Oklahoma Monthly Climate Summary

AUGUST 2020

OKLAHOMA CLIMATOLOGICAL SURVEY

Three strong cold fronts brought the summer heat to its knees during August, but drought took advantage of a mostly dry month to proliferate across western Oklahoma. The far southeast was anything but parched, however, after several rounds of heavy precipitation and a brush with the outskirts of Hurricane Laura left it with nearly a foot of rain for the month. There were sporadic outbursts of severe weather during August. Straight line winds of 70 mph and greater were suspected in the derailment of 16 train cars in Ellis County on August 10, and the Oklahoma Mesonet site at Burneyville recorded a wind gust of 80 mph on the 16th. Mother Nature saved the most exciting weather for last, though, with a strong cold front on August's final day. The front kicked off several rounds of storms that brought widespread severe weather and flooding. Numerous water rescues of stranded motorists were reported with flash flooding across central and southeastern Oklahoma, and hail to the size of golf balls fell with many of the storms.

August 2020 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	110°F	Camargo, Hollis	28
Low Temperature	53°F	Cookson	19
High Precipitation	11.13 in.	Broken Bow	--
Low Precipitation	0.49 in.	Blackwell	--

The triple dose of cold air during August brought Oklahoma's statewide average temperature down 1.8 degrees below normal according to preliminary data from the Mesonet. The month finished at 79 degrees to rank as the 26th coolest August on record, dating back to 1895. Heat was still present during August, owing to its summer roots. Temperatures soared into the triple digits at times, topping out at 110 degrees at both Camargo and Hollis on the 28th. Oklahoma City recorded its first triple-digit temperature of the summer that day at 102 degrees. Heat index values indicated oppressive heat was even more widespread. Idabel's heat index rose to 118 degrees on the 29th. The Mesonet's 120 sites recorded heat index values of at least 105 degrees 546 times during August. The state's lowest temperature was 53 degrees at Cookson on the 19th. Summer finished with a statewide average temperature of 80.1 degrees, 0.5 degrees above normal to rank as the 58th warmest June-August on record. The first eight months of the year ranked as the 25th warmest at 63.2 degrees, a degree above normal.

August was dry for the most part, but saved somewhat by the late-month storm system that brought flooding rains across central and southeastern Oklahoma. The statewide average total of 2.94 inches was just 0.01 inches below normal to rank as the 57th wettest on record. That total belied the actual experiences across the state, however. The Panhandle fell 1.13 inches below normal for their 29th driest August on record, while the southeast was 4.06 inches above normal for their fifth wettest. The far southeast was 4-8 inches above normal, bolstered by tropical rains from Hurricane Laura. Nevertheless, most of the state was somewhere between 1-3 inches below normal. The Mesonet site at Broken Bow led the month's totals at 11.13 inches, and Blackwell brought up the rear with 0.49 inches. The summer finished at 9.55 inches to rank as the 55th driest on record, 0.80 inches below normal. The January-August average total of 28.06 inches was 3.2 inches above normal to rank as the 21st wettest such period on record.

August 2020 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2020)
Month (Aug)	79.0°F	-1.8°F	26th Coolest
Season-to-Date (Jun-Aug)	80.1°F	0.5°F	58th Warmest
Year-to-Date (Jan-Aug)	63.2°F	1.0°F	25th Warmest

