Oklahoma Monthly Climate Summary

MARCH 2018

OKLAHOMA CLIMATOLOGICAL SURVEY

Drought continued to punish western Oklahoma throughout March, even as eastern sections saw additional relief. Similar to February, Interstate 44 served as a rough demarcation line between the above normal totals to the southeast and paltry offerings to the northwest. The news was dire for northwestern Oklahoma, where precipitation deficits that began in early October 2017 strengthened drought impacts. Fire danger rose to critical levels almost daily. Continued damage to the winter wheat crop was reported in western Oklahoma, along with low or empty stock ponds, desiccated soils, and struggling pastures. Severe weather reports were sporadic, but somewhat tame for a springtime month in Oklahoma.

According to preliminary data from the Oklahoma Mesonet, the statewide average precipitation total was 1.86 inches, 1.18 inches below normal and the 41st driest March since records began in 1895. Most areas of the state finished below normal except the regions just to the southeast of I-44. East central Oklahoma finished with its 34th wettest March on record at 0.42 inches above normal, while the Panhandle was 1.32 inches below normal to rank as their 18th driest. The Mesonet site at Hooker recorded no precipitation for the month, and 25 additional sites recorded a half-inch or less. Cookson led the state with 5.97 inches. The first three months of the year were just a bit below normal statewide, but the various regions across the state had remarkable differences during that period. The Panhandle had its second driest January-March on record with an average total of 0.32 inches, 2.38 inches below normal. The southeast saw an average of 16.28 inches, 5.29 inches above normal, to rank as their eighth wettest. The Mesonet sites at Eva and Hooker received 0.06 inches through that time. Broken Bow recorded 13.38 inches. Again, I-44 served as a rough dividing line between areas with 10 inches or more to the southeast and 3 inches or less to the northwest for the first three months of the year. Dating back to Oct. 1, 2017, eight Mesonet sites in northwest Oklahoma had recorded less than 2 inches of rain for that six-month period. Boise City and Kenton received less than an inch.

The month was 2.2 degrees above normal statewide with an average temperature of 52.6 degrees, the 33rd warmest March on record. The Mesonet's top temperature reading of 95 was recorded at three different sites on the 23rd. Kenton owned the lowest reading of 9 degrees on March 6. Freezing weather was somewhat uncommon with the Mesonet site at Medicine Park spending just 1 hour below freezing, while Eva spent 119 hours at 32 degrees or lower. The first three months of the year were a tenth of a degree below normal with a statewide average of 43.3 degrees.

March 2018 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	86°F	Waurika	25
Low Temperature	9°F	Kenton	6
High Precipitation	5.97 in.	Cookson	--
Low Precipitation	0.00 in.	Hooker	--

March 2018 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2018)
Month (March)	52.6°F	2.2°F	33rd Warmest
Year-to-Date (Jan-Mar)	43.3°F	-0.1°F	49th Warmest

Precipitation

	Total	Depart.	Rank (1895-2018)
Month (March)	1.86 in.	-1.18 in.	41st Driest
Year-to-Date (Jan-Mar)	6.26 in.	-0.17 in.	48th Wettest

