

Mired in significant drought for much of the last five years, western Oklahomans have been in desperate need of moisture. Mother Nature finally granted that wish and provided abundant rainfall during April. Much of Oklahoma saw at least 4-6 inches of rain during the month. According to preliminary data from the Oklahoma Mesonet, the statewide average rain total was 4.8 inches, 1.6 inches above normal and the 17th wettest April since records began in 1895. West central Oklahoma enjoyed its second wettest April on record with an average total of 7.6 inches, 5.2 inches above normal. Only the northeast saw a deficit at 0.5 inches below normal. The Oklahoma Mesonet site at Cheyenne recorded a whopping 13.2 inches of rain for the month, their wettest April on record and their second wettest month ever. Kenton recorded 1.1 inches for the month's lowest total. The year-to-date statewide average of 9.4 inches is now near normal with a deficit of 0.3 inches for the January-April period. The northeast's year-to-date deficit rose to nearly 4 inches while west central Oklahoma had a surplus of 3.3 inches.

### April 2015 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	96°F	Alva, Hollis	6, 7
Low Temperature	23°F	Buffalo, Medford	4
High Precipitation	13.22 in.	Cheyenne	--
Low Precipitation	1.10 in.	Kenton	--

The statewide average temperature was on the warm side at 60.5 degrees, 1.2 degrees above normal to rank April as the 40th warmest on record. Hollis recorded the highest temperature of the month with 96 degrees on the seventh. The lowest temperature of 23 was recorded at both Buffalo and Medford on the fourth. The January-April statewide average temperature of 46.9 degrees was 0.5 degrees below normal. Very little in the way of freezing weather occurred during April. Most of the southeastern half of the state never dropped below 32 degrees. Guymon spent the most time below freezing at 12 hours.

At least four tornadoes touched down during April according to preliminary data from the National Weather Service. That total could go up as more possible twisters are investigated.

Three of the confirmed tornadoes struck in far west central Oklahoma while the other traveled 12.3 miles from near Vinita to Bernice, injuring one person when it blew two tractor trailers over on I-40. That tornado was rated as an EF-1. Many other instances of severe winds and large hail were reported across the state during the stormy month.

### April 2015 Statewide Statistics

#### Temperature

	Average	Depart.	Rank (1895-2015)
Month (April)	60.9°F	1.6°F	36th Warmest
Season-to-Date (Mar-Apr)	55.9°F	1.2°F	32nd Warmest
Year-to-Date (Jan-Apr)	47.0°F	-0.4°F	52nd Warmest

#### Precipitation

	Total	Depart.	Rank (1895-2015)
Month (April)	4.82 in.	1.56 in.	17th Wettest
Season-to-Date (Mar-Apr)	7.23 in.	0.93 in.	28th Wettest
Year-to-Date (Jan-Apr)	9.62 in.	-0.07 in.	40th Wettest

Depart. = departure from 30-year normal

The bountiful moisture provided significant drought relief for much of the state, and that is reflected on the U.S. Drought Monitor maps. The report from April 7 listed 40 percent of the state in extreme-to-exceptional drought, much of that across the western half of Oklahoma. The month's final map on the 30th saw that amount reduced to 24 percent. The amount of the state with no drought increased from 32 percent to 41 percent, mostly across the eastern half of the state. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification. The reservoirs across western Oklahoma saw great benefits from the rains, as did stock ponds and streams. Reservoirs that had shown alarming drops recently rose a foot or more, including Canton, Altus-Lugert, Tom Steed and Foss. Waurika Lake, the city of Duncan's water supply, remained 19 feet below normal storage. Regardless of the gains, most of those lakes remain well below their normal capacity.

## APRIL 2015 DAILY SUMMARIES

**APRIL 1-4:** Passing showers, thunderstorms, and a cold front caused temperatures to plummet. The highest maximum temperature of 92 degrees on the 1st (measured in Beaver and Buffalo) dropped to 68 degrees on the 4th. The lowest maximum temperatures were in the low 70s on the 1st and 2nd, 52 degrees on the 3rd, and 62 degrees on the 4th. The highest minimum temperatures dropped from the 60s to the 40s and the coolest temperatures fell from the 30s to the 20s. The thunderstorm activity and heavy rain caused 2-2.75 inch hail in Woods and Dewey County as well as flooding in Midwest City and Oklahoma City on the 1st. An EF-1 tornado was reported on the 2nd, crossing through Craig, Ottawa, and Delaware County. The highest daily rainfall totals were .87 inches in Centrahoma on the 1st and .84 inches in Vinita on the 2nd. Average wind speeds were generally less than 20mph, however, peak wind gusts were measured in the 50s Wednesday through Friday.

**APRIL 5-7:** Warm temperatures made a comeback with the warmest recorded temperatures increasing from 88 degrees in Beaver on the 5th to 96 degrees the following two days. The coolest highs rose from 52 degrees to 79 degrees. The warmest minimums increased from the low 50s to high 60s and the coolest minimums fluctuated in the mid-upper 30s and low 40s. Although showers and thunderstorms moved from southern and central OK early on the 5th, they soon exited the state to the east. The highest 24-hour rainfall was .51 inches in Haskell. Daily average wind speeds were less than 20mph.

