

Warm and mostly dry December weather dashed any hopes of walking in a winter wonderland, including dreams of a white Christmas. Very little in the way of wintry weather was seen during the month, save for a couple of inches of snow in the western Panhandle and a few bouts with freezing drizzle and fog. Christmas Day itself was the second warmest on record with a statewide average temperature of 57 degrees, topped only by 2016’s 57.6 degrees and far removed from 1983’s record cold of 4.7 degrees. Spring weather took up the slack for the dearth of winter excitement. A storm system moved through on December 27-28 and brought widespread beneficial rainfall across all 77 Oklahoma counties. Severe weather struck eastern Oklahoma on the 28th and produced the year’s final tornado near Broken Arrow. The twister – rated an EF0 on the Enhanced Fujita Scale – damaged power poles, trees and a few structures. The year’s 147 tornadoes are the most in Oklahoma since accurate records began in

on record with a statewide average of 44.59 inches, 8.09 inches above normal. The year was easily the wettest on record for the northeast at 62.09 inches, 19.42 inches above normal, obliterating their previous record of 57.82 inches from 1973. Miami’s 2019 total of 81.64 inches led the state and became one of the highest recorded amounts in state history, as did Jay’s 80.67 inches. The National Weather Service cooperative observing station at Daisy has the record high total of 89.69 inches from 2015. The Mesonet site at Eva reported the lowest 2019 total with 13.65 inches. Forty-nine Mesonet stations recorded at least 50 inches of rainfall for the year.

The month was substantially warmer than normal. The statewide average of 43 degrees ranked as the 11th warmest December on record, 4.1 degrees above normal. The average maximum temperatures were even higher, finishing 5-6

### December 2019 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	77°F	Hollis	5
Low Temperature	8°F	Kenton	17
High Precipitation	2.36 in.	Cookson	--
Low Precipitation	0.44 in.	Tipton	--

1950, besting 1999’s previous record total of 145. May’s 105 tornadoes made up the bulk of the year’s record total, also the highest count for any month on record in the state. Despite the record number, there were no violent tornadoes – EF4 or EF5 – in the state during 2019.

According to preliminary data from the Oklahoma Mesonet, the statewide average precipitation total was 1.11 inches, 0.95 inches below normal to rank as the 47th driest December since records began in 1895. Far northwestern Oklahoma and the Panhandle enjoyed small surpluses to rank as their 39th and 22nd wettest Decembers on record, respectively. The southeast’s average total of 1.39 inches was 2.61 inches below normal to rank as their 14th driest. Only three of the Mesonet’s 120 sites recorded more than 2 inches of rain for the month, with Cookson leading the state at 2.36 inches. Mangum had the lowest total with 0.26 inches. Despite the dry finish, 2019 managed to end as the eighth wettest year

### December 2019 Statewide Statistics

#### Temperature

	Average	Depart.	Rank (1895-2019)
Month (December)	43.0°F	4.1°F	11th Warmest
Year-to-Date (Jan-Dec)	59.9°F	0.0°F	58th Warmest

#### Precipitation

	Total	Depart.	Rank (1895-2019)
Month (December)	1.11 in.	-0.95 in.	47th Driest
Year-to-Date (Jan-Dec)	44.59 in.	8.09 in.	8th Wettest