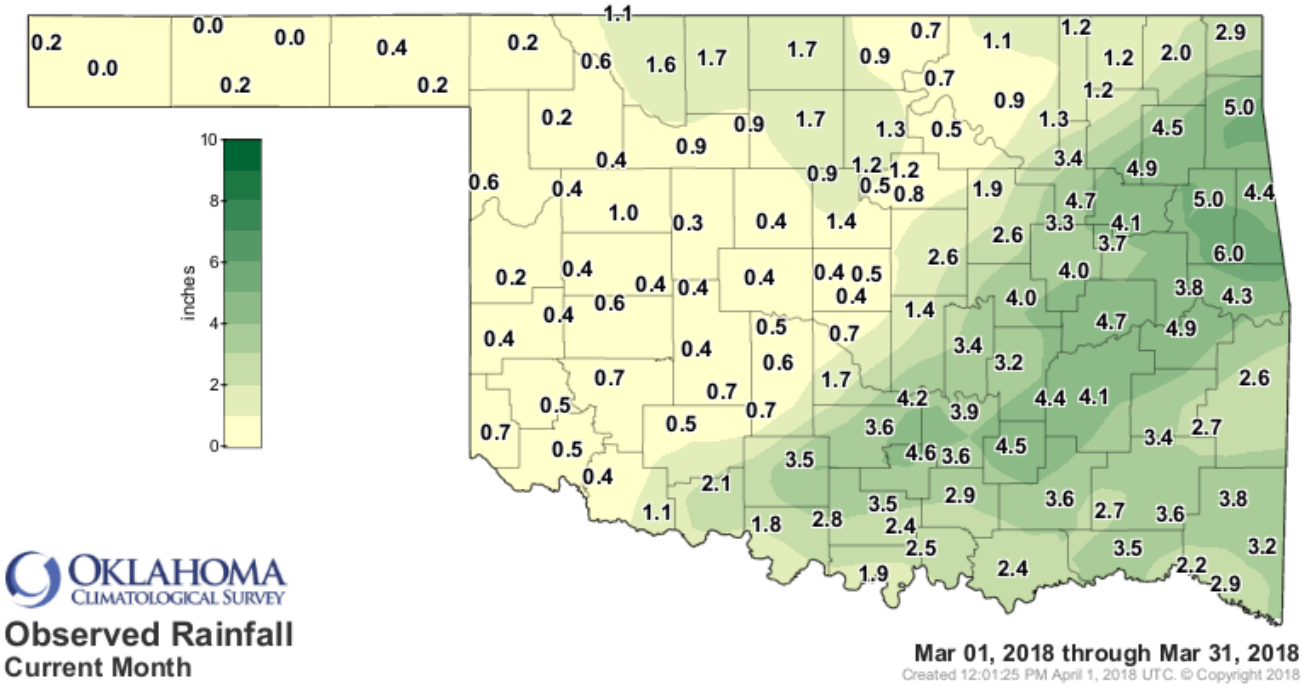
Depart. = departure from 30-year normal

According to the U.S. Drought Monitor, most of the area southeast of I- 44 was drought free by the end of March. Drought continued to intensify across the northwestern half of the state, however. According to the U.S. Drought Monitor, the total area of the state in drought decreased from 66 percent at the end of February to 48 percent at the end of March. The most intense category of drought – the Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification – increased from zero percent at the end of February to 15 percent at the end of March. That

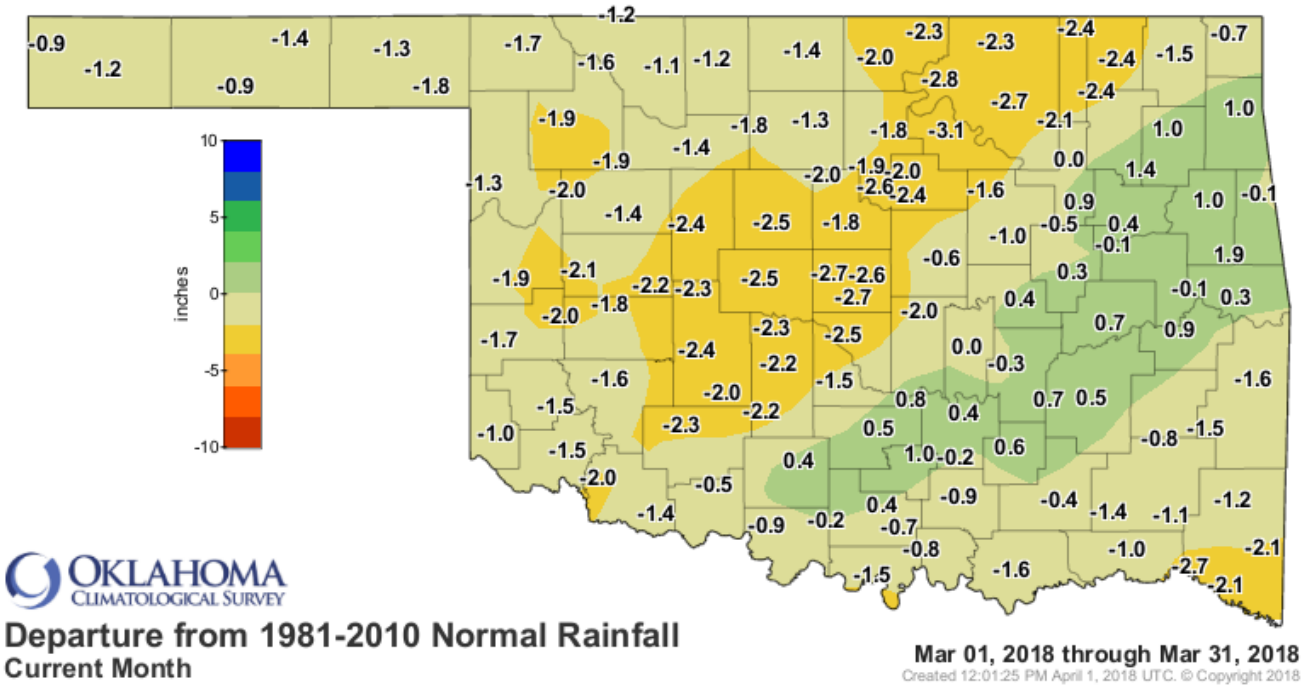
intensification occurred in the far northwest through much of the Panhandle.

The April temperature and precipitation outlooks from the Climate Prediction Center (CPC) did not bode well for drought improvement across western Oklahoma. The precipitation outlook indicated increased odds of above normal precipitation across far northeastern Oklahoma, but also below normal precipitation across far western portions of the state. The picture for April temperatures was unclear, so equal odds of above-, below- and near-normal were expected. That led to an April U.S. Monthly Drought Outlook that predicted drought as persisting or intensifying across western Oklahoma. No drought development was expected across eastern Oklahoma, however.

