# Oklahoma Monthly Climate Summary

Oklahoma's oddly persistent caste-like rainfallDeppattern—with those to the north and west of Interstatethe44 seeing near-record dryness and those to the southoneand east experiencing abundance—continued duringtwisMarch. Rainfall totals to the northwest of I-44 were202generally a half-inch or less, while amounts of 5-8aveinches were quite common to the southeast. TenOctOklahoma Mesonet sites in far northwest OklahomaThefailed to record more than a tenth of an inch of rain forThethe month, with another 17 stuck below the quarter-inchinch line on the rain gauge. The 0.07 inches at thethe

#### **March 2023 Statewide Extremes**

National Weather Service's observing site in Ames

Description	Extreme	Station	Day
High Temperature	90°F	Altus, Mangum	11
Low Temperature	5°F	Eva	19
High Precipitation	13.22 in.	Cloudy	
Low Precipitation	0.01 in.	Woodward	

broke the previous record of 0.05 inches for their driest March set back in 1900. The observer in Weatherford recorded a trace for the month. The persistent dry weather continued to hinder early spring green up in that half of the state and exacerbate dangerous wildfire conditions. The month's final day saw winds gusting up to 77 mph combine with relative humidity in the teens and single digits to create the prime ingredients for a wildfire outbreak. At least 36 homes were destroyed by a wildfire in Logan County according to local and state Emergency Management officials, as well as at least seven homes in Washington County. Another three homes were burned in Oklahoma City. Several other homes were either damaged or destroyed by wildfires that day across the state. The Oklahoma State Department of Health reported 32 injuries related to the fires and the accompanying weather. There was one confirmed tornado during the month—an EF1 twister near Broken Bow on March 2—bringing the 2023 total to 18, well ahead of the January-March average of 4.9. It was also the first month since October 2022 with a below average tornado total.

OKLAHOMA

The statewide average precipitation total of 3.04 inches was 0.26 inches above normal and ranked as the 38th wettest March since records began in 1895. March Mesonet rainfall totals ranged from a 13.22

#### **March 2023 Statewide Statistics**

#### Temperature

Period	Average	Departure	Rank (1895-2023)
Month (March)	50°F	-1.2°F	60th Warmest
Year-to-Date (Jan-Mar)	45.5°F	1.5°F	22nd Warmest

#### Precipitation

Period	Total	Departure	Rank (1895-2023)
Month (March)	3.04 in.	0.26 in.	38th Wettest
Year-to-Date (Jan-Mar)	6.66 in.	0.62 in.	39th Wettest

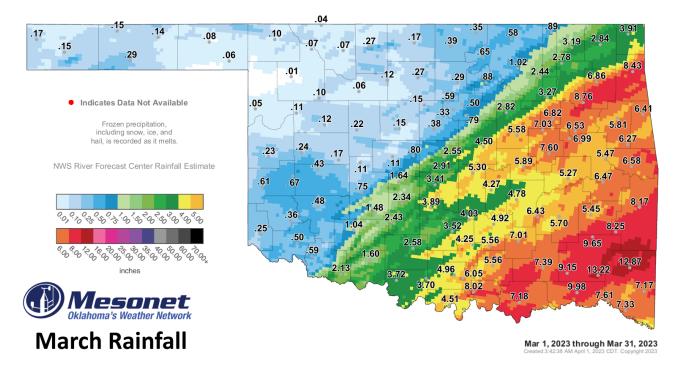
Departure from 30-year normal

inches at Cloudy to a scant hundredth of an inch at Woodward. Forty-six of the Mesonet's 120 sites recorded at least 4 inches for the month, all within the southeastern half of the state. The statewide average precipitation total for the first 3 months of the year was 6.66 inches, 0.62 inches above normal and ranked as the 39th wettest January-March on record. January-March totals across the southeastern half of the state ranged generally from 10-20 inches, with Mt. Herman leading the way at 24.22 inches. Surpluses for the 3-month period ranged from about an inch to more than 12 inches in that part of the state. The northwestern half of the state fared much worse with totals of less than an inch to 3 inches, and deficits of an inch to 3 inches. Eva had the lowest total with 0.38 inches.

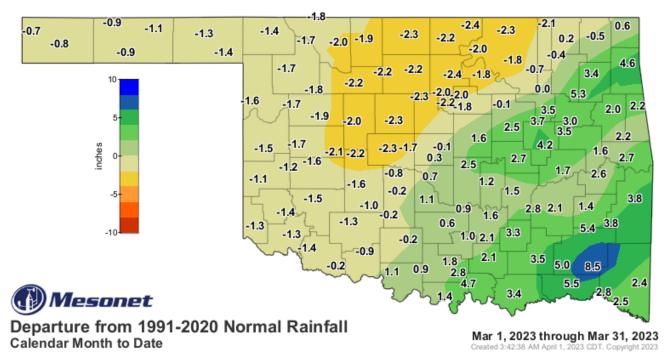
Oklahoma spent much of March with below normal temperatures, including a downright frigid Spring Break. The statewide average temperature for the month finished at 50 degrees, 1.2 degrees below normal and ranked as the 60th warmest March since records began in 1895. Temperatures ranged from 90 degrees at Altus and Mangum on March 11, to 5 degrees at Eva on March 19. Oklahoma suffered a statewide hard freeze on March 18-19 with low temperatures in the teens and 20s, although some areas in northwest Oklahoma saw temperatures drop into the single digits. The January-March period finished at 45.5 degrees, 1.5 degrees above normal and ranked as the 22nd warmest such period on record.