Depart. = departure from 30-year normal

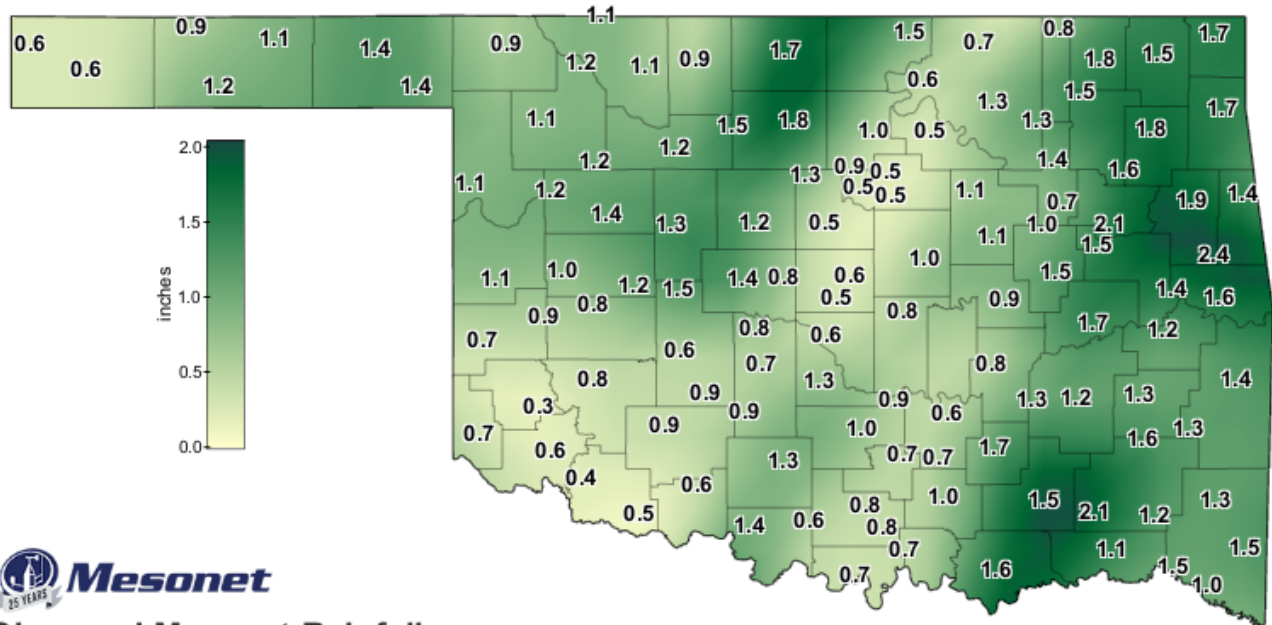
degrees above normal across parts of western Oklahoma. Boise City reported the highest single reading of the month at 77 degrees on the 23rd. The lowest temperature of 8 degrees came on the 17th at Kenton. That was the only single-digit reading at the Mesonet’s 120 stations during the month. The year came in exactly normal at 59.9 degrees, the 58th warmest on record. The highest temperature for 2019 was 108 degrees from Hooker on August 19, while the lowest of minus 4 degrees was recorded at Eva on November 12. The lowest calculated wind chill was minus 17 degrees at

Eva on January 2, and the highest heat index of 118 degrees came at Bixby on August 26.

The rain at the end of the month managed to halt any drought progression or intensification across western Oklahoma, despite the previous absence of moisture. Drought coverage had increased from 12% to 18% during December according to the U.S. Drought Monitor, before shrinking to a little more than 10% on the year's final report. The amount of the state in abnormally dry conditions – signaling areas in danger of progressing to drought – shrank from 39% to 24%. The greatest extent of drought during 2019 came on the August 20 Drought Monitor at 24%. Drought was absent from the state for 27 weeks throughout the year, including 15 consecutive weeks from March 19 to July 23 – the longest such streak since 2010.

The Climate Prediction Center's January outlooks show increased odds of above normal temperatures for all of Oklahoma save for the Panhandle, with those odds being greater in southeastern Oklahoma. Odds are even for above-, below- and near-normal precipitation over the entire state. CPC's January Drought Outlook indicates the persistence of drought in the western Panhandle and southwestern Oklahoma, although the drought's areal coverage should decrease somewhat in those areas