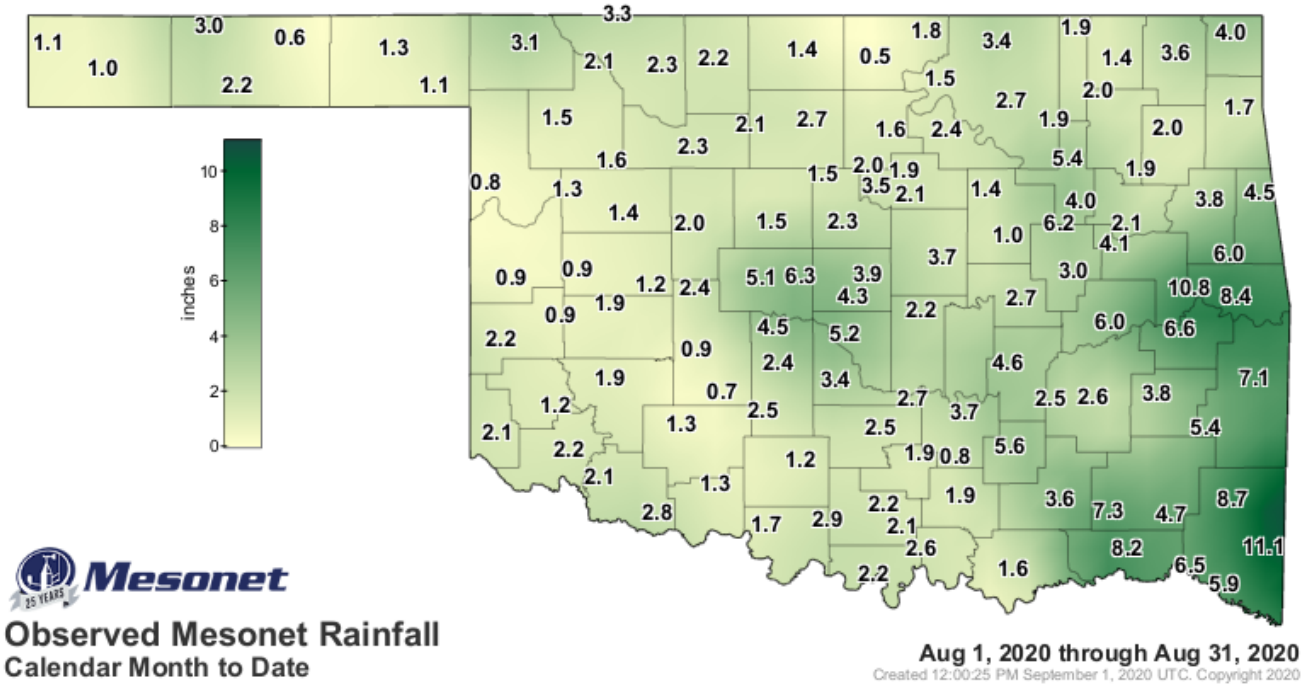
Precipitation

	Total	Depart.	Rank (1895-2020)
Month (Aug)	2.94 in.	-0.01 in.	57th Wettest
Season-to-Date (Jun-Aug)	9.55 in.	-0.80 in.	55th Driest
Year-to-Date (Jan-Aug)	28.06 in.	3.20 in.	21st Wettest

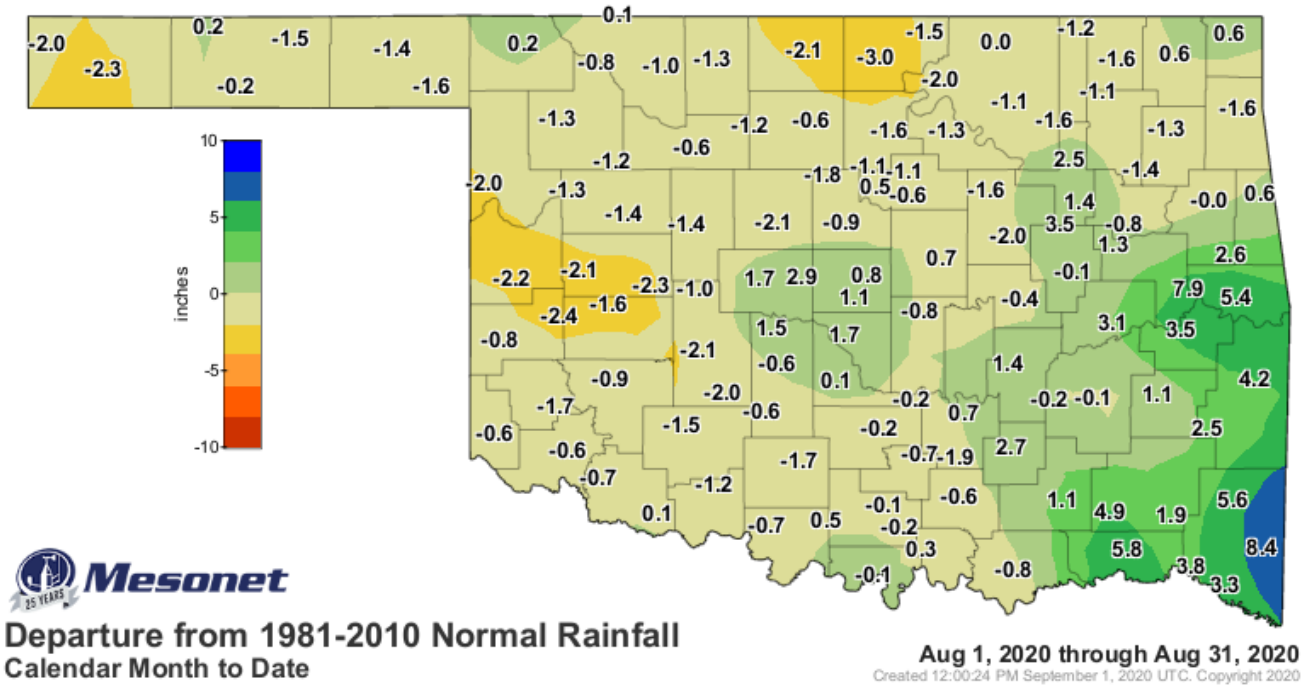
Depart. = departure from 30-year normal

The worst drought conditions continued across southwestern and west central Oklahoma. The U.S. Drought Monitor portrayed most of the western third of the state in moderate-to-severe drought intensity, with small areas of extreme drought centered on Harmon and Beckham counties. Severe drought also existed in northern Cimarron County. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst classification. The chance for drought relief appears greatest in the main body of the state, according to the Climate Prediction Center's (CPC) September drought outlook. The drought is expected to persist and possibly intensify where it currently exists in the Panhandle. The drought outlook is based partly on CPC's September precipitation outlook, which sees increased odds of above normal precipitation in all but the Panhandle, where increased chances of below normal rainfall are indicated. The September temperature outlook shows increased chances for below normal temperatures across the eastern two-thirds of Oklahoma.