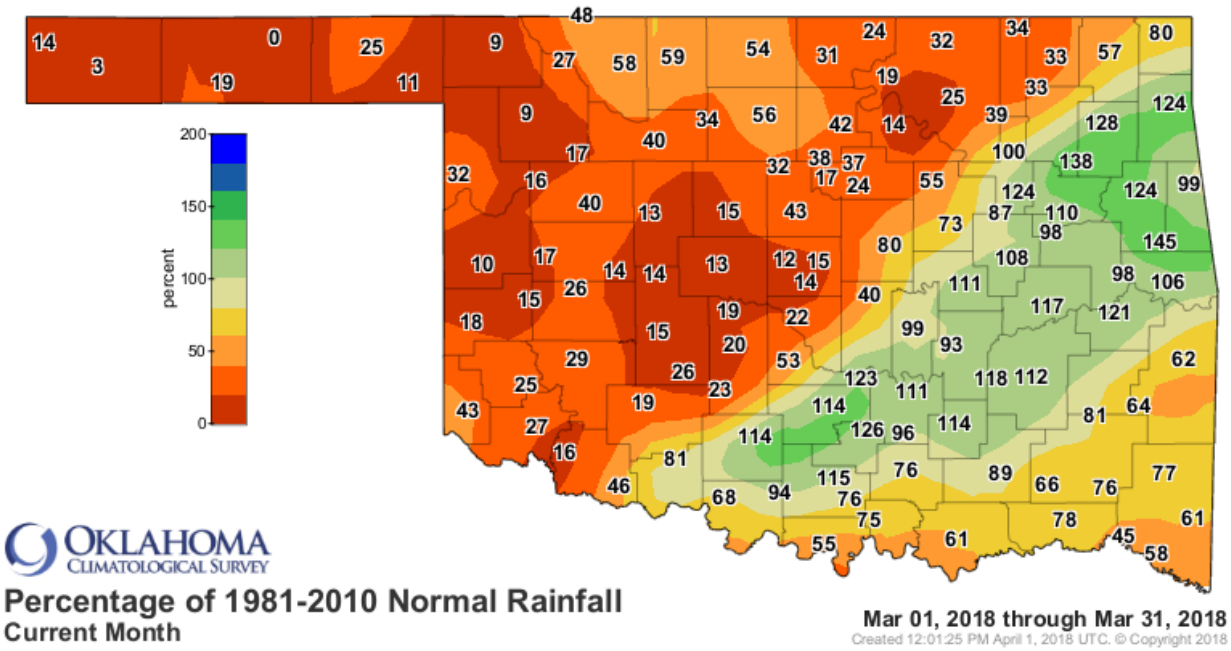
MARCH 2018 OBSERVED PRECIPITATION



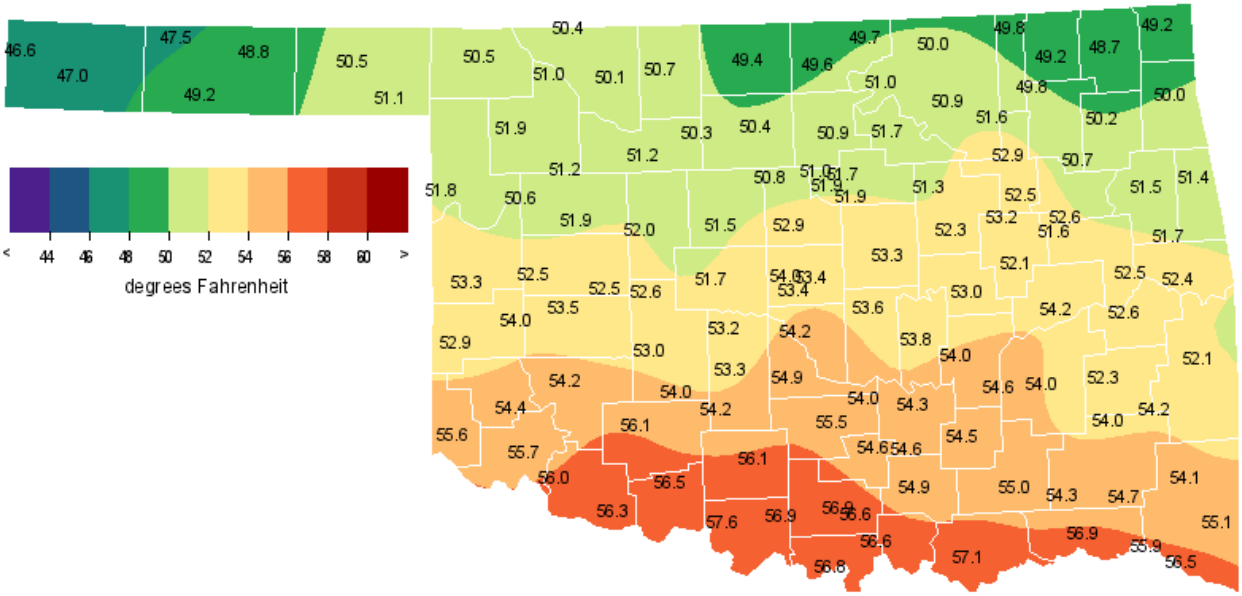
MARCH 2018 DEPARTURE FROM NORMAL PRECIPITATION