**APRIL 8-10:** Although a dryline stretched across northwest Oklahoma on the 8th, showers and thunderstorms returned to the area on the 8th and 9th. Maximum rainfall amounts measured .71 inches in Burbank on the 8th and .56 inches on the 9th. Rainfall was absent by the 10th. Severe weather was evident as hail 2-3 inches in diameter fell in Beckham and Roger Mills County, and wind gusts just over 70mph were reported in Roger Mills and Kiowa County on the 8th. Maximum temperatures dropped from a range between 74 and 93 degrees to a range between 66 and 73 degrees during this period. The highest minimum temperatures plummeted from 70 to 49 degrees and the lowest minimum temperatures decreased from 37 to 25 degrees. There was a peak wind gust of 62 degrees in Hobart and El Reno on the 8th, however, average speeds were less than 20mph on the 8th and 9th, and less than 13mph on the 10th.

**APRIL 11:** Showers and thunderstorms developed over the area with rain primarily falling in central OK. Some storms were strong-severe with 2 inch diameter hail falling in Beckham County. Peak wind gusts got as high as 48mph in Camargo and daily average wind speeds were less than 20mph. Highs ranged from 62 degrees in Medford and Cherokee to 78 degrees in Wister. Lows were between 41

degrees in Camargo, Wister, and Boise City and 54 degrees in Skiatook and Stillwater.

**APRIL 12-13:** A warm front stretched across the state and rain and thunderstorms spread over north and northwest Oklahoma. On the 13th, the showers and storms increased in intensity along a cold front boundary in south and southeast OK. 70mph wind gusts were reported in Reydon on the 12th, and flooding was reported in Le Flore, Pittsburg, and Sequoyah Counties on the 13th. It is no surprise then that the highest daily rainfall amounts were a whopping 3.14 inches in Cheyenne on the 12th and 3.39 inches in Talihina on the 13th. The cold front caused the warmest temperatures in the state to drop from 88 to 71 degrees and the coolest maximum temperatures to fall from 73 to 59 degrees. The highest minimum temperatures were in the upper 50s and low 60s, and the coolest temperature in the state was 39 degrees in Kenton on Sunday and 40 degrees in Boise City on Monday. Daily average wind speeds were less than 20mph.

**APRIL 14:** Even with the rain cooled air and cloudiness, temperatures were still comfortable. Highs ranged from 54 degrees in El Reno, Apache, and Medicine Park to 72 degrees in Hooker. Minimum temperatures were between 30 degrees in Boise City and 59 degrees in Idabel. Due to an upper low, scattered rain fell over southwest, central, and eventually southeast Oklahoma. Although trace amounts to a quarter inch of rain were common in most areas, the top three rainfall amounts in the state were .59 inches in Sulphur, .69 inches in Fittstown, and .80 inches in Wilburton. Average wind speeds were between 5 and 14mph.

**APRIL 15-20:** As skies cleared in portions of southwest OK on the 15th, dense fog developed. Temperatures were much warmer than the previous day with the highest maximums in the state reaching a warm 85 degrees in Hooker. Following a downward trend, the highest maximum temperatures fell from the 80s, to the 70s, and finally to 69 degrees on the 20th. The coolest maximums were in the low-mid 60s and upper 50s. The highest minimum temperatures were generally in the 60s and 50s, but dropped into the 40s by the 20th. Except for the state's coolest minimum measuring 43 degrees (Kenton) on the 16th, the coolest minimum temperatures were primarily in the 30s. Rain and thunderstorms were a common scene from the 15th through the 19th before skies started to clear again on the 20th. The areas that experienced the most rainfall throughout the state were eastern OK on the 15th; western OK on the 16th; west and north-central OK on the 17th; Love County and the eastern one-third of the state on the 18th; and north-central, northwest, central, and then eastern OK on the 19th as a cold front passed through. The highest daily rainfall amounts reported each day were .21 inches (Haskell), 2.54 inches

(Freedom), 2.40 inches (Cheyenne), 1.41 inches (Cookson), and .60 inches (Putnam) each consecutive day. A number of severe weather reports occurred from this period, including 2-3 inch hail in Roger Mills County on the 16th and Tillman, Kiowa, Comanche, and Washita County on the 18th. Wind gusts of 70mph were reported in Roger Mills County on the 16th and 17th, and Grady County on the 18th. Daily average wind speeds were less than 19mph on Wednesday, less than 14mph on Thursday and Friday, less than 12mph on Saturday and Monday, and less than 22mph on Sunday when there was also a wind advisory issued for western OK.

**APRIL 21-23:** Temperatures remained fairly consistent during this three-day stretch, even with a stalled cold front across the region on the 22nd. The highest maximum temperatures were in the upper 70s and the lowest maximum temperatures were in the mid-low 60s. The highest minimum temperatures increased from 53 degrees in Oklahoma City and Medicine Park on the 21st to 61 degrees in Burneyville and Durant on the 23rd. The coolest minimum temperatures were between 36 and 40 degrees. Although rainfall was negligible on the 21st, as much as 1.03 inches fell in Ringling on the 22nd and .90 inches in Madill on the 23rd. Some of the storms were considered strong-severe on Wednesday in western OK with heavy rain in central, south-central, and southeast OK. Daily average wind speeds were less than 12mph on Wednesday, 14mph on Thursday, and 15mph on Friday.