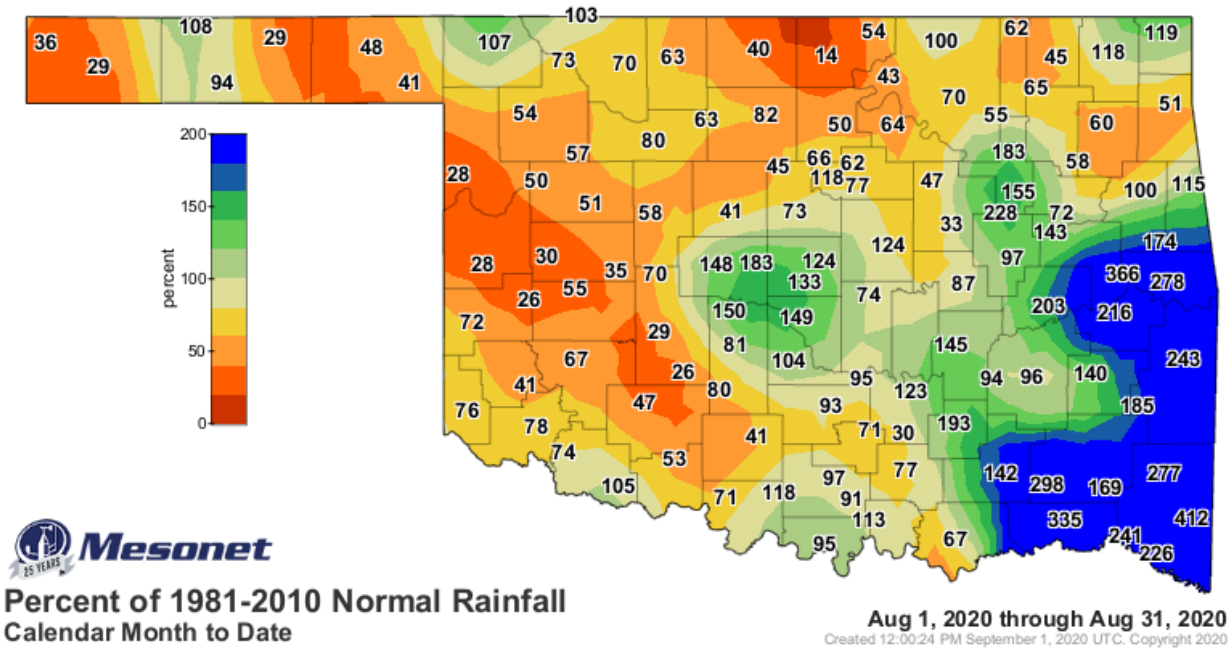
AUGUST 2020 OBSERVED PRECIPITATION



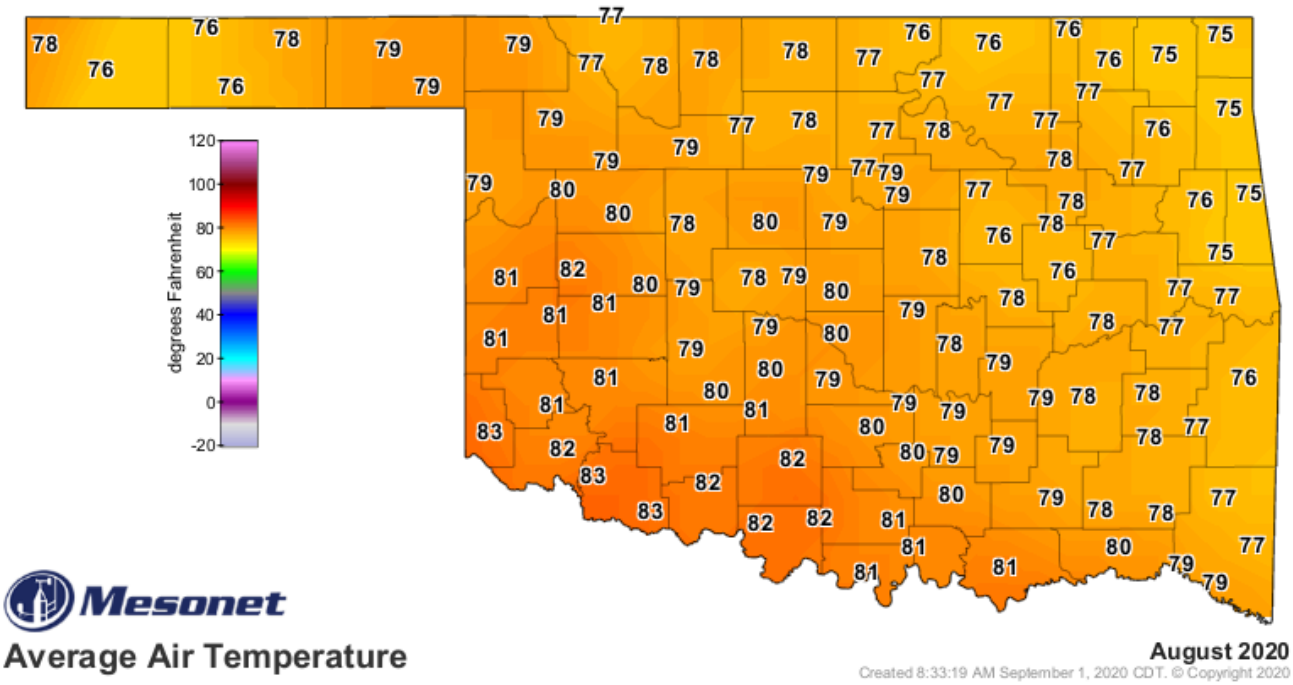