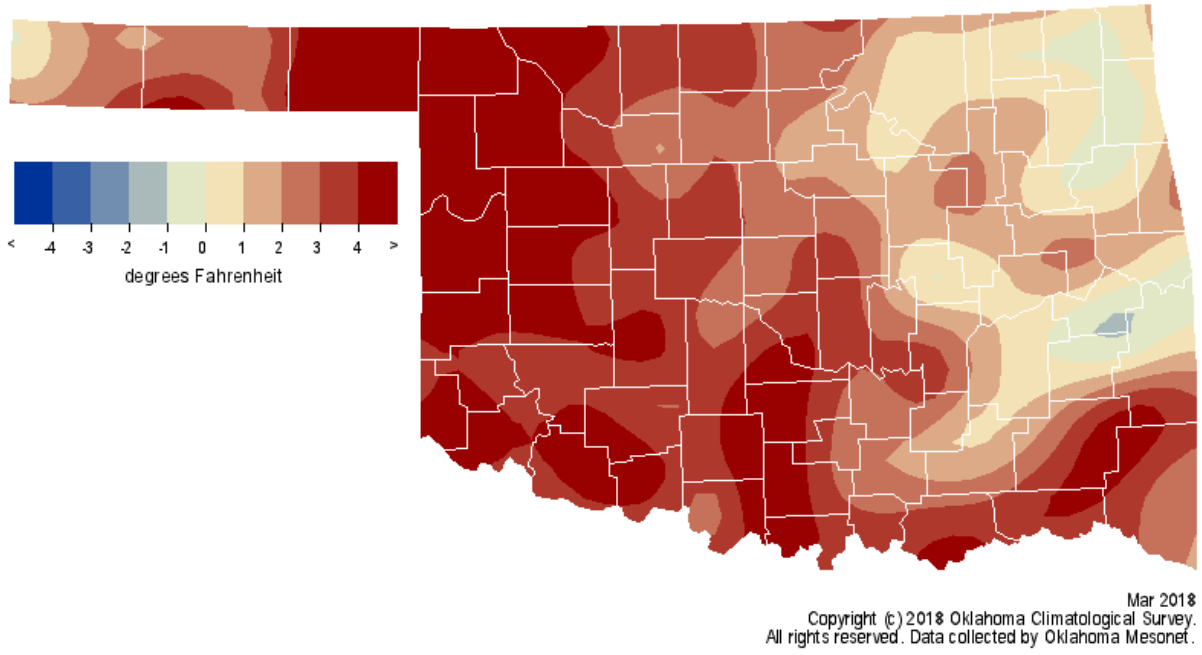
MARCH 2018 PERCENT OF NORMAL PRECIPITATION



