Oklahoma Monthly Climate Summary

JANUARY 2021

OKLAHOMA CLIMATOLOGICAL SURVEY

The winter storm that began the year captured January's biggest weather headline. The event straddled the changeover from 2020 to 2021, with as much as 10 inches of snow falling in Vici on New Year's Day. Reports of 4-8 inches were widespread across the northwestern half of the state. Seasonal totals through January climbed to nearly 3 feet across northwestern Oklahoma. The National Weather Service cooperative observer at Arnett reported 34.3 inches since late October, 24.1 inches more than their entire normal seasonal total of 10.2 inches. Gate had received 31.1 inches during that same period. Six other sites had reported at least 20 inches of snow for the season through January, all in northwestern Oklahoma. Outside of the northwest, Piedmont led the way with 18.6 inches. Severe weather was rare during the month, but at least two tornadoes were spotted on the 30th in far northern Nowata County—the first two such reports of 2021 in Oklahoma. Non-thunderstorm winds gusted up to 65 mph on the 14th, prompting a dust storm warning for the Oklahoma Panhandle.

January 2021 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	73°F	Several	30
Low Temperature	2°F	Kenton	27
High Precipitation	5.58 in.	Copan	--
Low Precipitation	0.24 in.	Boise City	--

According to preliminary data from the Oklahoma Mesonet, the statewide average temperature was 39.5 degrees for the month, 1.8 degrees above normal, to rank as the 34th warmest January since records began in 1895. The highest reading came on Jan. 30 when the Oklahoma Mesonet sites at Altus, Durant, and Tipton all reached a maximum temperature of 73 degrees. The lowest temperature was 2 degrees recorded at Kenton on the 27th. Wind chills dropped to below zero on that day across northern Oklahoma, with Hooker bottoming out at -11 degrees. The first two months of the climatological winter, which runs December-February, have been on the warm side at 1.9 degrees above normal. The statewide average of 40.2 degrees ranks as the 30th warmest December-January on record.

Parts of southwestern through northeastern Oklahoma experienced an unusually wet January, thanks to the generous snowfall to start the year and three subsequent storm systems throughout the month. Surpluses ranged from about an inch in the southwest to a little over 4 inches in the northeast. Southern Oklahoma saw widespread deficits of up to 1.5 inches, with smaller shortfalls across the far northwest. Altogether, the statewide average was 1.75 inches, 0.19 inches above normal, to rank as the 44th wettest January on record. Northeastern, north central, and west central Oklahoma enjoyed their 12th, 16th, and 17th wettest Januarys on record, respectively. South central Oklahoma suffered a deficit of 0.74 inches to rank as their 47th driest January on record. The Mesonet site at Copan led the state with 5.58 inches while Boise City brought up the rear with 0.24 inches. Forty-two Mesonet sites received at least 2 inches of precipitation for the month. The first two months of winter were the 21st wettest on record with a statewide average of 4.34 inches, 0.72 inches above normal.

January 2021 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2021)
Month (January)	39.5°F	1.8°F	34th Warmest
Season-to-Date (Dec-Jan)	40.2°F	1.9°F	30th Warmest

Precipitation

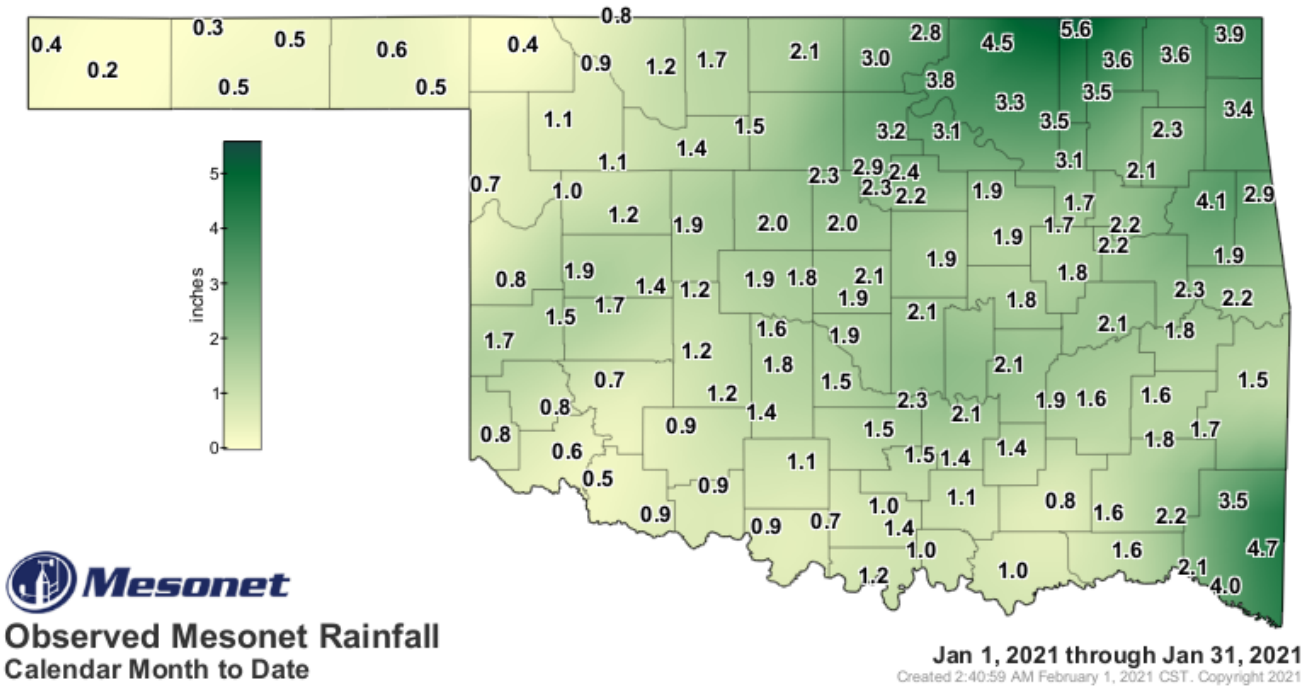
	Total	Depart.	Rank (1895-2021)
Month (January)	1.75 in.	0.19 in.	44th Wettest
Season-to-Date (Dec-Jan)	4.33 in.	0.71 in.	22nd Wettest