AUGUST 2020 DEPARTURE FROM NORMAL PRECIPITATION



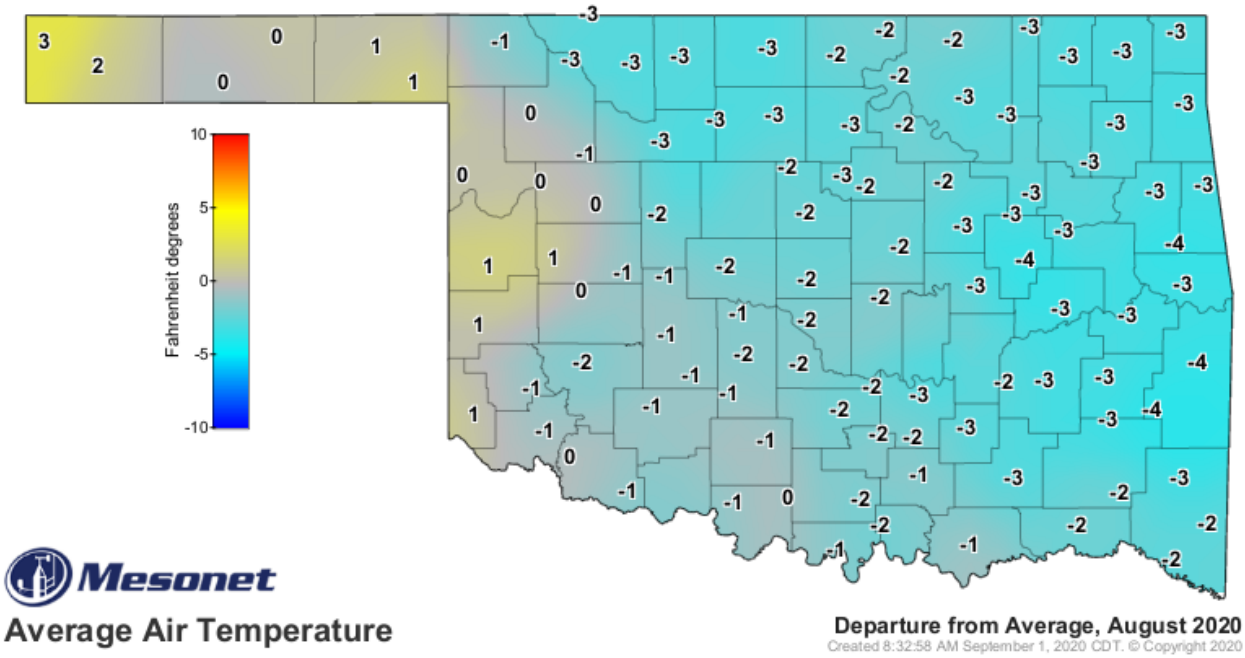
AUGUST 2020 PERCENT OF NORMAL PRECIPITATION