MARCH 2018 AVERAGE TEMPERATURE



MARCH 2018 DEPARTURE FROM NORMAL TEMPERATURE

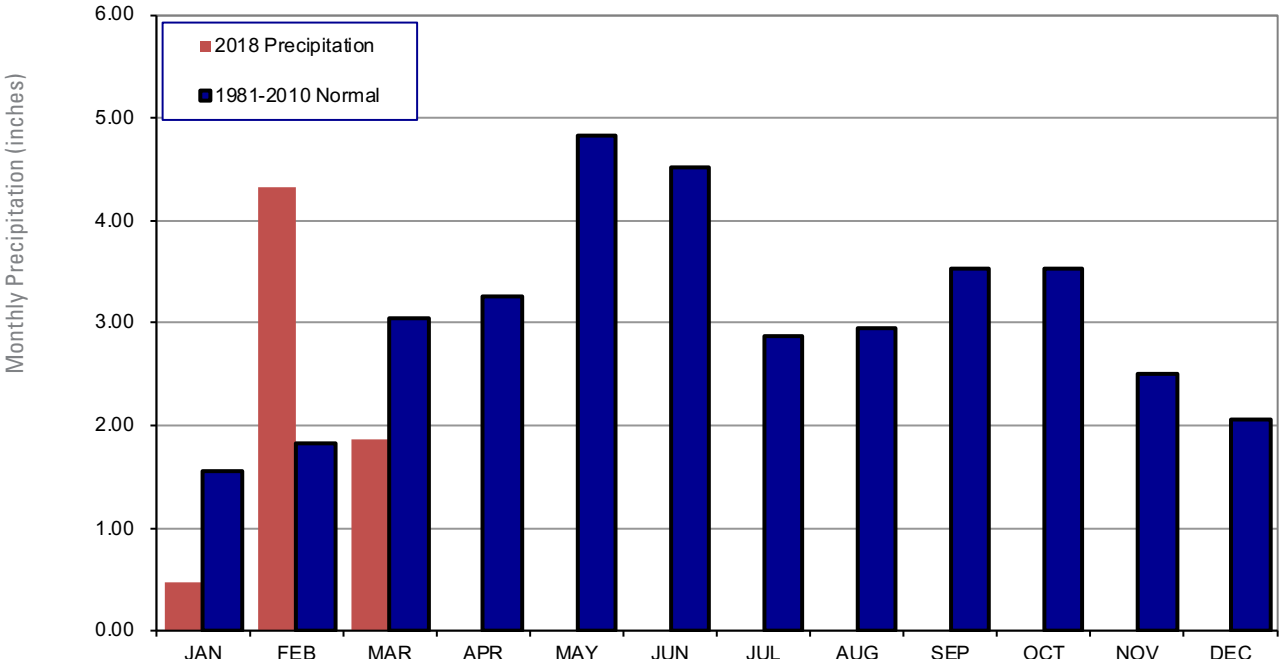


MESONET MONTHLY SUMMARY FOR MARCH 2018

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	51.8	90	23	22	7	416	6	.63	.56	28
Beaver	50.5	95	23	16	12	460	11	.42	.41	18
Boise City	46.9	86	23	14	6	560	0	.04	.04	29
Buffalo	50.5	95	23	16	8	457	9	.16	.07	18
Eva	47.4	90	23	13	6	550	4	.03	.03	13
NORTH CENTRAL										
Alva	50.0	80	23	19	8	464	0	1.58	.76	28
Blackwell	49.6	78	15	20	14	477	0	.92	.51	18
Breckinridge	50.4	81	26	22	13	453	1	1.65	1.00	29
Cherokee	50.7	80	15	20	12	445	1	1.69	.94	29
Fairview	51.2	80	26	24	7	429	1	.93	.86	18
Freedom	50.9	85	23	19	7	438	2	.58	.30	18
Lahoma	50.3	78	16	23	12	456	0	.93	.57	18
NORTHEAST										
Bixby	52.5	78	16	24	14	391	3	4.65	1.92	27
Burbank	51.0	79	22	22	14	437	2	.65	.40	27
Copan	49.9	78	16	23	8	470	0	1.22	.52	27
Foraker	49.9	78	16	21	7	468	1	1.08	.41	27
Inola	50.8	78	16	22	14	443	1	4.90	2.89	27
Jay	50.0	77	16	21	8	466	2	4.96	2.95	27
Miami	49.3	76	16	23	13	487	0	2.89	1.54	27
Nowata	49.2	77	16	19	8	491	0	1.18	.52	27
WEST CENTRAL										
Bessie	53.5	81	22	23	7	359	3	.63	.36	27
Butler	52.5	82	23	21	7	390	3	.41	.18	18
Camargo	50.6	83	23	17	7	448	2	.39	.22	29
Cheyenne	53.3	82	23	24	7	367	4	.21	.08	27
Elk City	54.0	82	23	26	7	344	2	.35	.17	27
CENTRAL										
Acme	54.2	79	22	24	13	343	7	.67	.30	27
Bowlegs	53.7	79	16	25	14	355	5	3.35	1.72	26
Bristow	52.2	79	16	21	14	403	6	2.63	.92	26
Lake Carl Blac	51.0	85	26	21	14	439	4	1.17	.81	29
Chandler	53.2	79	16	26	14	371	7	2.55	1.35	26
Chickasha	53.4	81	23	24	13	369	8	.55	.23	27
El Reno	51.7	83	26	23	12	416	5	.37	.13	18
Guthrie	53.0	82	26	26	12	379	6	1.36	.67	27
Kingfisher	51.5	82	26	22	14	422	4	.44	.23	29
Marena	51.9	84	26	25	12	409	4	.54	.32	27
Minco	53.2	78	23	26	7	371	5	.54	.31	27
EAST CENTRAL										
Cookson	51.7	78	16	23	8	414	0	5.97	3.12	27
Eufaula	54.2	80	16	28	14	340	6	4.69	1.76	26
Haskell	51.7	79	16	24	14	414	1	3.65	1.35	26
Hectorville	53.2	78	16	27	7	370	3	3.29	1.14	27
Holdenville	54.0	79	16	26	13	346	4	3.22	1.59	26
McAlester	54.0	81	16	23	14	348	6	4.13	2.51	27
Okmulgee	52.1	80	16	22	14	401	2	4.00	1.68	26
SOUTHWEST										
Altus	55.7	85	25	23	7	304	16	.54	.39	27
Apache	54.0	79	22	25	12	344	3	.71	.30	27
Fort Cobb	53.0	79	22	23	7	378	5	.42	.19	18
Grandfield	56.3	85	25	28	7	287	16	1.14	.46	27
Hinton	52.5	79	26	24	7	389	2	.38	.20	27
Hobart	54.2	81	25	22	7	341	6	.66	.45	27
SOUTH CENTRAL										
Ada	54.2	80	16	26	14	338	4	3.91	1.93	26
Ardmore	56.7	82	24	31	7	276	18	2.36	1.43	27
Burneyville	56.8	84	24	25	13	276	23	1.91	1.53	27
Byars	55.8	79	26	29	7	****	****	4.18	2.35	26
Centrahoma	54.5	81	24	24	14	334	7	4.52	2.63	27
Durant	57.0	83	24	31	14	264	17	2.44	2.03	27
Fittstown	54.6	80	24	25	7	331	8	3.63	1.41	26
Ketchum Ranch	56.2	82	23	28	7	289	14	3.54	1.25	31
SOUTHEAST										
Antlers	54.3	85	24	23	8	339	8	2.67	1.71	27
Broken Bow	55.1	83	24	27	8	316	9	3.21	.82	28
Clayton	54.0	81	24	24	14	345	4	3.39	2.66	27
Cloudy	54.7	83	24	26	8	327	8	3.60	1.91	27
Hugo	56.9	84	24	30	8	268	17	3.50	1.76	27
Idabel	56.5	82	24	27	8	278	15	2.91	.82	28