**APRIL 24-26:** Despite a weak cold front on the 26th, the high maximum temperatures remained in the 80s. There was a slight cooling effect from the cold front with the lowest maximum temperatures as they fluctuated from 62 degrees on the 24th to 76 degrees on the 25th and 55 degrees on the 26th. High minimum temperatures were in the upper 50s and low 60s and the lowest minimum temperatures ranged from 35 degrees in Kenton on the 26th and 43 degrees on the 24th. Showers and thunderstorms passed over southern Oklahoma on the 24th. Far south-central and southeast Oklahoma received the most rain that day, measuring 1-3 inches. With a dryline in the region, skies were rain free on the 25th. A slow moving low pressure system caused

some strong-severe storms on the 26th in west and southeast Oklahoma. The maximum rainfall measured that day was 1.75 inches in Ft. Cobb. Many portions of the state experienced fog on the 24th and 26th. The top wind gusts in the state were 54mph in Goodwell on the 24th, 31mph in Red Rock on the 25th, and 45mph in Burneyville on the 26th. Daily average wind speeds were 5-18mph, 5-15mph, and less than 17mph each consecutive day.

**APRIL 27:** Intense rain was widespread with over 2 inches falling in west-central Oklahoma. The highest 24-hour rainfall measurement was 3.13 inches in Woodward, followed by 3.03 inches in Erick. Maximum temperatures ranged from 45 degrees in Boise City to 71 degrees in Antlers. Minimum temperatures were between 38 degrees in Boise City and 54 degrees in Wister. Average wind speeds were 7-22mph with a 51mph wind gust in Erick.

**APRIL 28-30:** Temperatures took off on a warming trend with the highest maximums increasing from 70 degrees in Newkirk on the 28th to 82 degrees in the panhandle on the 30th. The lowest maximums increased from 54 degrees in Mt. Herman to 73 degrees in Westville. High minimum temperatures were generally in the upper 40s to low-mid 50s. The coolest minimum temperatures were 37 degrees in Goodwell on the 28th, 36 degrees in Boise City on the 29th, and 41 degrees in the far north on the 30th. Trace amounts to .78 inches of rain (Cookson) fell on the 28th. The last two days of the month were rain-free. Average wind speeds were generally less than 12mph.

## APRIL 2015 SEVERE WEATHER

### Hail (2 inches in diameter or greater)

Size (in.)	Location	County	Day
2.00	4 W Camp Houston	Woods	1
2.50	1 N Freedom	Woods	1
2.75	4 N Camargo	Dewey	1
2.00	10 N Texola	Beckham	8
2.75	Dempsey	Roger Mills	8
2.00	4 S Cheyenne	Roger Mills	8
3.00	5 E Cheyenne	Roger Mills	8
3.00	2 N Hammon	Roger Mills	8
2.00	3 E Texola	Beckham	11
2.00	Erick	Beckham	11
2.00	2 W Reydon	Roger Mills	16
2.50	2 W Crawford	Roger Mills	16
2.00	3 SW Grandfield	Tillman	18
2.75	4 N Mountain Park	Kiowa	18
2.75	7 N Indianhome	Comanche	18
2.50	Cordell	Washita	18

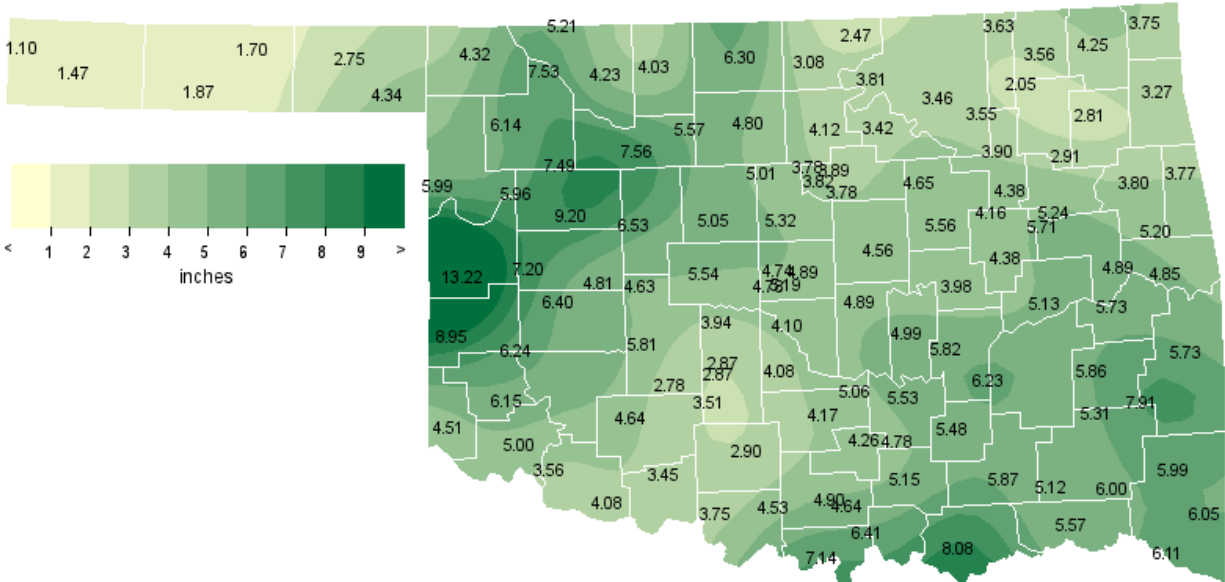
### Flooding

Location	County	Day
Midwest City	Oklahoma	1
Oklahoma City	Oklahoma	1
5 WSW Hartshorne	Pittsburg	13
Poteau	Le Flore	13
1 SW Haileyville	Pittsburg	13
2 SW Bache	Pittsburg	13
6 WSW McAlester	Pittsburg	13
5 NW Haywood	Pittsburg	13
3 SW McAlester	Pittsburg	13
2 ENE Muldrow	Sequoyah	13
Heavener	Le Flore	13