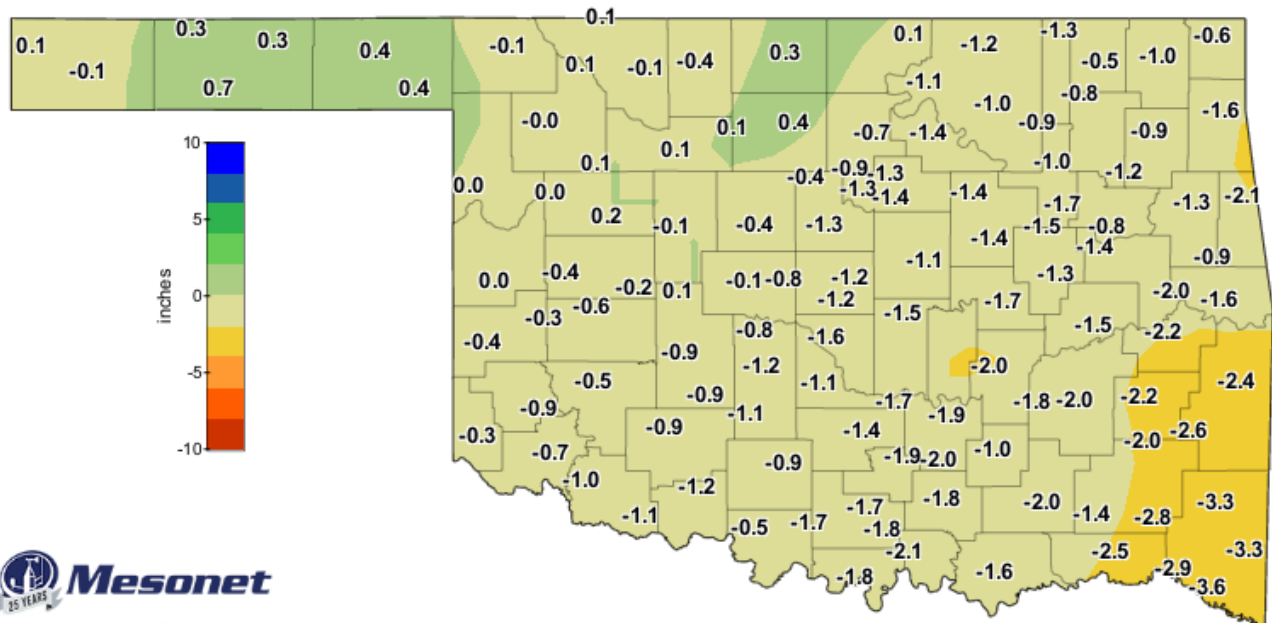
## DECEMBER 2019 OBSERVED PRECIPITATION



**Observed Mesonet Rainfall**  
Calendar Month to Date

Dec 1, 2019 through Dec 31, 2019  
Created 12:01:17 PM January 1, 2020 UTC. Copyright 2020

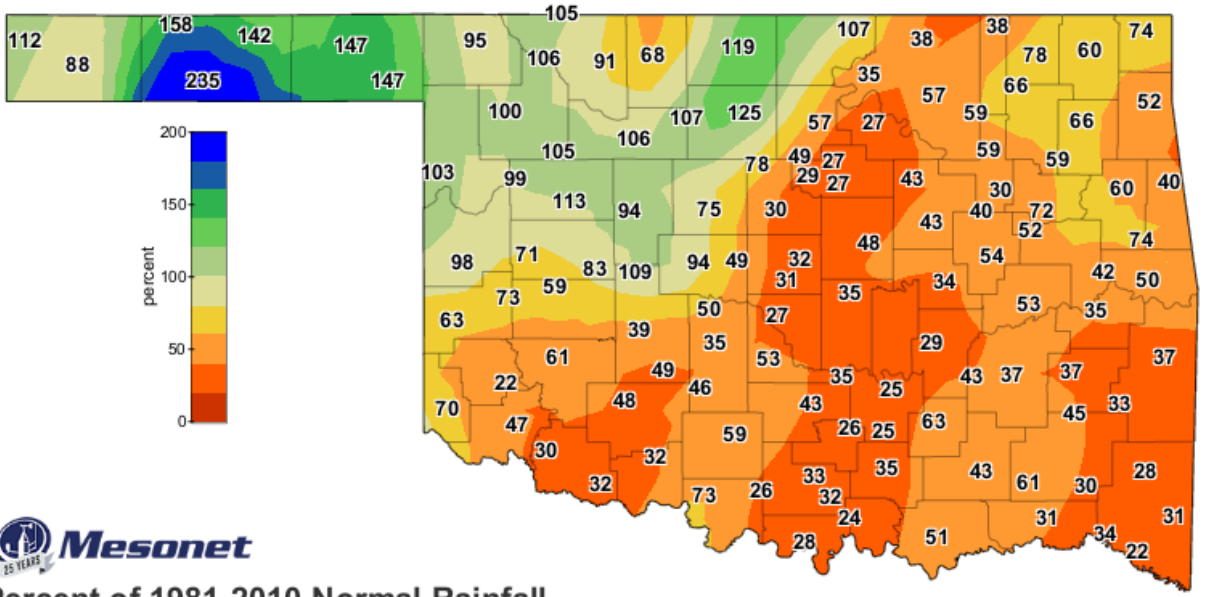
## DECEMBER 2019 DEPARTURE FROM NORMAL PRECIPITATION



**Departure from 1981-2010 Normal Rainfall**  
Calendar Month to Date

Dec 1, 2019 through Dec 31, 2019  
Created 12:01:14 PM January 1, 2020 UTC. Copyright 2020