AUGUST 2020 AVERAGE TEMPERATURE



AUGUST 2020 DEPARTURE FROM NORMAL TEMPERATURE

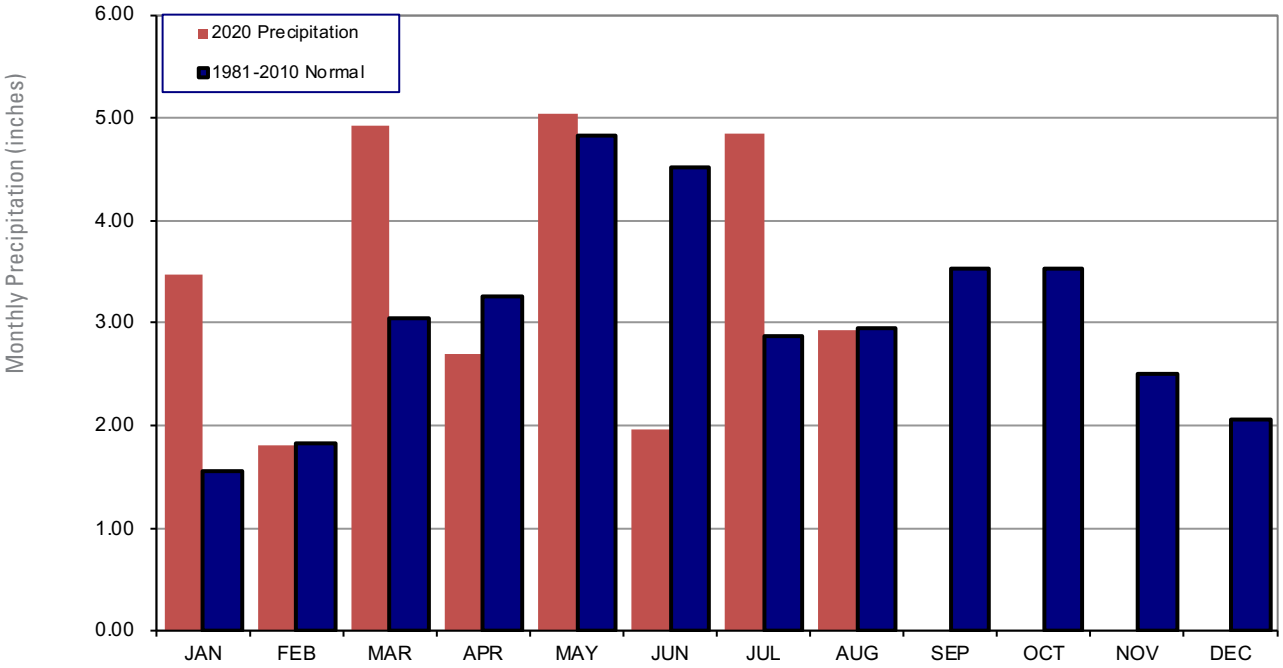


MESONET MONTHLY SUMMARY FOR AUGUST 2020

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	79.6	109	28	59	3	0	452	.76	.29	29
Beaver	79.8	107	28	60	4	0	460	1.28	.59	16
Boise City	76.8	101	28	55	31	0	365	.96	.40	5
Buffalo	79.7	106	28	60	22	0	457	3.08	1.54	16
Eva	76.3	104	8	54	11	0	349	3.01	1.86	29
NORTH CENTRAL										
Alva	83.6	107	22	60	1	0	577	1.56	.76	3
Blackwell	82.8	106	22	64	1	0	551	1.62	.67	2
Breckinridge	83.3	105	22	63	4	0	567	3.33	1.18	3
Cherokee	84.1	106	22	63	1	0	591	2.92	1.25	23
Fairview	84.2	107	22	64	4	0	596	1.40	1.04	3
Freedom	82.8	107	22	57	1	0	551	2.65	1.78	3
Lahoma	83.4	106	22	64	4	0	570	3.75	2.91	3
NORTHEAST										
Bixby	77.9	97	28	58	19	0	401	4.01	1.93	11
Burbank	77.2	101	28	55	19	0	378	1.49	.52	31
Copan	77.2	98	28	56	19	0	378	1.86	.66	31
Foraker	76.3	96	28	56	4	0	350	3.36	1.14	13
Inola	77.1	98	28	57	22	0	377	1.90	1.11	6
Jay	75.7	93	28	54	4	0	332	1.66	.38	7
Miami	76.1	95	25	54	4	0	345	3.98	1.16	29
Nowata	76.4	97	28	54	4	0	354	1.36	.58	15
WEST CENTRAL										
Bessie	81.2	108	28	61	1	0	503	1.86	.68	4
Butler	81.8	109	28	58	19	0	522	.90	.29	10
Camargo	79.9	110	28	56	1	0	463	1.25	.63	10
Cheyenne	81.1	107	28	62	5	0	499	.85	.39	29
Elk City	82.0	109	13	62	5	0	526	.85	.27	31
CENTRAL										
Acme	81.1	106	28	56	19	0	498	2.46	1.29	30
Bristow	77.1	99	28	54	19	0	375	.99	.29	31
Lake Carl Blac	77.7	102	28	57	20	0	393	2.04	1.02	7
Chandler	78.3	101	28	58	20	0	413	3.67	2.70	7
Chickasha	80.5	106	28	58	19	0	482	2.36	1.32	5
El Reno	77.8	102	28	56	19	0	397	5.14	2.33	31
Guthrie	79.4	104	28	59	5	0	448	2.34	1.19	31
Kingfisher	79.3	106	28	60	19	0	444	1.48	.63	5
Marena	77.9	100	28	59	20	0	400	3.51	.98	31
Minco	79.8	104	28	61	5	0	458	4.54	2.70	5
Marshall	78.9	104	28	59	20	0	429	1.46	.47	5
EAST CENTRAL										
Cookson	75.8	94	28	53	19	0	334	5.99	1.78	31
Eufaula	78.5	100	28	59	4	0	420	6.04	2.39	31
Haskell	77.4	98	28	58	22	0	384	4.13	1.86	31
Hectorville	77.9	98	28	60	4	0	400	6.20	2.50	31
Holdenville	78.9	102	28	58	19	0	432	4.58	2.85	31
McAlester	78.2	100	28	58	21	0	409	2.57	1.66	11
Okmulgee	76.9	98	28	56	21	0	370	3.01	.92	13
SOUTHWEST										
Altus	82.0	106	28	61	19	0	526	2.16	1.13	29
Apache	80.1	104	28	59	19	0	467	.67	.22	5
Fort Cobb	79.7	106	28	60	19	****	****	.85	.32	5
Grandfield	83.3	109	28	59	19	****	****	2.79	2.07	30
Hinton	79.9	106	28	60	19	0	461	2.38	.76	5
Hobart	81.1	108	28	60	19	0	500	1.89	.90	4
SOUTH CENTRAL										
Ada	82.1	99	27	67	30	0	531	5.53	2.99	2
Ardmore	83.3	101	27	67	4	0	567	3.46	1.39	2
Burneyville	83.4	102	28	66	4	0	569	2.19	.72	9
Byars	81.8	98	27	67	4	0	522	4.15	2.34	2
Centrahoma	81.4	98	27	64	31	0	509	9.97	4.40	2
Durant	81.7	97	23	65	31	0	517	7.59	3.29	3
Fittstown	80.5	97	27	66	31	****	****	11.80	6.98	2
Ketchum Ranch	82.9	102	27	65	4	0	554	3.07	.92	8
SOUTHEAST										
Antlers	78.9	97	29	57	19	0	431	7.33	2.81	11
Broken Bow	78.4	95	16	60	21	0	416	11.13	5.24	26
Clayton	78.4	97	28	57	21	0	414	*****	1.95	11
Cloudy	79.0	96	15	58	21	0	434	4.69	1.48	11
Hugo	80.5	98	29	61	21	0	481	8.23	2.43	26
Idabel	79.6	98	16	60	21	0	453	5.88	2.52	26