Depart. = departure from 30-year normal

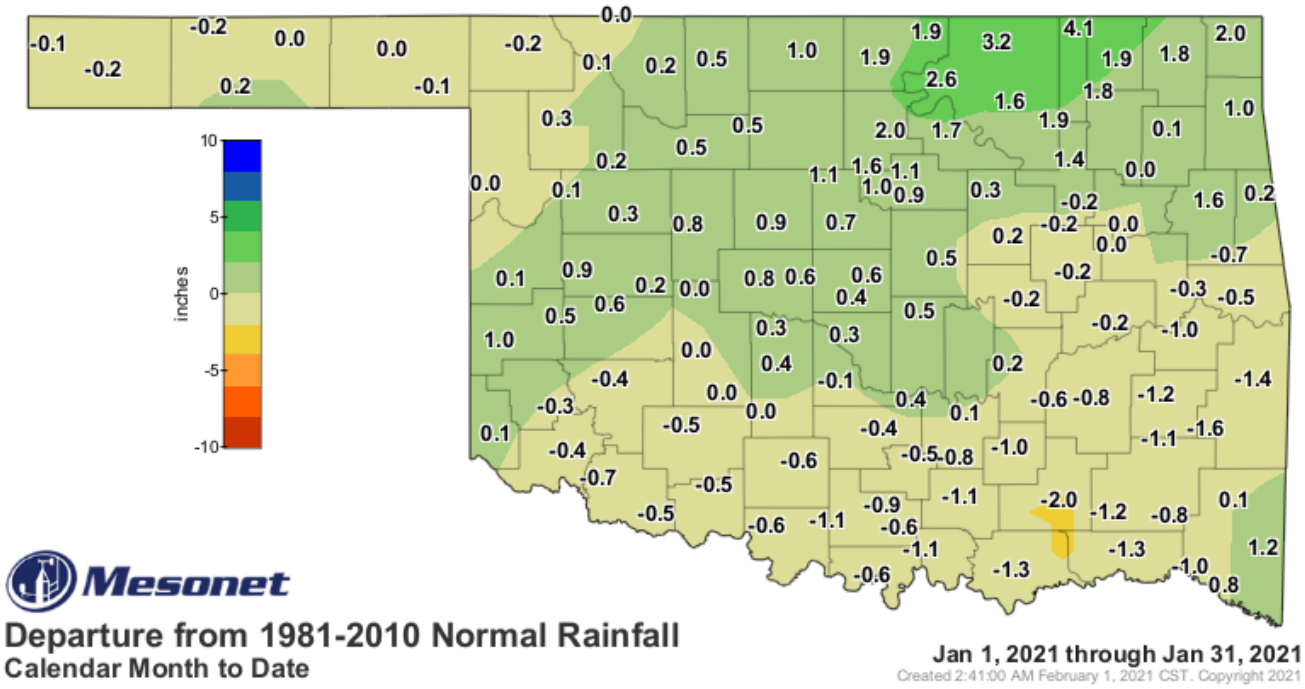
Drought took a tumble in Oklahoma during January. The wet month allowed a drop in drought coverage from 25% at the end of December to 11% exiting January. Drought that had been intensifying across south central Oklahoma was eradicated entirely. The Climate Prediction Center's (CPC) outlooks for February see increased odds of below normal temperatures across the northern half of the state, and above normal temperatures across the eastern third.

Outside of those areas, equal chances exist for above-, below-, and near-normal temperatures and precipitation. CPC's February drought outlook expects a static map, with neither development nor removal of drought by the end of the month. February is normally a relatively dry month in Oklahoma. Therefore, near- or below-normal precipitation combined with near- or below-normal temperatures would not be favorable conditions for drought development.