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	49.2	90	23	17	6	497	7	.22	.14	13
Hooker	48.8	92	23	16	6	507	5	.00	.00	1
Kenton	46.5	84	23	9	6	573	0	.15	.09	29
Slapout	51.1	95	23	22	12	438	8	.21	.13	18
May Ranch	50.4	81	23	20	7	452	0	1.14	.66	18
Medford	49.4	78	16	20	12	484	0	1.65	.55	19
Newkirk	49.8	78	22	21	12	473	1	.72	.21	18
Red Rock	51.0	83	26	21	8	437	3	1.32	.68	18
Seiling	51.2	80	23	20	12	430	3	.39	.32	18
Woodward	51.9	86	23	18	12	413	6	.19	.07	18
Pawnee	51.7	80	22	23	14	415	3	.51	.41	27
Porter	52.6	79	16	27	14	387	3	4.14	1.59	27
Pryor	50.2	78	16	21	14	460	0	4.51	2.53	27
Skiatook	51.6	76	22	25	7	417	1	1.29	.58	27
Talala	49.8	77	16	23	7	470	0	1.18	.68	27
Tulsa	52.8	78	16	27	14	381	3	3.40	1.98	26
Vinita	48.8	77	16	20	14	502	0	1.99	.88	27
Wynona	50.9	78	22	23	14	438	2	.90	.42	27
Erick	52.8	83	23	21	7	381	4	.36	.18	27
Putnam	51.9	79	26	23	7	409	2	.95	.76	18
Watonga	52.0	79	26	25	7	404	2	.34	.25	18
Weatherford	52.4	77	16	23	7	391	1	.36	.13	27
Marshall	50.9	85	26	21	14	443	5	.94	.45	29
Norman	54.2	79	23	27	13	345	10	.72	.34	26
Oilton	51.3	79	22	19	14	428	4	1.86	1.05	27
OKC East	53.4	79	23	26	13	368	8	.44	.20	27
OKC North	54.1	80	26	29	7	345	7	.36	.21	27
Okemah	53.0	78	16	24	14	374	2	3.98	1.49	26
Perkins	51.9	80	26	25	8	408	2	.77	.48	27
Shawnee	53.6	77	16	28	14	356	4	1.35	.46	27
Spencer	53.4	79	22	27	13	367	6	.48	.27	27
Stillwater	51.7	83	26	22	14	416	5	1.18	.59	29
Washington	54.9	80	23	28	14	324	10	1.85	.80	27
Sallisaw	52.4	81	16	23	8	391	1	4.29	3.21	27
Stigler	52.7	80	16	23	14	383	0	4.94	3.74	27
Stuart	54.6	79	24	28	14	330	8	4.42	1.96	27
Tahlequah	51.5	77	16	22	13	420	0	5.04	2.11	27
Webbers Falls	52.5	82	16	24	8	387	0	3.84	2.57	27
Westville	51.4	77	16	26	13	422	2	4.41	2.23	27
Hollis	55.6	86	23	23	7	307	16	.72	.50	27
Mangum	54.3	83	22	18	7	339	9	.50	.27	27
Medicine Park	56.1	82	25	31	7	283	8	.53	.29	27
Tipton	56.0	85	25	24	7	297	17	.37	.17	27
Walters	56.4	83	25	29	7	282	16	2.14	1.09	26
Lane	55.0	82	24	26	14	319	10	3.57	2.43	27
Madill	56.6	83	24	28	8	279	19	2.50	1.77	27
Newport	56.9	82	24	29	13	268	18	3.45	1.85	26
Pauls Valley	55.5	80	26	28	8	309	15	3.64	2.22	26
Ringling	56.9	82	23	30	7	269	18	2.82	1.44	26
Sulphur	54.6	80	24	24	14	331	10	4.61	2.27	26
Tishomingo	54.9	82	24	26	14	322	9	2.94	2.23	27
Waurika	57.5	86	23	29	14	258	27	1.84	.80	27
Mt Herman	54.1	82	24	25	14	340	3	3.77	1.74	27
Talihina	54.1	83	24	23	8	343	6	2.72	1.78	27
Valliant	55.9	84	24	26	8	295	12	2.23	.89	27
Wilburton	54.1	81	16	25	8	****	****	4.02	2.93	27
Wister	52.1	81	16	21	8	400	0	2.55	1.81	27