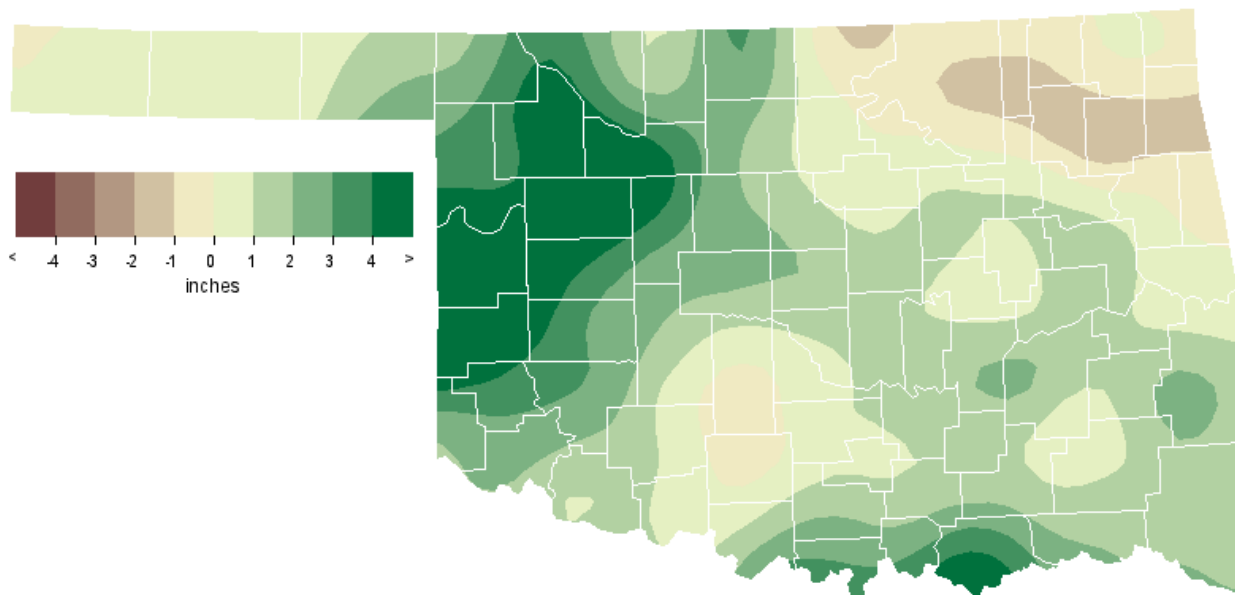
### Wind Gusts (70 mph or greater)

Speed (m.p.h)	Location	County	Day
70.00	7 NE Sweetwater	Roger Mills	8
75.00	7 SE Cheyenne	Roger Mills	8
71.00	4 SE Hobart	Kiowa	8
70.00	7 E Reydon	Roger Mills	12
70.00	5 N Durham	Roger Mills	16
70.00	2 N Cheyenne	Roger Mills	16
70.00	5 NW Reydon	Roger Mills	17
70.00	Bridge Creek	Grady	18