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	77.2	105	28	57	30	0	377	2.21	.80	14
Hooker	79.2	106	28	60	18	0	441	.63	.21	29
Kenton	77.9	102	14	55	31	0	401	1.09	.56	16
Slapout	80.0	109	28	60	3	0	466	1.12	.75	3
May Ranch	81.9	104	22	59	1	0	524	.95	.68	8
Medford	83.4	105	22	62	1	0	571	2.50	1.16	3
Newkirk	81.5	104	22	63	1	0	511	1.73	1.35	3
Red Rock	83.2	107	22	65	5	0	565	1.71	.89	3
Seiling	82.9	104	22	62	4	0	555	.99	.87	3
Woodward	82.4	104	22	59	1	0	541	1.75	.61	15
Pawnee	78.4	101	28	58	20	0	416	2.37	1.88	31
Porter	77.9	98	28	59	4	0	399	2.05	.75	31
Pryor	77.0	96	28	58	19	0	371	1.97	1.17	7
Skiatook	77.9	98	28	59	4	0	399	1.91	.60	6
Talala	77.3	96	28	56	4	0	381	1.96	.89	15
Tulsa	78.6	98	28	60	4	0	420	5.42	2.59	13
Vinita	75.7	94	28	55	4	0	331	3.56	2.20	7
Wynona	77.4	98	28	58	4	0	383	2.69	1.40	13
Erick	81.0	109	28	59	19	0	497	2.20	.80	29
Putnam	79.9	106	28	59	1	0	462	1.41	.65	10
Watonga	78.8	104	28	61	5	0	427	2.02	1.29	5
Weatherford	80.7	107	28	61	5	0	487	1.22	.43	5
Norman	80.2	101	28	60	19	0	471	5.15	3.58	31
Oilton	77.9	102	28	54	19	0	398	1.44	.68	31
OKC East	79.6	103	28	61	19	0	453	4.34	2.16	31
Okemah	78.5	102	28	57	21	0	417	2.71	1.52	30
Perkins	79.3	103	28	59	20	0	442	2.14	.86	31
Seminole	78.9	102	28	58	20	0	430	4.33	2.17	30
Shawnee	79.7	103	28	59	19	0	455	2.23	.72	31
Spencer	78.9	101	28	58	19	0	430	3.89	2.72	31
Stillwater	78.9	102	28	59	20	0	432	1.86	.71	5
Washington	80.0	104	28	59	20	0	465	3.36	1.16	5
Yukon	78.7	102	28	61	3	0	425	6.34	5.29	31
Sallisaw	77.9	97	10	56	4	0	399	8.36	2.60	31
Stigler	77.4	97	28	56	19	0	384	6.55	1.85	13
Stuart	79.0	101	28	59	21	0	433	2.53	1.01	11
Tahlequah	76.3	94	28	57	4	0	350	3.77	1.40	6
Webbers Falls	78.0	97	28	58	4	0	403	10.81	4.28	7
Westville	75.8	93	25	56	4	0	334	4.49	3.03	14
Hollis	83.3	110	28	63	19	0	568	2.07	1.19	29
Mangum	80.9	108	28	56	19	0	493	1.19	.52	29
Medicine Park	81.6	106	28	63	5	0	514	1.32	.58	30
Tipton	83.6	108	28	60	1	0	577	2.11	1.57	30
Walters	82.1	106	28	61	19	0	530	1.33	1.11	30
Lane	81.1	97	23	63	31	0	498	5.49	2.26	2
Madill	83.3	101	23	66	31	0	567	2.93	1.07	2
Newport	83.2	102	22	67	4	0	564	5.32	1.75	2
Pauls Valley	82.9	102	27	67	4	****	****	3.57	1.34	2
Ringling	82.9	101	22	65	4	0	555	3.00	1.58	5
Sulphur	81.6	98	22	67	1	0	515	8.64	5.47	2
Tishomingo	81.8	99	27	67	1	0	522	4.70	1.02	5
Waurika	83.2	101	22	65	4	0	565	4.88	3.53	5
Mt Herman	77.4	95	15	58	4	0	385	8.73	2.58	29
Talihina	78.0	96	29	56	21	0	401	5.39	2.39	11
Valliant	79.8	99	29	59	21	0	459	6.54	4.35	26
Wilburton	78.3	99	28	56	4	0	412	3.84	1.55	11
Wister	77.1	98	10	55	4	0	375	7.06	2.66	11