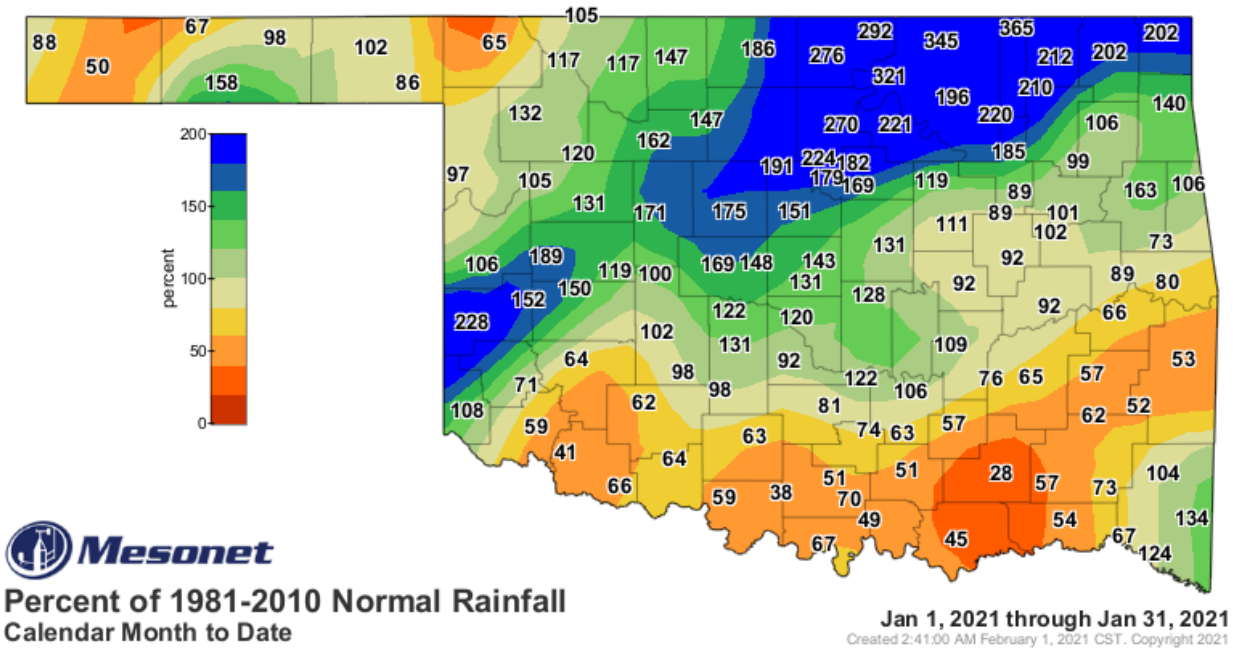
JANUARY 2021 OBSERVED PRECIPITATION



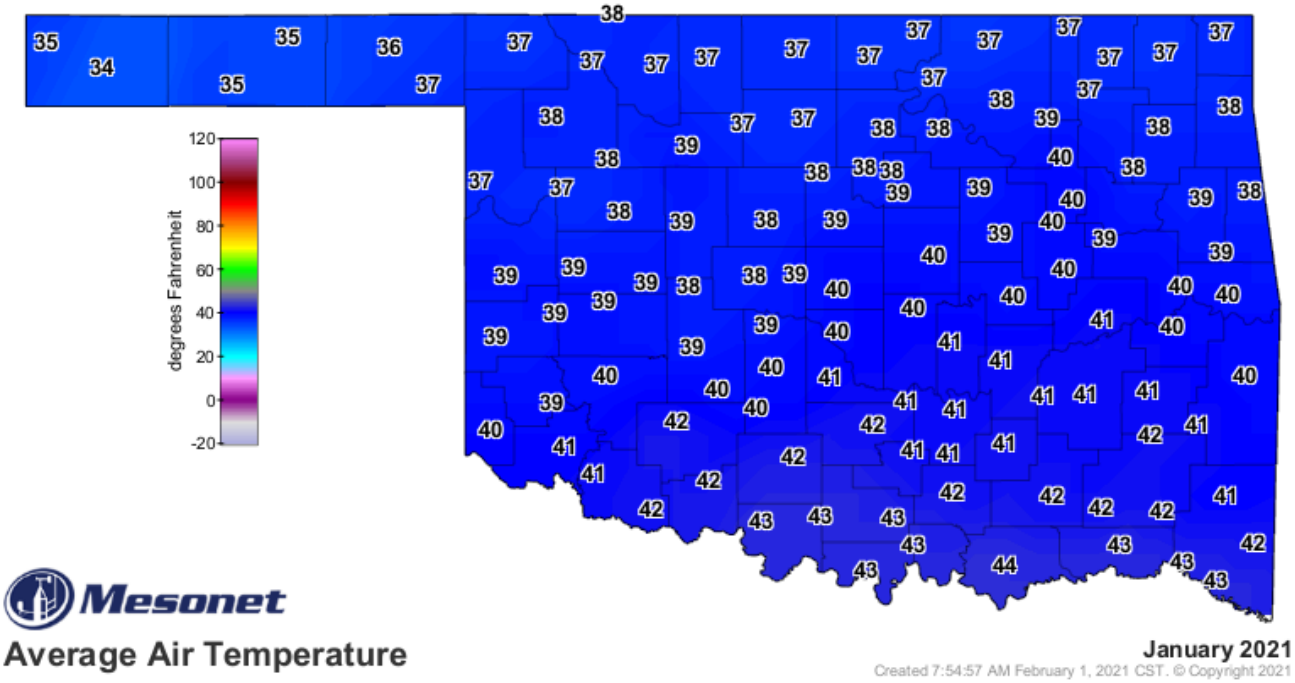