# DECEMBER 2019 PERCENT OF NORMAL PRECIPITATION



Percent of 1981-2010 Normal Rainfall  
Calendar Month to Date

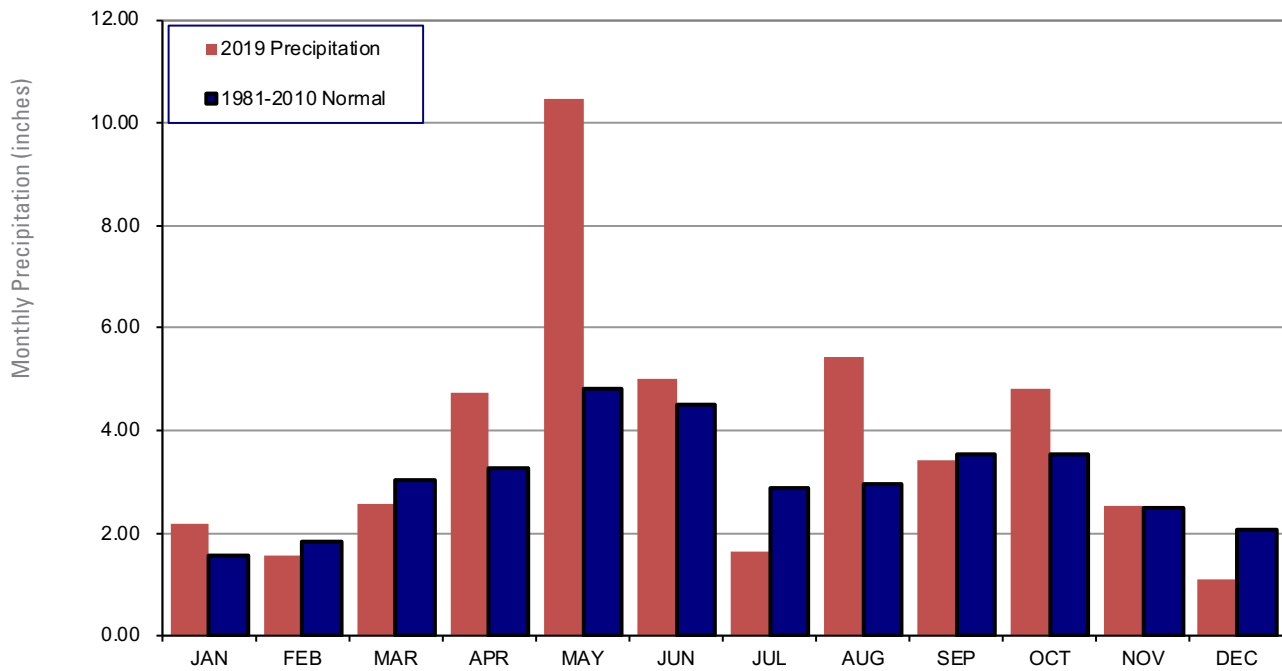
Dec 1, 2019 through Dec 31, 2019  
Created 12:01:15 PM January 1, 2020 UTC. Copyright 2020