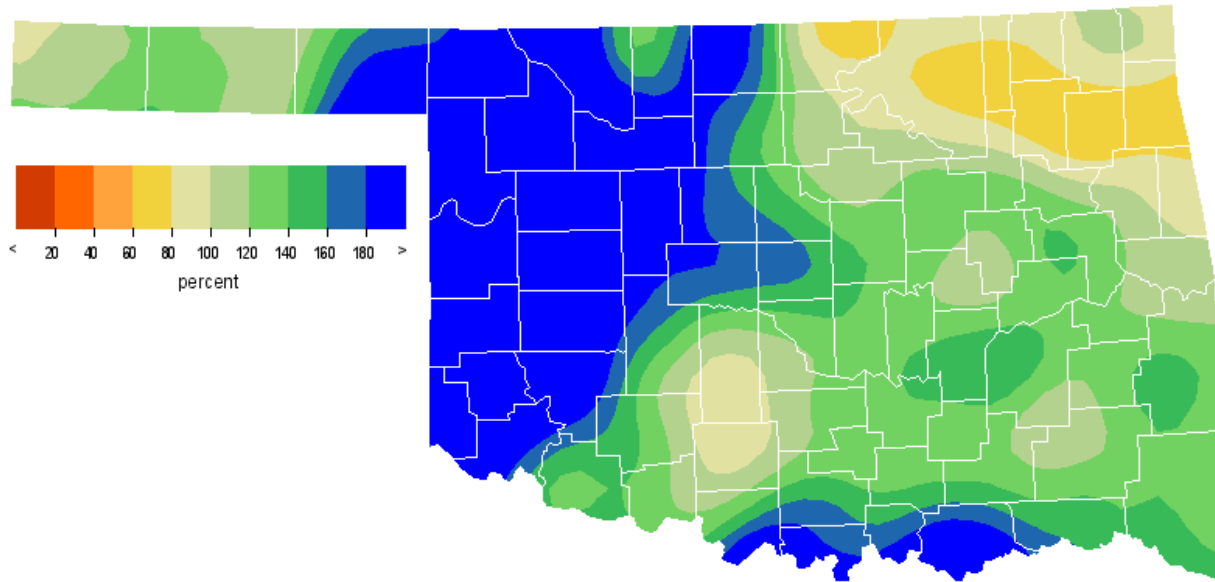
## APRIL 2015 OBSERVED PRECIPITATION



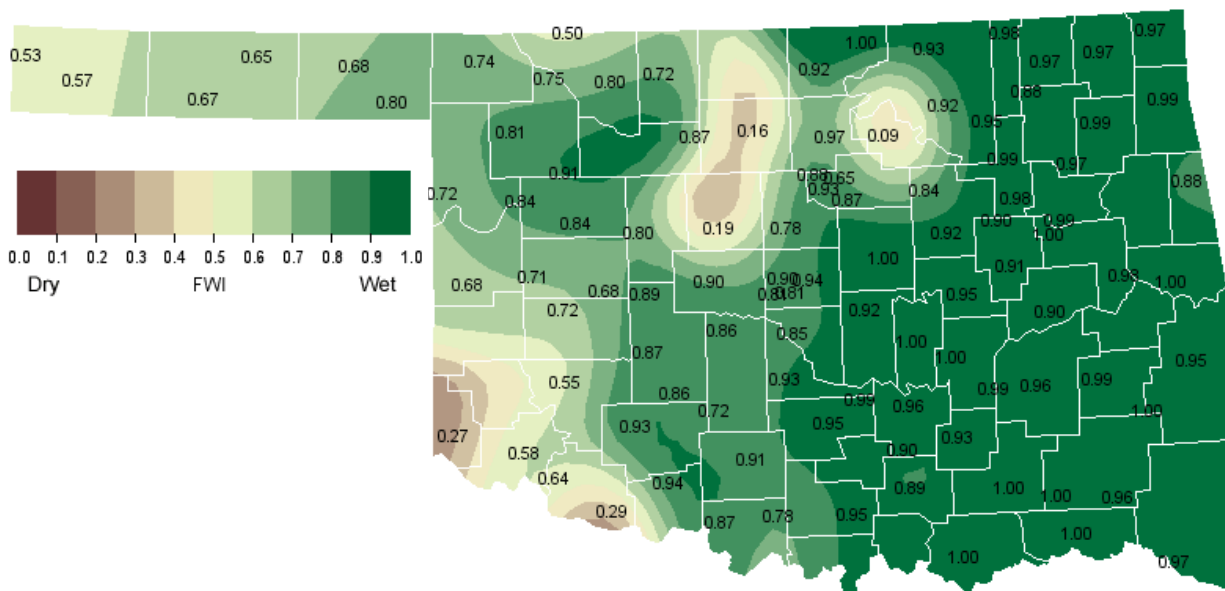
## APRIL 2015 DEPARTURE FROM NORMAL PRECIPITATION



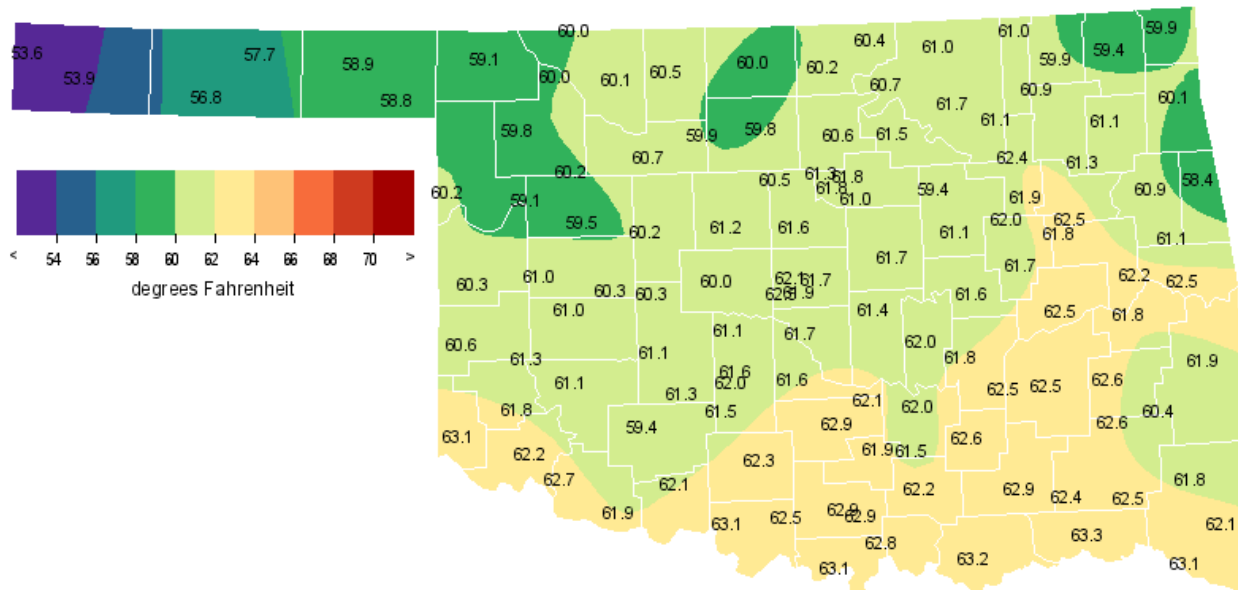
## APRIL 2015 PERCENT OF NORMAL PRECIPITATION