JANUARY 2021 DEPARTURE FROM NORMAL PRECIPITATION



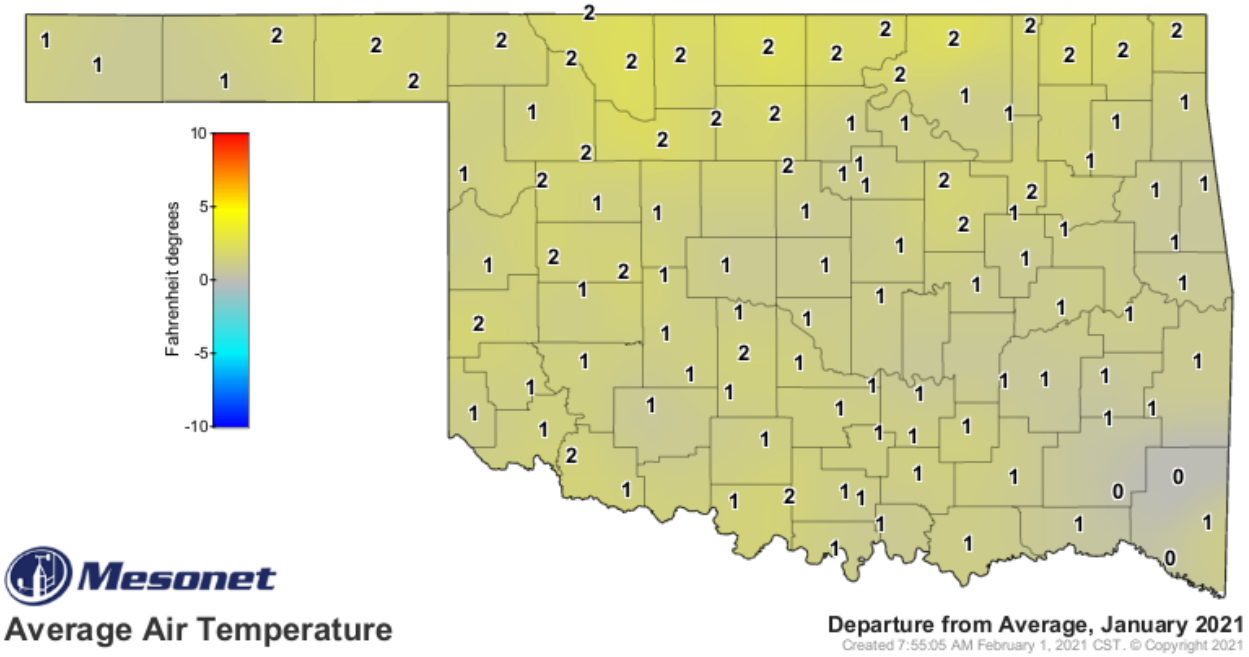
JANUARY 2021 PERCENT OF NORMAL PRECIPITATION