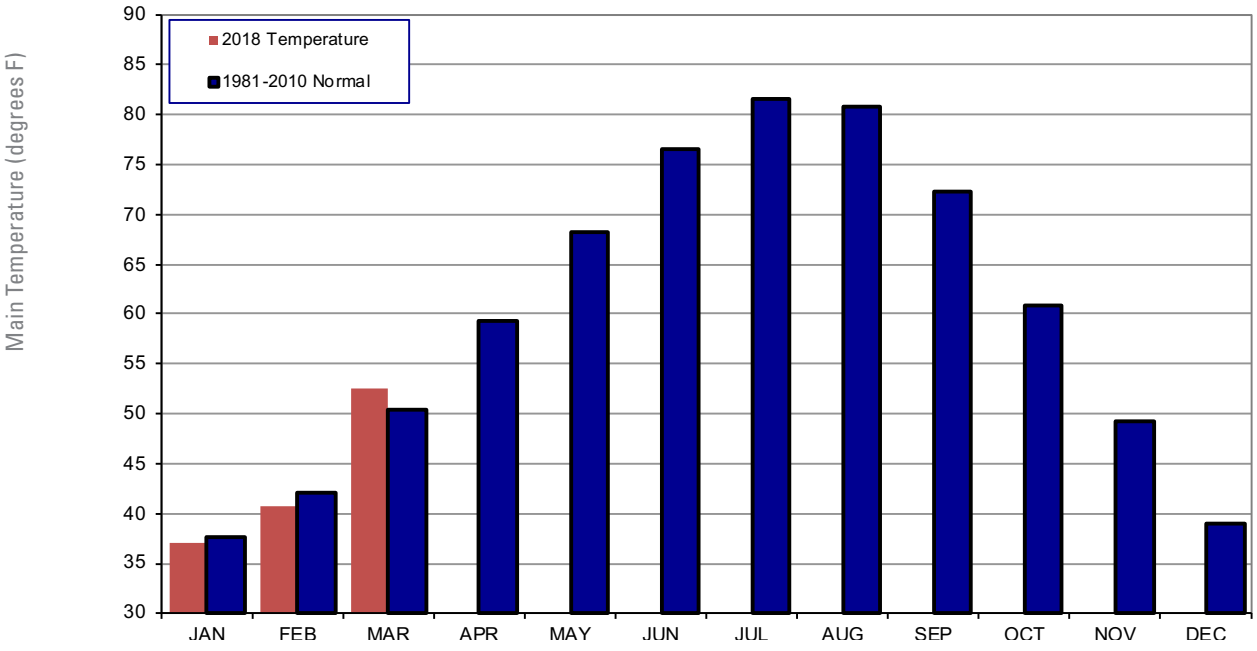
2018 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



March 2018 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Mar-17 (inches)
Panhandle	0.21	-1.32	18th Driest	5.66 (1973)	0.01 (1936)	2.13
North Central	1.05	-1.62	37th Driest	8.27 (1973)	0.00 (1936)	2.79
Northeast	2.47	-1.04	58th Driest	9.33 (1973)	0.33 (1971)	2.72
West Central	0.44	-1.85	20th Driest	6.76 (1973)	0.00 (1971)	3.03
Central	1.27	-1.87	30th Driest	7.45 (1990)	0.10 (1971)	2.89
East Central	4.30	0.42	34th Wettest	10.02 (1945)	0.52 (1941)	2.38
Southwest	0.74	-1.63	29th Driest	5.61 (1973)	0.00 (1940)	3.03
South Central	3.24	-0.24	45th Wettest	8.15 (1945)	0.28 (1950)	1.44
Southeast	3.06	-1.45	39th Driest	12.50 (1945)	0.96 (2011)	3.29
Statewide	1.86	-1.18	41st Driest	7.43 (1973)	0.39 (1971)	2.61