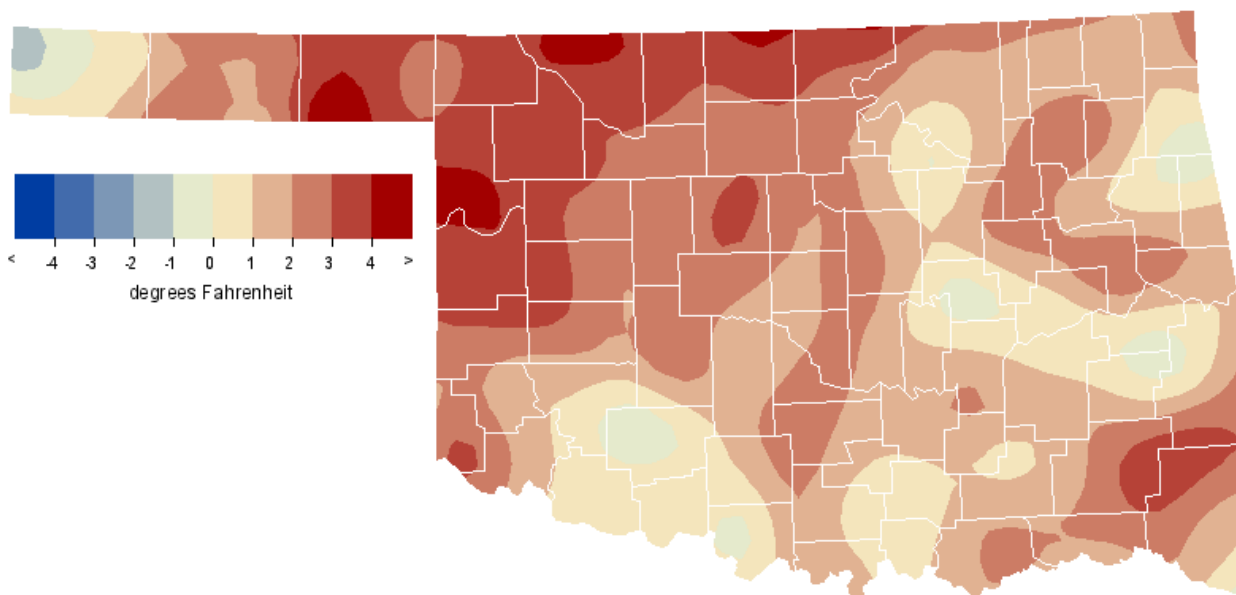
## APRIL 2015 AVERAGE SOIL MOISTURE AT 25CM



## APRIL 2015 AVERAGE TEMPERATURE



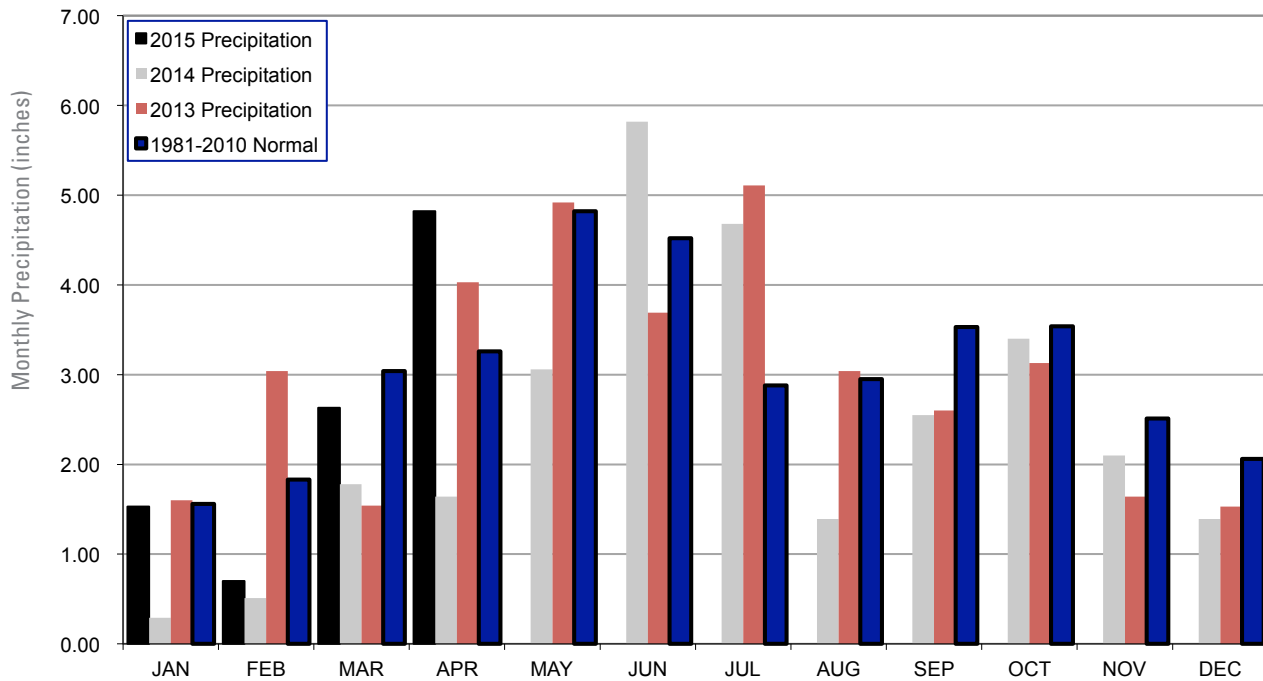
## APRIL 2015 DEPARTURE FROM NORMAL TEMPERATURE