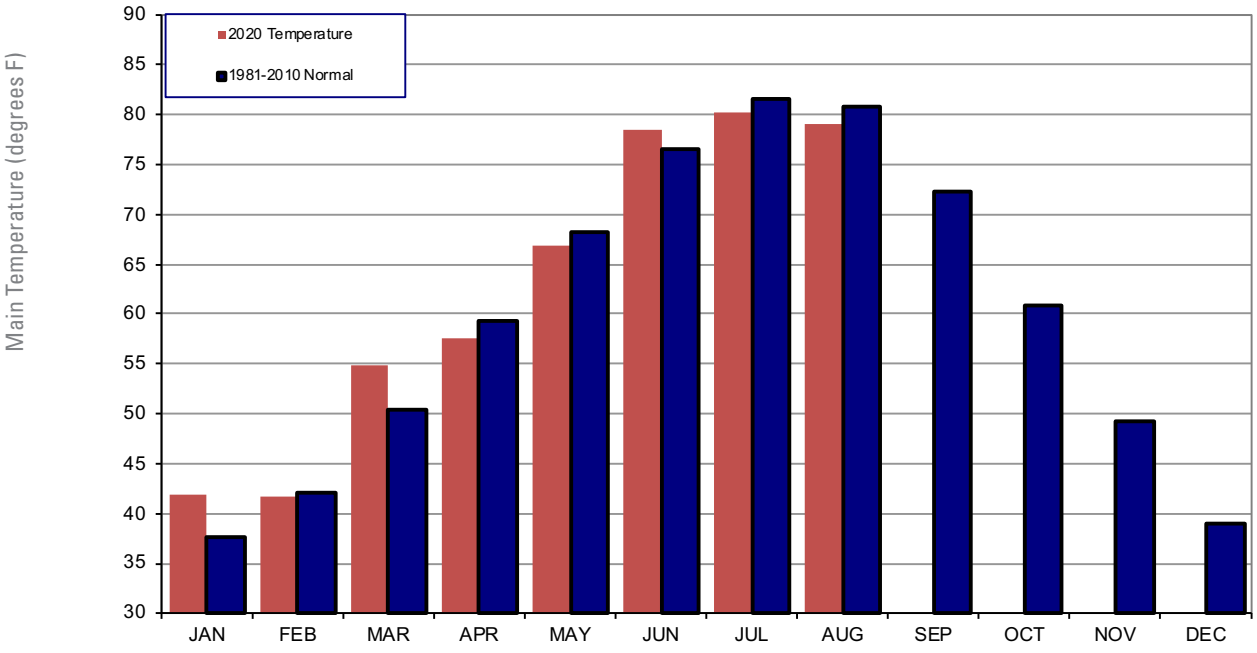
2020 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



August 2020 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Aug-19 (inches)
Panhandle	1.57	-1.13	29th Driest	5.81 (1917)	0.54 (1936)	3.14
North Central	1.95	-1.27	42nd Driest	8.10 (1974)	0.14 (2000)	5.59
Northeast	2.60	-0.64	55th Driest	8.86 (2019)	0.03 (2000)	8.86
West Central	1.40	-1.61	31st Driest	6.93 (2017)	0.02 (2000)	2.76
Central	3.08	-0.02	49th Wettest	8.18 (1906)	0.02 (2000)	6.54
East Central	5.31	2.28	17th Wettest	10.88 (1915)	0.02 (2000)	6.80
Southwest	1.71	-1.06	46th Driest	7.38 (1996)	0.00 (2000)	2.43
South Central	2.45	-0.15	57th Wettest	8.72 (1906)	0.01 (2000)	4.86
Southeast	6.88	4.06	5th Wettest	9.68 (1915)	0.25 (1936)	3.65
Statewide	2.94	-0.01	57th Wettest	6.47 (1915)	0.12 (2000)	5.14