JANUARY 2021 AVERAGE TEMPERATURE



JANUARY 2021 DEPARTURE FROM NORMAL TEMPERATURE

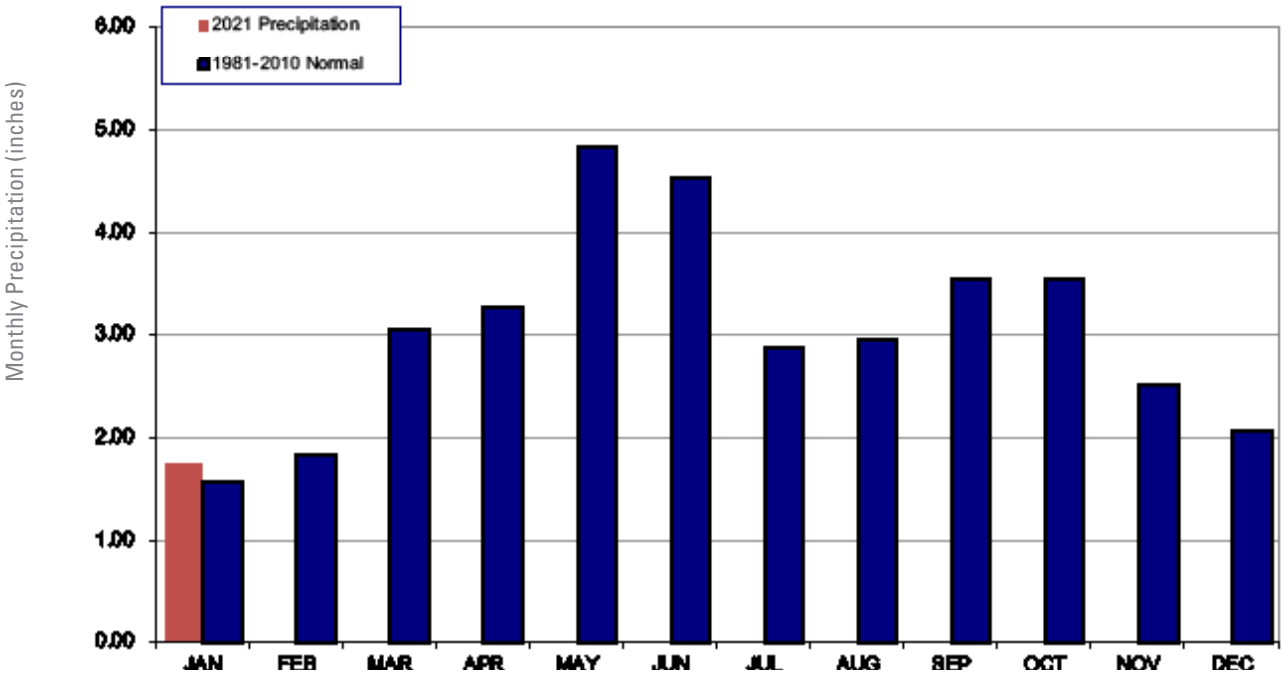


MESONET MONTHLY SUMMARY FOR JANUARY 2021

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	38.0	69	13	13	12	837	0	.71	.36	24
Beaver	36.6	66	5	10	27	882	0	.59	.23	24
Boise City	34.5	67	29	4	11	945	0	.24	.07	10
Buffalo	37.3	67	13	17	27	860	0	.43	.29	25
Eva	*****	***	***	***	***	****	****	.32	.21	10
NORTH CENTRAL										
Alva	37.7	64	13	19	12	845	0	1.16	.67	25
Blackwell	36.8	61	30	18	28	874	0	2.98	.91	30
Breckinridge	37.7	64	30	20	9	846	0	*****	1.01	25
Cherokee	37.8	64	30	20	28	842	0	1.65	.78	25
Fairview	39.3	65	30	21	28	797	0	1.41	.64	25
Freedom	37.8	65	13	18	28	844	0	.88	.49	25
Lahoma	37.6	64	30	20	28	849	0	1.50	.64	25
NORTHEAST										
Bixby	39.9	67	30	23	11	779	0	1.72	.58	1
Burbank	37.6	62	30	17	11	850	0	3.82	1.57	25
Copan	37.6	58	13	20	11	849	0	5.58	2.06	30
Foraker	37.6	60	30	21	11	850	0	4.45	1.52	25
Inola	38.4	66	30	20	9	823	0	2.14	.55	1
Jay	38.3	62	30	19	11	827	0	3.39	.78	25
Miami	37.7	58	5	21	11	846	0	3.90	.98	25
Nowata	37.7	61	30	18	11	846	0	3.62	1.08	25
WEST CENTRAL										
Bessie	39.8	67	30	19	28	782	0	1.70	.67	25
Butler	39.1	66	30	17	12	803	0	1.91	1.09	24
Camargo	37.5	64	13	17	12	851	0	.99	.55	25
Cheyenne	39.9	63	30	22	28	779	0	.83	.48	24
Elk City	39.8	67	30	19	28	780	0	1.50	.68	24
CENTRAL										
Acme	40.4	70	30	20	28	762	0	1.35	.54	25
Bristow	39.2	66	30	18	9	801	0	1.88	.48	1
Lake Carl Blac	37.5	64	30	15	28	854	0	2.87	.67	25
Chandler	40.2	66	30	19	28	768	0	1.91	.61	1
Chickasha	39.8	70	30	18	28	780	0	1.77	.85	25
El Reno	37.7	67	30	15	28	846	0	1.86	.61	24
Guthrie	39.6	65	30	19	28	788	0	2.01	.40	1
Kingfisher	38.7	67	30	20	28	816	0	1.98	.74	25
Marena	38.7	64	30	17	28	815	0	2.34	.69	1
Minco	39.2	68	30	20	28	799	0	1.58	.38	2
Marshall	38.0	64	30	19	28	836	0	2.31	.67	25
EAST CENTRAL										
Cookson	39.3	64	30	19	9	798	0	1.89	.56	25
Eufaula	41.4	67	30	21	9	732	0	2.14	1.22	25
Haskell	39.4	67	30	21	9	794	0	2.24	.64	25
Hectorville	40.1	65	30	22	9	772	0	1.66	.58	1
Holdenville	41.0	66	30	20	28	745	0	2.10	.80	25
McAlester	41.0	69	30	19	9	744	0	1.57	.42	1
Okmulgee	39.5	67	30	19	12	790	0	1.83	.42	1
SOUTHWEST										
Altus	41.5	73	30	23	16	729	0	.62	.25	25
Apache	40.1	71	30	18	28	772	0	1.23	.46	1
Fort Cobb	39.5	69	30	19	13	790	0	1.16	.39	25
Grandfield	42.4	72	30	22	28	701	0	.86	.48	25
Hinton	38.9	65	30	20	28	808	0	1.16	.40	25
Hobart	39.9	70	30	19	28	777	0	.65	.27	1
SOUTH CENTRAL										
Ada	41.2	67	30	18	28	739	0	2.12	.82	25
Ardmore	43.4	68	30	21	28	670	0	1.37	.63	25
Burneyville	42.9	70	30	19	28	684	0	1.17	.61	25
Byars	41.6	67	30	20	28	725	0	2.32	.81	25
Centrahoma	41.6	70	30	18	28	724	0	1.40	.83	25
Durant	44.1	73	30	24	9	647	0	1.02	.40	25
Fittstown	41.1	66	30	19	9	739	0	1.35	.47	25
Ketchum Ranch	42.1	70	30	20	28	711	0	1.05	.39	25
SOUTHEAST										
Antlers	42.1	72	30	18	12	709	0	1.59	.55	6
Broken Bow	42.8	67	25	22	12	688	0	4.65	2.48	6
Clayton	41.4	68	30	19	12	731	0	1.80	.88	6
Cloudy	41.9	69	30	20	12	715	0	2.22	.82	6
Hugo	43.8	72	30	23	28	657	0	1.58	.42	25
Idabel	43.2	69	30	20	12	677	0	3.95	1.72	6