# MESONET MONTHLY SUMMARY FOR DECEMBER 2019

NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY		
<b>PANHANDLE</b>																					
Arnett	41.2	75	24	17	18	739	0	1.08	.86	28	Goodwell	39.3	73	23	13	17	797	0	1.15	.91	27
Beaver	39.2	71	23	12	18	801	0	1.37	.89	28	Hooker	38.0	72	23	13	18	837	0	1.09	.69	27
Boise City	37.4	77	23	12	17	856	0	.58	.46	27	Kenton	37.0	76	23	8	17	868	0	.57	.43	27
Buffalo	39.4	75	24	16	18	792	0	.92	.60	28	Slapout	40.7	72	23	17	18	753	0	1.38	.94	28
Eva	37.3	76	23	10	17	859	0	.87	.71	27											
<b>NORTH CENTRAL</b>																					
Alva	39.8	72	25	18	17	781	0	1.10	.53	27	May Ranch	40.6	71	24	20	23	758	0	1.09	.58	28
Blackwell	40.7	72	24	15	17	754	0	1.68	1.60	28	Medford	40.1	70	24	15	17	771	0	1.69	1.58	28
Breckinridge	40.8	70	24	15	17	750	0	1.84	1.80	28	Newkirk	40.8	70	24	15	17	752	0	1.52	1.41	28
Cherokee	40.1	72	25	18	17	773	0	.93	.60	28	Red Rock	42.0	72	25	17	17	712	0	.97	.93	28
Fairview	41.7	71	25	20	21	721	0	1.23	.96	28	Seiling	40.3	70	25	14	18	766	0	1.16	.66	28
Freedom	40.1	73	24	16	18	773	0	1.15	.65	28	Woodward	42.0	73	24	20	17	712	0	1.07	.82	28
Lahoma	40.7	71	24	21	17	754	0	1.45	1.33	28											
<b>NORTHEAST</b>																					
Bixby	44.0	72	25	21	18	650	0	.74	.70	28	Pawnee	42.8	71	25	17	17	687	0	.54	.48	28
Burbank	41.6	71	25	15	17	724	0	.59	.53	28	Porter	44.1	71	25	20	18	649	0	2.07	1.84	28
Copan	41.9	71	25	19	18	718	0	.83	.75	28	Pryor	42.2	70	25	17	18	708	0	1.82	1.70	28
Foraker	40.7	70	25	13	17	755	0	.72	.64	28	Skiatook	43.6	70	25	21	17	662	0	1.28	1.20	28
Inola	42.7	70	25	20	18	691	0	1.64	1.42	28	Talala	42.1	71	25	19	18	710	0	1.53	1.44	28
Jay	43.2	69	25	21	18	677	0	1.68	1.28	28	Tulsa	44.9	72	25	24	18	624	0	1.39	1.32	28
Miami	42.2	69	25	18	18	706	0	1.69	1.49	28	Vinita	41.5	69	25	16	17	727	0	1.47	1.28	28
Nowata	42.0	70	25	17	18	712	0	1.82	1.74	28	Wynona	42.5	71	25	17	17	696	0	1.28	1.22	28
<b>WEST CENTRAL</b>																					
Bessie	42.8	70	25	21	21	689	0	.81	.55	28	Erick	42.0	72	5	18	18	714	0	.65	.50	28
Butler	41.7	70	24	17	18	723	0	.97	.70	28	Putnam	41.5	69	25	20	17	728	0	1.44	.95	28
Camargo	39.6	70	25	14	19	789	0	1.24	.72	28	Watonga	42.5	70	24	23	16	698	0	1.34	1.15	28
Cheyenne	43.1	68	24	23	17	677	0	1.07	.84	28	Weatherford	42.1	68	24	18	17	710	0	1.15	.96	28
Elk City	42.3	70	24	21	18	703	0	.87	.63	28											
<b>CENTRAL</b>																					
Acme	44.2	72	5	17	17	645	0	.92	.89	28	Norman	44.5	71	5	19	17	635	0	.58	.53	28
Bristow	43.7	72	25	16	18	661	0	1.09	1.03	28	Oilton	43.0	71	25	18	17	682	0	1.06	1.03	28
Lake Carl Blac	41.7	73	24	17	17	722	0	.87	.82	28	OKC East	44.6	71	25	21	17	631	0	.54	.53	28
Chandler	44.6	71	25	19	17	632	0	1.01	.95	28	Okemah	43.9	69	25	18	18	655	0	.90	.86	28
Chickasha	43.4	72	25	15	18	670	0	.67	.63	28	Perkins	43.4	71	24	18	17	670	0	.50	.45	28
El Reno	41.8	69	24	17	17	719	0	1.43	1.27	28	Seminole	45.0	72	5	22	17	619	0	.95	.92	28