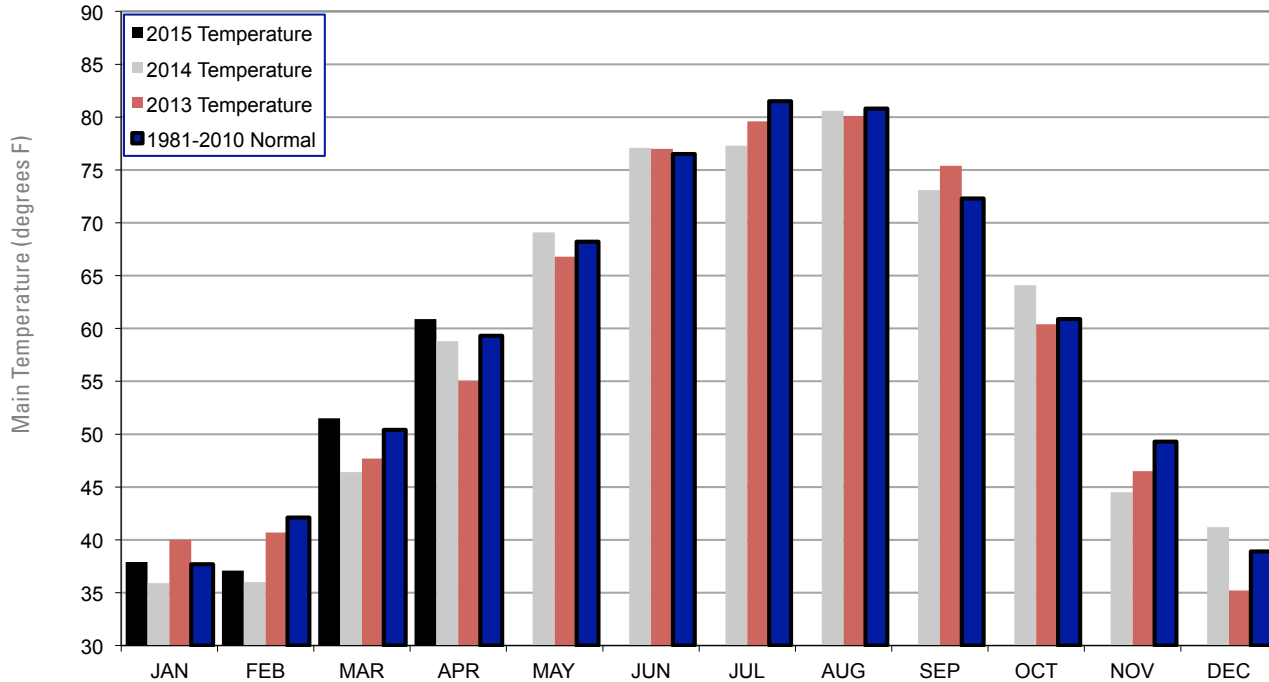
## 2013, 2014 AND 2015 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



### April 2015 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Apr-14
Panhandle	2.94	1.28	18th Wettest	5.31 (1900)	0.02 (1935)	0.54
North Central	5.27	2.45	10th Wettest	7.14 (1999)	0.47 (2014)	0.47
Northeast	3.60	-0.47	61st Driest	9.06 (1942)	0.22 (1989)	1.68
West Central	7.61	5.20	2nd Wettest	8.43 (1997)	0.16 (1996)	0.83
Central	4.41	1.06	30th Wettest	9.37 (1942)	0.28 (1989)	1.42
East Central	4.97	0.74	40th Wettest	11.32 (1957)	0.74 (1989)	2.90
Southwest	4.46	1.83	16th Wettest	7.53 (1997)	0.14 (1989)	1.04
South Central	5.17	1.55	26th Wettest	11.33 (1942)	0.40 (1903)	2.66
Southeast	5.96	1.48	37th Wettest	12.81 (1957)	0.80 (1987)	3.98
Statewide	4.82	1.56	17th Wettest	8.32 (1942)	0.55 (1989)	1.69