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	36.1	71	29	5	27	896	0	.52	.19	10
Hooker	35.4	67	5	3	27	916	0	.50	.18	10
Kenton	35.0	69	29	2	27	931	0	.37	.11	10
Slapout	37.6	66	13	15	27	851	0	.54	.18	25
May Ranch	38.3	66	13	16	27	829	0	.78	.48	25
Medford	37.6	61	30	20	28	850	0	2.12	.87	25
Newkirk	37.1	59	30	18	27	863	0	2.83	.98	25
Red Rock	37.8	63	30	17	28	844	0	3.24	1.13	25
Seiling	38.2	64	30	21	12	830	0	1.08	.52	25
Woodward	38.6	66	13	19	26	819	0	1.07	.51	25
Pawnee	38.4	62	30	17	11	826	0	3.12	.82	25
Porter	39.9	67	30	23	9	777	0	2.22	.68	25
Pryor	38.1	63	30	20	11	835	0	2.26	.60	1
Skiatook	39.0	62	30	20	11	805	0	3.52	1.02	1
Talala	37.7	61	30	20	11	847	0	3.50	.87	1
Tulsa	40.1	65	30	22	11	772	0	3.10	.83	1
Vinita	37.2	59	5	18	11	862	0	3.63	1.02	25
Wynona	38.1	62	30	19	11	832	0	3.29	.99	25
Erick	39.2	65	30	18	12	799	0	1.73	1.25	24
Putnam	38.5	62	30	21	28	821	0	1.24	.48	24
Watonga	39.3	65	30	21	28	796	0	1.92	.79	24
Weatherford	39.4	66	30	21	16	794	0	1.39	.51	25
Norman	40.2	68	30	19	28	768	0	1.86	.68	25
Oilton	38.6	64	30	17	11	819	0	1.94	.61	25
OKC East	39.9	67	30	18	28	777	0	1.87	.60	1
Okemah	39.6	65	30	20	12	789	0	1.78	.70	25
Perkins	39.2	63	30	18	28	799	0	2.23	.57	25
Seminole	41.0	67	30	18	28	745	0	1.48	.40	1
Shawnee	40.4	66	30	20	28	762	0	2.09	.55	6
Spencer	40.1	66	30	18	28	771	0	2.08	.53	24
Stillwater	38.5	64	30	17	28	822	0	2.42	.89	1
Washington	41.0	70	30	19	13	745	0	1.50	.38	24
Yukon	39.0	67	30	18	28	805	0	1.82	.47	25
Sallisaw	40.2	66	30	19	12	768	0	2.20	1.00	6
Stigler	40.5	68	30	19	12	760	0	1.81	.63	25
Stuart	41.7	68	30	22	9	723	0	1.90	.76	25
Tahlequah	38.8	64	30	20	9	813	0	4.11	2.55	25
Webbers Falls	40.4	66	30	21	12	762	0	2.31	.95	25
Westville	38.8	63	30	22	9	811	0	2.85	1.50	25
Hollis	40.6	71	30	20	12	756	0	.80	.36	25
Mangum	39.7	71	30	15	12	785	0	.79	.28	1
Medicine Park	41.7	70	30	21	28	723	0	.88	.38	1
Tipton	41.6	73	30	21	16	726	0	.46	.17	25
Walters	42.2	72	30	21	28	708	0	.85	.32	25
Lane	42.2	71	30	18	12	706	0	.80	.21	6
Madill	43.3	70	30	20	9	673	0	1.04	.46	25
Newport	43.4	68	30	22	9	****	****	.96	.27	25
Pauls Valley	41.7	69	30	19	28	721	0	1.45	.71	25
Ringling	43.3	69	30	21	28	673	0	.66	.25	24
Sulphur	41.0	68	30	17	12	745	0	1.47	.53	25
Tishomingo	41.6	68	30	19	12	727	0	1.11	.62	25
Waurika	43.2	71	30	19	28	677	0	.85	.31	1
Mt Herman	41.0	65	25	19	9	743	0	3.45	1.26	6
Talihina	41.3	69	30	16	12	736	0	1.70	1.08	6
Valliant	42.8	71	30	20	12	688	0	2.09	.92	6
Wilburton	40.8	69	30	19	12	749	0	1.58	.57	25
Wister	40.4	70	25	18	12	763	0	1.54	.98	6

