27th	Ninnekah	36	1st	Chickasha	7.87	Bowlegs	5.33	19th	Bowlegs
East Central	94	27th	Webbers Falls	41	2nd	Okmulgee	9.24	Stuart	5.16	19th	Stuart
Southwest	102	27th	Altus	33	1st	Mangum	5.52	Walters	2.32	10th	Fort Cobb
South Central	100	26th	Burneyville	35	1st	Burneyville	10.05	Tishomingo	4.92	19th	Fittstown
Southeast	92	26th	Antlers	40	6th	Antlers	6.57	Wilburton	3.64	20th	Wister
Statewide	102	27th	Altus	29	1st	Kenton	10.05	Tishomingo	5.33	19th	Bowlegs

Oklahoma Climate Divisions



U.S. Drought Monitor Oklahoma

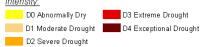
May 30, 2017

(Released Thursday, Jun. 1, 2017) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

		_				
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	97.17	2.83	0.00	0.00	0.00	0.00
Last Week 05-23-2017	97.17	2.83	0.00	0.00	0.00	0.00
3 Month's Ago 02-28-2017	12.64	87.36	73.14	28.77	0.18	0.00
Start of Calendar Year 01-03-2017	5.61	94.39	83.21	55.75	5.55	0.00
Start of Water Year 09-27-2016	57.82	42.18	19.04	3.05	0.00	0.00
One Year Ago 05-31-2016	97.18	2.82	0.00	0.00	0.00	0.00

Intensity:



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

<u>Author:</u> Chris Fenimore NCEI/NESDIS/NOAA









http://droughtmonitor.unl.edu/

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 November 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 November result in an artificially high or low value

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 Centers for Environmental Information:

https://www.ncdc.noaa.gov/stormevents/

SEASONAL OUTLOOKS

Climate Prediction Center:

http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.shtml

CLIMATE CALENDARS AND OTHER LOCAL WEATHER AND CLIMATE INFORMATION

Oklahoma Climatological Survey:

http://climate.mesonet.org_or http://climate.ok.gov/



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