Drought coverage in Oklahoma dropped from 67% at the end of February to 54% at the end of March according to the U.S. Drought Monitor with nearly all of those improvements coming in the southeastern half of the state. The amount of extreme-to-exceptional drought-all within the northwestern half of the stateremained about the same at 37%, however. The highest intensity category alone rose from 9% to 13% during the month. Prospects for drought reduction during April look slim according to the Climate Prediction Center. CPC's temperature outlook calls for increased odds of above normal temperatures across the entire state. The precipitation outlook indicates increased odds for above normal precipitation across the southeastern one-half of the state. The April drought outlook shows the current drought conditions persisting through April.

## MARCH 2023 OBSERVED PRECIPITATION



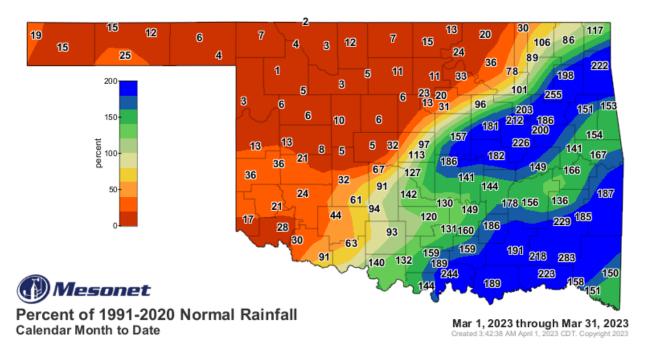
The accumulated rainfall for March split the state along a diagonal line from northeast to southwest. North of the line was drier with Woodward receiving 0.01 inches. While south of the line, the Cloudy site received 13.22 inches.



## MARCH 2023 DEPARTURE FROM NORMAL PRECIPITATION

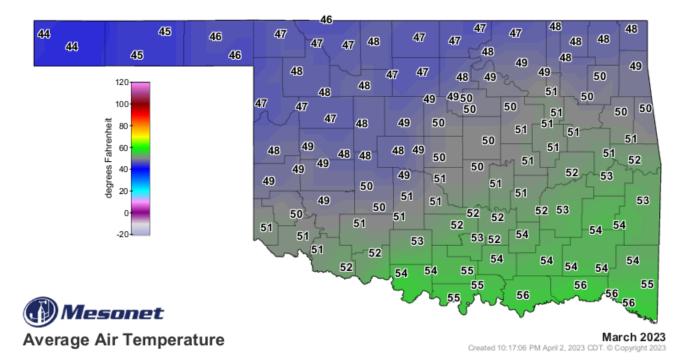
Comparing the March rainfall accumulation to the 1991 to 2020 normal rainfall, sites west of Interstate 44 were below normal from half an inch to two and half inches. East of Interstate 44, most areas received a range from an inch to 5.5 inches above normal rainfall. An area surrounding the Cloudy site received 8.5 inches above normal.

## MARCH 2023 PERCENT OF NORMAL PRECIPITATION

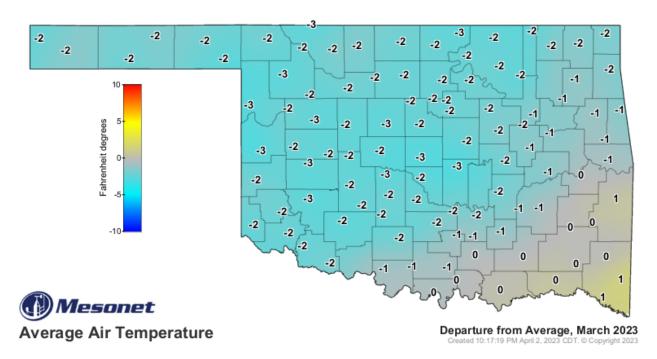


North and west of Interstate 44 areas received between 1% and 97% of normal rainfall with Woodward receiving the least at 1% and Spencer receiving 97%. South and east of Interstate 44, the values ranged from 101% to 283% of normal rainfall with Cloudy benefiting the most.

### MARCH AVERAGE TEMPERATURE IN DEGREES FAHRENHEIT



Temperatures ranged from the mid 40s in the panhandle to the mid 50s in south central and southeastern counties.



## MARCH 2023 DEPARTURE FROM NORMAL TEMPERATURE

The temperature departures from normal ranged from -3°F to 1°F statewide. Most sites were below normal with only the southeastern counties reporting normal to one degree above normal.