2018 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



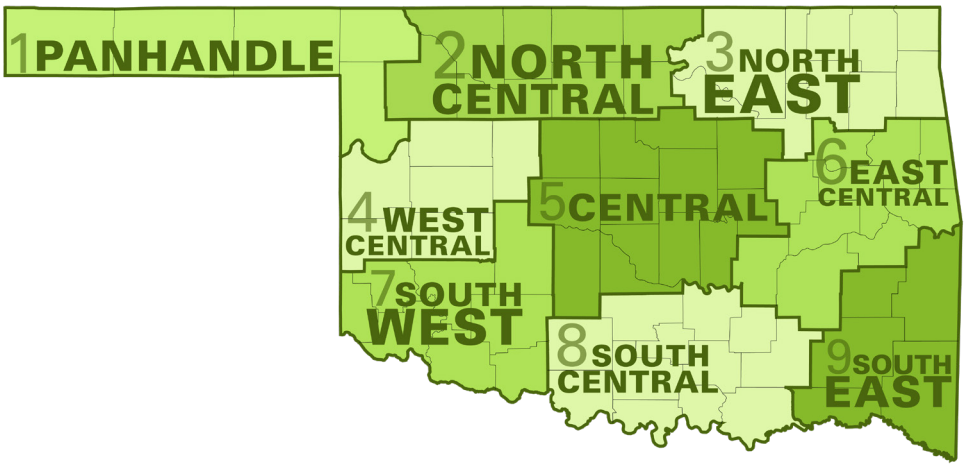
March 2018 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Mar-17 (F)
Panhandle	49.2	2.7	25th Warmest	55.4 (2012)	34.1 (1958)	52.4
North Central	50.5	2.2	33rd Warmest	58.5 (2012)	36.0 (1915)	53.8
Northeast	50.7	1.0	42nd Warmest	59.7 (2012)	36.9 (1960)	54.4
West Central	52.6	3.2	24th Warmest	58.3 (1907)	37.2 (1915)	55.6
Central	52.8	1.9	37th Warmest	60.7 (2012)	38.6 (1915)	56.8
East Central	52.8	1.1	42nd Warmest	61.2 (2012)	39.8 (1915)	56.8
Southwest	54.9	2.9	26th Warmest	61.4 (1907)	40.6 (1915)	58.1
South Central	55.8	2.4	33rd Warmest	62.1 (1907)	41.6 (1915)	59.1
Southeast	54.6	2.1	34th Warmest	62.0 (1907)	40.3 (1915)	57.6
Statewide	52.6	2.2	33rd Warmest	59.6 (2012)	38.5 (1915)	56.0

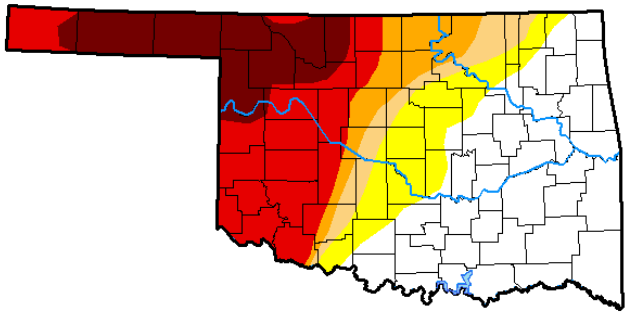
MESONET EXTREMES FOR MARCH 2018

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	95	23rd	Beaver	9	6th	Kenton	0.63	Arnett	0.56	28th	Arnett
North Central	86	23rd	Woodward	18	12th	Woodward	1.69	Cherokee	1.00	29th	Breckinridge
Northeast	80	22nd	Pawnee	19	8th	Nowata	4.96	Jay	2.95	27th	Jay
West Central	83	23rd	Camargo	17	7th	Camargo	0.95	Putnam	0.76	18th	Putnam
Central	85	26th	Marshall	19	14th	Oilton	3.98	Okemah	1.72	26th	Bowlegs
East Central	82	16th	Webbers Falls	22	14th	Okmulgee	5.97	Cookson	3.74	27th	Stigler
Southwest	86	23rd	Hollis	18	7th	Mangum	2.14	Walters	1.09	26th	Walters
South Central	86	23rd	Waurika	24	14th	Centrahoma	4.61	Sulphur	2.63	27th	Centrahoma
Southeast	85	24th	Antlers	21	8th	Wister	3.77	Mt Herman	2.66	27th	Clayton
Statewide	95	23rd	Beaver	9	6th	Kenton	5.97	Cookson	3.74	27th	Stigler

Oklahoma Climate Divisions



U.S. Drought Monitor
Oklahoma



March 27, 2018
(Released Thursday, Mar. 29, 2018)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	40.71	59.29	47.60	42.29	34.93	14.79
Last Week 03-20-2018	38.11	61.89	48.50	42.41	34.93	8.20
3 Months Ago 12-26-2017	0.00	100.00	75.97	28.19	0.00	0.00
Start of Calendar Year 01-02-2018	0.00	100.00	77.15	38.76	0.00	0.00
Start of Water Year 09-26-2017	64.46	35.54	0.77	0.00	0.00	0.00
One Year Ago 03-28-2017	7.24	92.76	77.80	36.07	2.99	0.00

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.

Author:
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/

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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