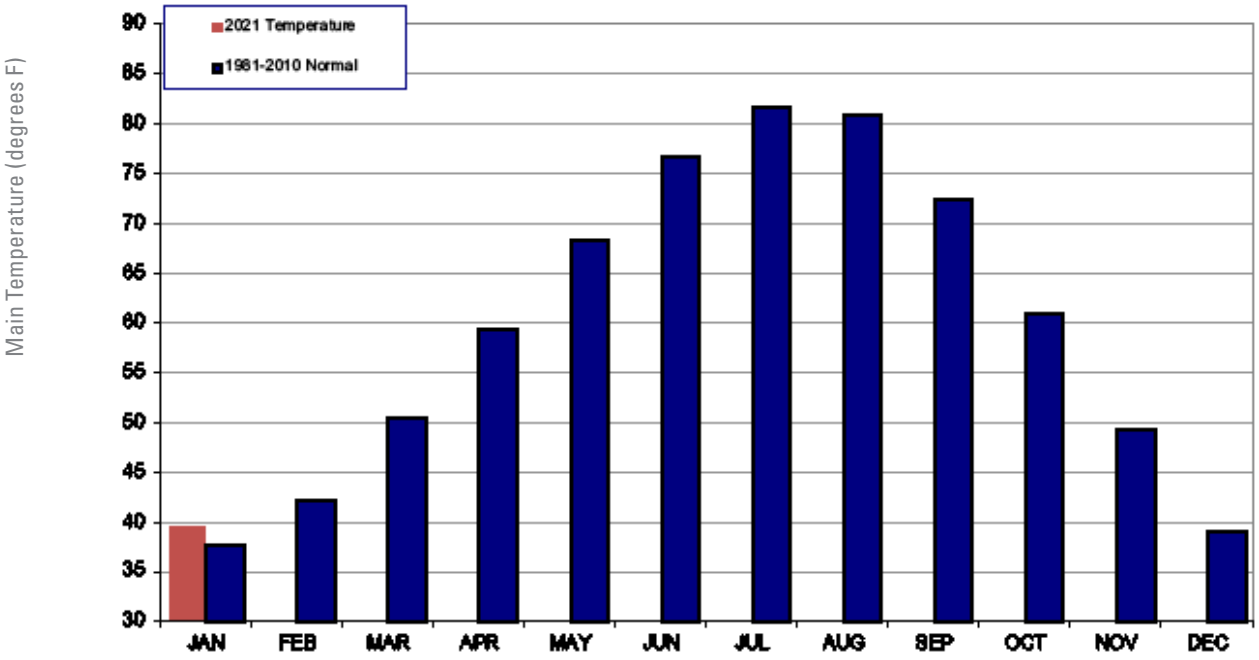
2021 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



January 2021 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jan-20 (inches)
Panhandle	0.47	-0.07	53rd Wettest	1.94 (2017)	0.00 (1923)	1.23
North Central	1.73	0.76	16th Wettest	4.16 (1949)	0.00 (1986)	1.90
Northeast	3.33	1.61	12th Wettest	6.87 (1916)	0.01 (1986)	4.14
West Central	1.47	0.56	17th Wettest	3.74 (1949)	0.00 (1976)	1.40
Central	1.95	0.51	31st Wettest	5.58 (1949)	0.00 (1986)	4.03
East Central	2.20	-0.22	56th Wettest	11.21 (1916)	0.04 (1986)	5.75
Southwest	0.86	-0.26	58th Wettest	4.48 (1949)	0.00 (1912)	2.36
South Central	1.26	-0.74	47th Driest	7.70 (1916)	0.03 (1986)	5.18
Southeast	2.38	-0.73	53rd Driest	11.13 (1949)	0.20 (1943)	6.09
Statewide	1.75	0.19	44th Wettest	5.35 (1949)	0.03 (1986)	3.59