2020 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



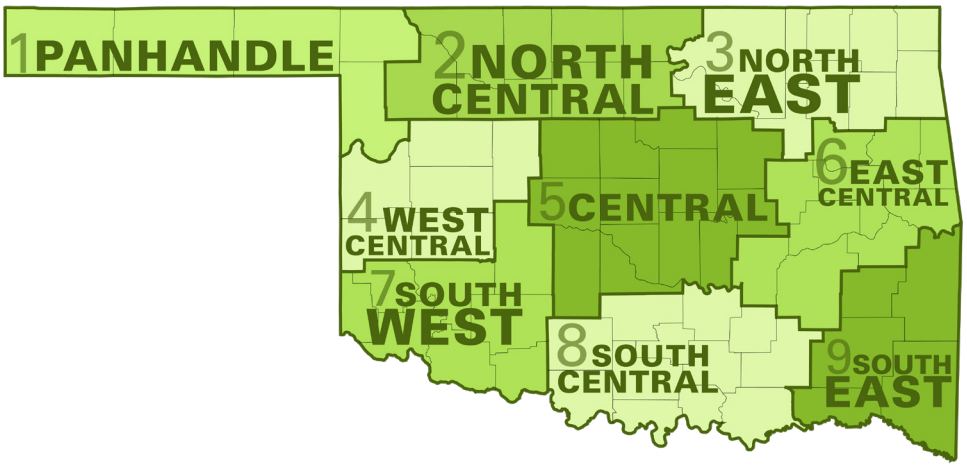
August 2020 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Aug-19 (F)
Panhandle	78.5	0.6	58th Warmest	83.7 (1937)	71.4 (1915)	80.2
North Central	78.1	-2.7	22nd Coolest	88.2 (1936)	72.9 (1915)	81.7
Northeast	77.1	-3.2	17th Coolest	88.8 (1936)	72.7 (1915)	79.7
West Central	80.7	0.0	61st Warmest	87.9 (2011)	73.6 (1915)	83.5
Central	79.0	-2.4	24th Coolest	88.7 (1936)	74.1 (1915)	82.6
East Central	77.5	-3.4	15th Coolest	88.6 (1936)	73.5 (1915)	81.5
Southwest	80.7	-1.7	36th Coolest	91.4 (2011)	76.1 (1915)	85.7
South Central	80.9	-1.6	36th Coolest	90.8 (2011)	76.1 (1992)	84.2
Southeast	78.7	-1.7	33rd Coolest	87.5 (2011)	74.2 (1915)	82.4
Statewide	79.0	-1.8	26th Coolest	87.7 (2011)	73.9 (1915)	82.3

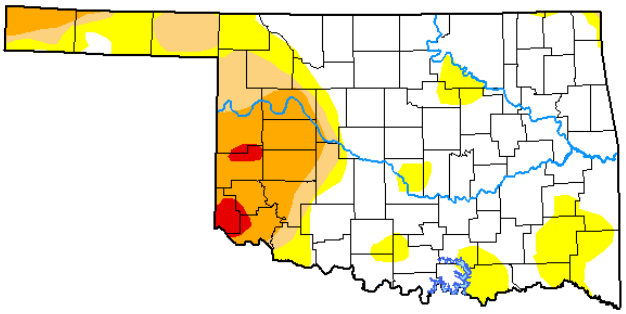
MESONET EXTREMES FOR AUGUST 2020

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	109	28th	Slapout	54	11th	Eva	3.08	Buffalo	1.86	29th	Eva
North Central	109	28th	Seiling	56	1st	Seiling	3.30	May Ranch	2.30	10th	May Ranch
Northeast	101	28th	Pawnee	54	4th	Nowata	5.42	Tulsa	2.59	13th	Tulsa
West Central	110	28th	Camargo	56	1st	Camargo	2.20	Erick	1.29	5th	Watonga
Central	106	28th	Chickasha	54	19th	Bristow	6.34	Yukon	5.29	31st	Yukon
East Central	102	28th	Holdenville	53	19th	Cookson	10.81	Webbers Falls	4.28	7th	Webbers Falls
Southwest	110	28th	Hollis	56	19th	Mangum	2.79	Grandfield	2.07	30th	Grandfield
South Central	107	28th	Waurika	57	19th	Ada	5.62	Centrahoma	2.67	5th	Centrahoma
Southeast	99	28th	Wilburton	55	4th	Wister	11.13	Broken Bow	5.24	26th	Broken Bow
Statewide	110	28th	Hollis	53	19th	Cookson	11.13	Broken Bow	5.29	31st	Yukon

Oklahoma Climate Divisions



U.S. Drought Monitor
Oklahoma



August 25, 2020
(Released Thursday, Aug. 27, 2020)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	62.46	37.54	20.25	12.32	1.33	0.00
Last Week *08-18-2020*	65.06	34.94	18.59	10.74	0.46	0.00
3 Months Ago *05-26-2020*	73.67	26.33	14.44	3.46	0.00	0.00
Start of Calendar Year *12-31-2019*	76.45	23.55	10.47	3.64	0.00	0.00
Start of Water Year *10-01-2019*	71.94	28.06	11.08	1.01	0.00	0.00
One Year Ago *08-27-2019*	61.77	38.23	18.47	7.94	2.62	0.00

Intensity:

- None
- 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. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

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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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