Guthrie	43.7	70	24	19	17	662	0	.54	.50	28	Shawnee	44.9	70	25	21	17	624	0	.81	.72	28
Kingfisher	41.7	70	24	17	17	723	0	1.21	1.12	28	Spencer	44.7	70	25	18	17	629	0	.56	.52	28
Marena	42.9	72	24	17	17	684	0	.52	.41	28	Stillwater	43.1	72	24	18	17	680	0	.49	.45	28
Minco	43.2	68	25	19	17	676	0	.82	.78	28	Washington	44.8	73	5	22	11	627	0	1.26	1.17	28
Marshall	41.8	72	24	16	17	718	0	1.27	1.23	28	Yukon	43.1	70	24	21	17	679	0	.79	.75	28
<b>EAST CENTRAL</b>																					
Cookson	43.8	69	25	20	18	659	0	2.36	1.75	28	Sallisaw	44.0	71	25	19	18	650	0	1.64	.67	16
Eufaula	45.0	70	25	26	18	619	0	1.67	1.45	28	Stigler	43.8	70	26	19	18	657	0	1.19	.72	28
Haskell	43.4	70	25	20	18	671	0	1.47	1.20	28	Stuart	45.7	70	5	25	11	599	0	1.33	1.19	28
Hectorville	44.6	71	25	24	17	631	0	1.04	1.01	28	Tahlequah	43.4	69	25	18	18	669	0	1.89	1.44	28
Holdenville	45.2	70	5	22	17	615	0	.81	.76	28	Webbers Falls	44.3	71	25	21	18	642	0	1.41	1.05	28
McAlester	45.1	70	5	19	18	616	0	1.16	1.00	28	Westville	43.5	67	25	22	18	667	0	1.36	1.03	28
Okmulgee	43.8	71	25	17	18	659	0	1.49	1.42	28											
<b>SOUTHWEST</b>																					
Altus	44.3	75	5	17	18	642	0	.64	.46	28	Hollis	43.8	77	5	16	18	658	0	.71	.63	28
Apache	43.7	71	5	17	17	659	0	.89	.84	28	Mangum	42.8	75	5	14	18	687	0	.93	.67	28
Fort Cobb	42.9	70	24	19	17	686	0	.58	.56	28	Medicine Park	45.4	72	5	26	17	608	0	.85	.83	28
Grandfield	45.6	75	5	20	17	603	0	.53	.51	28	Tipton	44.6	75	5	18	18	634	0	.44	.29	28
Hinton	42.6	70	24	18	17	696	0	1.47	1.29	28	Walters	44.8	75	5	21	18	626	0	.58	.54	28
Hobart	43.2	73	25	17	18	677	0	.78	.63	28											
<b>SOUTH CENTRAL</b>																					
Ada	45.3	71	25	24	17	611	0	.64	.61	28	Lane	45.1	71	5	18	18	617	0	1.48	1.21	28
Ardmore	46.5	71	5	24	18	573	0	.82	.66	28	Madill	46.2	71	5	20	18	584	0	.73	.37	28
Burneyville	46.3	75	5	20	18	581	0	.72	.47	28	Newport	46.3	72	5	23	17	581	0	.82	.66	28
Byars	45.7	72	25	21	17	598	0	.90	.82	28	Pauls Valley	45.2	73	5	18	18	613	0	1.03	.98	28
Centrahoma	45.2	71	5	18	18	614	0	1.69	1.57	28	Ringling	45.7	73	5	21	18	598	0	.57	.54	28
Durant	46.9	70	5	25	18	563	0	1.61	1.20	28	Sulphur	44.8	70	5	15	18	626	0	.69	.62	28
Fittstown	45.2	70	5	23	17	613	0	.66	.56	28	Tishomingo	44.9	70	24	18	18	623	0	.98	.72	28
Ketchum Ranch	45.6	73	5	23	17	602	0	1.25	1.23	28	Waurika	46.1	75	5	19	18	586	0	1.42	1.39	28
<b>SOUTHEAST</b>																					
Antlers	44.6	71	5	17	18	631	0	2.12	1.60	28	Mt Herman	45.0	68	25	20	18	619	0	1.29	.85	28
Broken Bow	45.9	71	25	21	18	591	0	1.46	.88	28	Talihina	45.1	71	26	17	18	616	0	1.30	.96	28
Clayton	45.4	70	5	21	18	607	0	1.58	1.28	28	Valliant	45.8	70	5	20	18	594	0	1.48	.61	28
Cloudy	45.6	69	5	21	18	600	0	1.22	.88	28	Wilburton	44.6	70	26	18	18	632	0	1.27	.97	28
Hugo	46.9	70	5	24	18	562	0	1.14	.75	28	Wister	43.3	71	26	17	18	673	0	1.42	.74	28
Idabel	46.1	70	25	21	18	586	0	1.00	.52	28											