2021 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



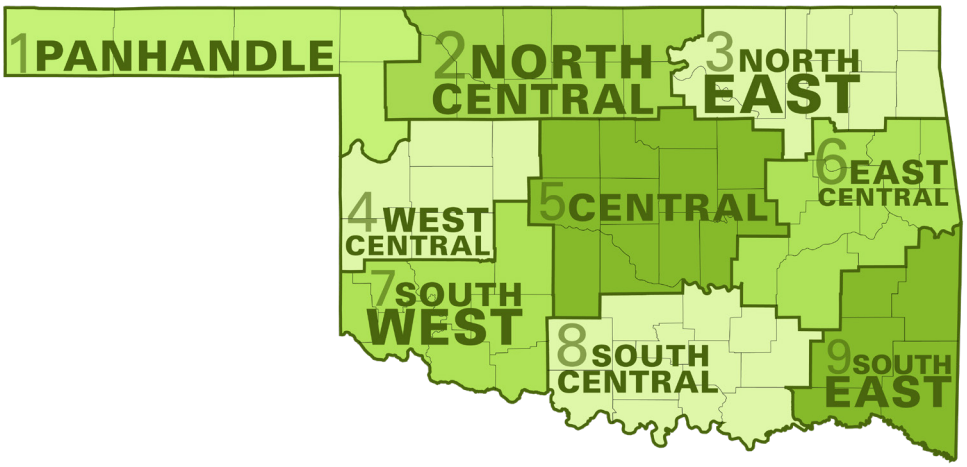
January 2021 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jan-20 (F)
Panhandle	36.3	1.4	36th Warmest	42.9 (2006)	19.7 (1940)	37.9
North Central	37.9	2.8	21st Warmest	45.0 (2006)	18.8 (1940)	39.4
Northeast	38.3	2.5	29th Warmest	46.2 (2006)	20.6 (1940)	40.5
West Central	39.2	2.2	24th Warmest	46.1 (2006)	21.3 (1930)	41.6
Central	39.4	1.5	38th Warmest	47.7 (2006)	22.8 (1930)	42.9
East Central	40.2	1.6	45th Warmest	48.0 (1923)	24.8 (1918)	43.0
Southwest	40.7	1.3	37th Warmest	48.1 (2006)	23.6 (1930)	44.3
South Central	42.3	1.5	39th Warmest	49.7 (1923)	27.5 (1930)	45.4
Southeast	42.0	1.6	41st Warmest	48.7 (1907)	27.7 (1918)	44.9
Statewide	39.5	1.8	34th Warmest	46.8 (2006)	23.7 (1940)	42.1

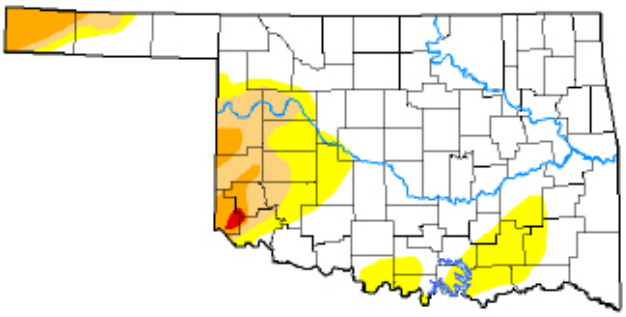
MESONET EXTREMES FOR JANUARY 2021

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	71	29th	Goodwell	2	27th	Kenton	0.71	Arnett	0.36	24th	Arnett
North Central	66	13th	Woodward	16	27th	May Ranch	3.24	Red Rock	1.13	25th	Red Rock
Northeast	67	30th	Bixby	17	11th	Pawnee	5.58	Copan	2.06	30th	Copan
West Central	67	30th	Elk City	17	12th	Camargo	1.92	Watonga	1.25	24th	Erick
Central	70	30th	Chickasha	15	28th	Lake Carl Blackwell	2.87	Lake Carl Blackwell	0.89	1st	Stillwater
East Central	69	30th	McAlester	19	9th	Cookson	4.11	Tahlequah	2.55	25th	Tahlequah
Southwest	73	30th	Altus	15	12th	Mangum	1.23	Apache	0.48	25th	Grandfield
South Central	73	30th	Durant	17	12th	Sulphur	2.32	Byars	0.83	25th	Centrahoma
Southeast	72	30th	Antlers	16	12th	Talihina	4.65	Broken Bow	2.48	6th	Broken Bow
Statewide	73	30th	Altus	2	27th	Kenton	5.58	Copan	2.55	25th	Tahlequah

Oklahoma Climate Divisions



U.S. Drought Monitor
Oklahoma



January 26, 2021
(Released Thursday, Jan. 28, 2021)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	75.15	24.85	10.93	4.05	0.23	0.00
Last Week 01-19-2021	67.61	32.39	11.95	5.52	0.83	0.00
3 Months Ago 10-27-2020	47.94	52.06	32.42	15.58	3.61	0.00
Start of Calendar Year 12-29-2020	56.83	43.17	25.21	7.75	1.45	0.00
Start of Water Year 09-29-2020	66.79	33.21	17.71	11.97	1.55	0.00
One Year Ago 01-28-2020	81.34	18.66	8.03	0.85	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

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CPC/NOAA/NWS/NCEP

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

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