## 2013, 2014 AND 2015 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



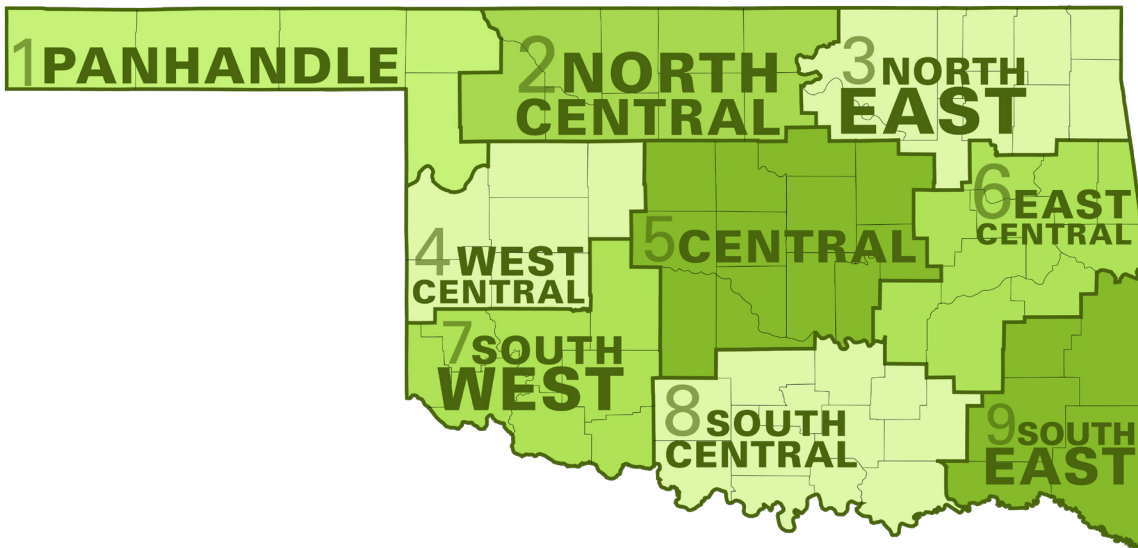
### April 2015 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Apr-14 (F)
Panhandle	57.4	2.1	35th Warmest	62.1 (1946)	48.8 (1997)	56.0
North Central	60.2	2.5	34th Warmest	64.4 (1981)	50.4 (1983)	58.3
Northeast	61.0	2.0	33rd Warmest	65.7 (1954)	52.5 (1983)	58.2
West Central	60.4	2.0	31st Warmest	65.1 (2006)	52.2 (1983)	59.3
Central	61.4	1.5	36th Warmest	66.9 (2006)	53.6 (1983)	60.3
East Central	61.7	1.3	43rd Warmest	67.8 (1896)	54.5 (1907)	59.6
Southwest	61.5	0.9	44th Warmest	67.6 (2006)	54.9 (1997)	61.2
South Central	62.6	0.9	49th Warmest	68.8 (1925)	56.6 (1983)	61.6
Southeast	62.3	1.7	38th Warmest	66.7 (2006)	55.3 (1983)	59.5
Statewide	60.9	1.6	36th Warmest	65.8 (2006)	53.2 (1983)	59.3

## MESONET EXTREMES FOR APRIL 2015

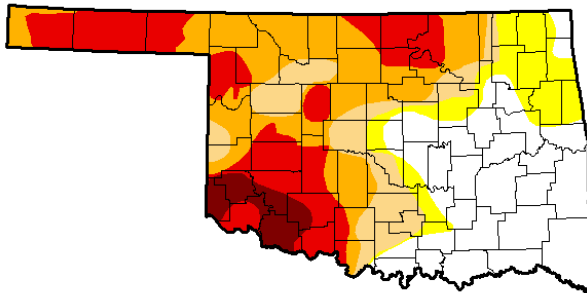
Climate Division	High Temp (F)			Low Temp (F)			High Monthly Rainfall (inches)		High Daily Rainfall (inches)		
	Day	Station	Day	Day	Station	Station	Station	Day	Station		
Panhandle	93	8th	Slapout	23	4th	Buffalo	5.99	Arnett	2.89	27th	Arnett
North Central	96	6th	Alva	23	4th	Medford	7.56	Fairview	3.13	27th	Woodward
Northeast	91	7th	Pawnee	27	4th	Burbank	5.24	Porter	1.47	13th	Porter
West Central	95	6th	Butler	25	4th	Camargo	13.22	Cheyenne	3.14	12th	Cheyenne
Central	90	7th	Stillwater	27	4th	Marshall	5.56	Bristow	2.40	27th	Oklahoma City North
East Central	85	7th	Okmulgee	29	4th	Tahlequah	6.23	Stuart	2.92	13th	Holdenville
Southwest	96	7th	Hollis	31	4th	Hobart	6.15	Mangum	2.08	27th	Grandfield
South Central	90	2nd	Waurika	36	4th	Waurika	8.08	Durant	2.83	24th	Durant
Southeast	86	26th	Clayton	37	4th	Broken Bow	7.91	Talihina	3.39	13th	Talihina
Statewide	96	7th	Hollis	23	4th	Medford	13.22	Cheyenne	3.39	13th	Talihina

Oklahoma Climate Divisions



# APRIL 2015 DROUGHT MONITOR

## U.S. Drought Monitor Oklahoma



**April 28, 2015**

(Released Thursday, Apr. 30, 2015)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	30.08	69.92	59.29	47.51	24.34	4.13
<b>Last Week</b> <i>4/21/2015</i>	25.19	74.81	60.92	52.39	37.13	8.36
<b>3 Months Ago</b> <i>1/27/2015</i>	5.03	94.97	60.60	45.34	22.58	5.69
<b>Start of Calendar Year</b> <i>1/20/2014</i>	25.63	74.37	62.03	40.84	21.74	5.70
<b>Start of Water Year</b> <i>9/30/2014</i>	8.55	91.45	73.31	58.13	20.92	4.64
<b>One Year Ago</b> <i>4/29/2014</i>	7.19	92.81	79.21	54.81	39.03	20.26

Intensity:

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

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

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<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.

**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/wwwcgi.dll?wwEvent~Storms>

### SEASONAL OUTLOOKS

Climate Prediction Center:

[http://www.cpc.ncep.noaa.gov/products/OUTLOOKS\\_index.html](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 is the State Climate Office for Oklahoma

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