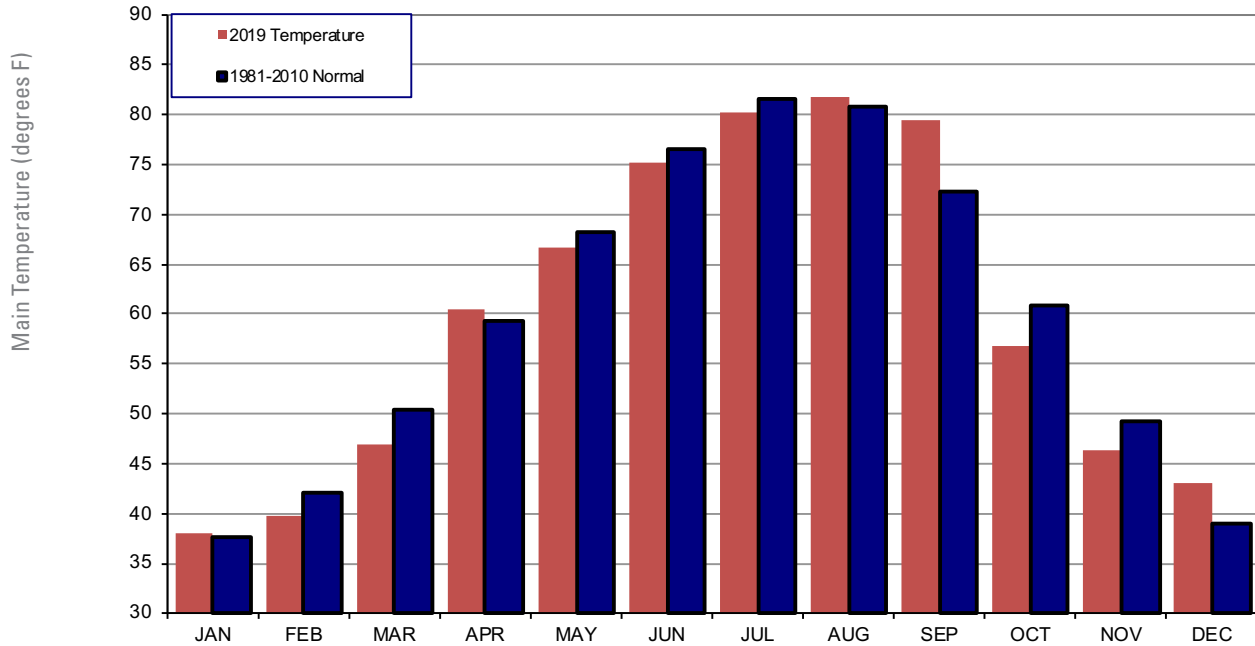
## 2019 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



### December 2019 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Dec-18 (inches)
Panhandle	1.00	0.26	22nd Wettest	3.28 (2006)	0.00 (1976)	1.17
North Central	1.27	-0.02	40th Wettest	3.59 (1984)	0.01 (1950)	2.26
Northeast	1.32	-1.03	49th Driest	7.61 (1895)	0.14 (1950)	3.43
West Central	1.06	-0.13	43rd Wettest	4.04 (1911)	0.00 (1908)	2.10
Central	0.85	-1.15	42nd Driest	6.45 (1984)	0.03 (1908)	3.96
East Central	1.45	-1.64	35th Driest	11.09 (2015)	0.20 (1917)	5.48
Southwest	0.70	-0.71	51st Driest	5.65 (1911)	0.00 (1908)	2.99
South Central	1.00	-1.63	29th Driest	6.97 (1991)	0.06 (1917)	5.73
Southeast	1.39	-2.61	14th Driest	12.32 (2015)	0.19 (1917)	7.47
Statewide	1.11	-0.95	47th Driest	5.54 (2015)	0.09 (1950)	3.81

## 2019 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



### December 2019 Mesonet Temperature Comparison

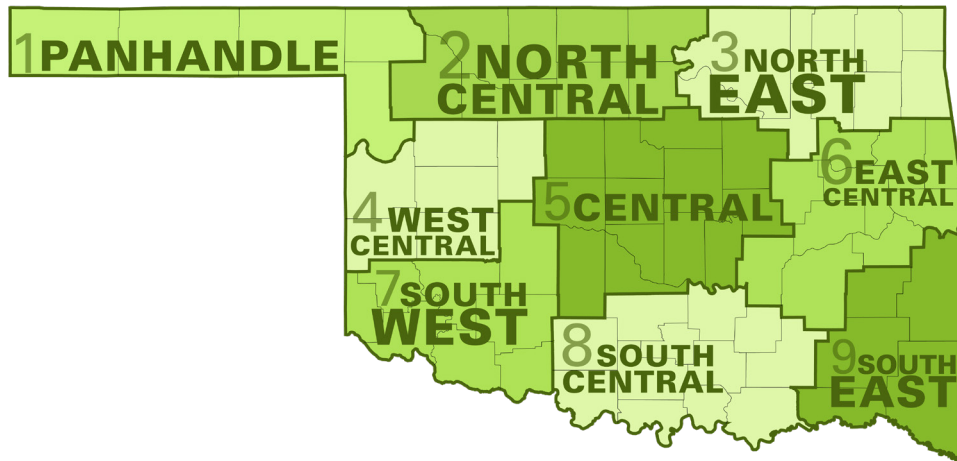
Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Dec-18 (F)
Panhandle	38.8	3.8	12th Warmest	42.1 (1933)	22.6 (1983)	36.8
North Central	40.7	4.6	11th Warmest	42.9 (1965)	21.5 (1983)	38.3
Northeast	42.6	4.8	10th Warmest	44.9 (1965)	23.6 (1983)	40.0
West Central	42.0	4.4	10th Warmest	44.1 (1965)	24.1 (1983)	39.1
Central	43.5	4.2	11th Warmest	46.0 (1965)	25.5 (1983)	41.2
East Central	44.3	3.8	25th Warmest	48.1 (1933)	27.6 (1983)	43.1
Southwest	44.0	3.8	10th Warmest	46.6 (1965)	27.4 (1983)	41.2
South Central	45.7	3.6	21st Warmest	48.4 (1933)	29.4 (1983)	43.5
Southeast	45.3	3.4	23rd Warmest	49.7 (1984)	30.4 (1983)	44.6
Statewide	43.0	4.1	11th Warmest	45.1 (1965)	25.7 (1983)	40.8



## MESONET EXTREMES FOR DECEMBER 2019

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	77	23rd	Boise City	8	17th	Kenton	1.38	Slapout	0.94	28th	Slapout
North Central	73	24th	Woodward	14	18th	Seiling	1.84	Breckinridge	1.80	28th	Breckinridge
Northeast	72	25th	Bixby	13	17th	Foraker	2.07	Porter	1.84	28th	Porter
West Central	72	5th	Erick	14	19th	Camargo	1.44	Putnam	1.15	28th	Watonga
Central	73	5th	Washington	15	18th	Chickasha	1.43	El Reno	1.27	28th	El Reno
East Central	71	25th	Hectorville	17	18th	Okmulgee	2.36	Cookson	1.75	28th	Cookson
Southwest	77	5th	Hollis	14	18th	Mangum	1.47	Hinton	1.29	28th	Hinton
South Central	75	5th	Waurika	15	18th	Sulphur	1.69	Centrahoma	1.57	28th	Centrahoma
Southeast	71	26th	Wister	17	18th	Talihina	2.12	Antlers	1.60	28th	Antlers
Statewide	77	23rd	Boise City	8	17th	Kenton	2.36	Cookson	1.84	28th	Porter

Oklahoma Climate Divisions

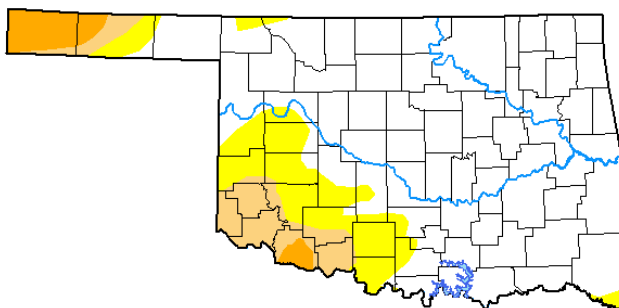


# U.S. Drought Monitor Oklahoma

**December 31, 2019**

(Released Thursday, Jan. 2, 2020)

Valid 7 a.m. EST



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	76.45	23.55	10.47	3.64	0.00	0.00
<b>Last Week</b> 12-24-2019	60.87	39.13	18.07	3.64	0.00	0.00
<b>3 Months Ago</b> 10-01-2019	71.94	28.06	11.08	1.01	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2019	94.85	5.15	0.00	0.00	0.00	0.00
<b>Start of Water Year</b> 10-01-2019	71.94	28.06	11.08	1.01	0.00	0.00
<b>One Year Ago</b> 01-01-2019	94.85	5.15	0.00	0.00	0.00	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>

Author:  
Brad Pugh  
CPC/NOAA



[droughtmonitor.unl.edu](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](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 is the State Climate Office for Oklahoma

Dr. Kevin Kloesel Director  
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