## **MESONET MONTHLY SUMMARY FOR MARCH 2023**

#### PANHANDLE

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Arnett	47.5	83	5	17	19	543	0	.05	.03	16
Beaver	46.7	82	15	11	19	566	0	.08	.04	16
Boise City	43.9	79	30	12	19	***	***	.15	.07	24
Buffalo	47.2	82	5	11	19	551	0	.10	.05	11
Eva	***	***	***	***	***	***	.15	.07	16	17
Goodwell	45.2	82	15	12	19	613	0	.29	.19	23
Hooker	45.2	82	22	11	19	614	0	.14	.07	23
Kenton	44.2	79	30	14	19	***	***	.17	.15	16
Slapout	46.4	81	5	14	19	575	0	.06	.03	16

#### NORTH CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Alva	47.1	82	22	9	19	558	3	.07	.04	11
Blackwell	47.4	80	22	10	19	***	***	.39	.11	16
Breckinridge	47.4	79	22	9	19	549	4	.27	.14	21
Cherokee	47.7	82	22	12	19	538	3	.27	.23	25
Fairview	48.1	82	22	10	19	528	4	.06	.03	9
Freedom	47.4	84	5	13	19	547	1	.07	.04	11
Lahoma	47.4	80	22	15	19	548	4	.12	.08	21
May Ranch	46.6	83	5	16	19	573	2	.04	.03	27
Medford	47.1	81	22	10	19	558	4	.17	.06	3
Newkirk	47.2	79	5	14	19	553	2	.35	.13	16
Red Rock	48.4	80	5	11	19	519	5	.29	.16	21
Seiling	47.6	82	22	12	19	542	1	.10	.07	16
Woodward	47.8	84	5	15	19	533	1	.01	.01	9

#### NORTHEAST

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Bixby	51.1	81	31	22	19	442	11	6.82	2.88	23
Burbank	48.2	80	5	11	19	525	6	.65	.35	16
Copan	47.7	80	31	16	19	542	4	.89	.20	21
Foraker	47.2	80	5	14	19	555	4	.58	.19	16
Inola	49.6	80	31	22	19	479	3	8.76	3.91	23
Jay	48.9	81	31	18	19	507	7	8.43	3.90	23
Miami	47.9	80	31	20	19	535	4	3.91	1.15	23
Nowata	47.8	82	31	16	19	540	6	3.19	1.26	23
Pawnee	49.6	80	5	13	19	484	7	.88	.47	24
Porter	50.7	82	31	23	19	450	7	6.53	2.08	23
Pryor	49.1	82	31	19	19	498	6	6.86	3.14	23
Skiatook	49.2	79	31	19	19	497	7	2.44	.87	23
Talala	48.2	81	31	17	19	523	2	2.78	.96	23
Tulsa	50.5	80	31	21	19	461	12	3.27	.90	23
Vinita	47.6	81	31	16	19	545	4	2.84	.90	23
Wynona	48.9	81	31	16	19	509	9	1.02	.32	21

#### WEST CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Bessie	49.4	82	11	16	19	486	4	.43	.22	14
Butler	49.2	85	22	14	19	492	4	.24	.13	14
Camargo	47.2	83	22	11	19	551	0	.11	.11	16
Cheyenne	49.1	81	22	20	19	496	3	.23	.15	14
Elk City	50.0	85	11	21	19	467	1	.67	.42	16
Erick	49.1	85	11	18	19	494	1	.61	.39	16
Putnam	47.8	81	21	17	19	533	2	.12	.06	16
Watonga	48.6	79	22	17	19	512	4	.22	.09	16
Weatherford	48.7	80	11	19	19	507	1	.17	.08	14

#### CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Acme	51.1	85	11	19	19	439	7	2.43	1.31	23
Bristow	50.3	81	22	19	19	466	11	5.58	2.26	23
Lake Carl Blac	48.3	80	5	9	19	522	5	.59	.33	24
Chandler	50.5	81	22	20	19	457	9	4.50	1.25	7
Chickasha	50.7	82	11	20	19	451	8	2.34	.72	23
El Reno	47.9	81	22	12	19	535	5	.11	.07	9
Guthrie	50.2	79	22	15	19	***	***	.38	.16	21
Kingfisher	47.8	80	22	9	19	538	5	.15	.08	24
Marena	49.6	79	22	14	19	484	7	.33	.18	21
Minco	49.4	81	11	20	19	488	5	1.64	.93	16
Marshall	48.5	79	22	10	19	518	5	.15	.09	21
Norman	51.0	80	22	20	19	443	8	3.41	1.00	23
Oilton	49.3	80	22	15	19	494	8	2.82	.76	23
OKC East	50.2	80	11	19	19	467	9	2.91	.97	7
Okemah	50.8	81	22	21	19	449	9	5.89	1.78	23
Perkins	49.9	79	5	15	19	475	7	.79	.32	21
Seminole	51.3	82	22	23	19	433	10	4.27	1.33	23
Shawnee	50.0	81	22	20	19	473	8	5.30	2.53	23
Spencer	50.3	81	11	20	19	463	8	2.55	.71	7
Stillwater	49.4	80	5	12	19	491	9	.50	.20	21
Washington	51.4	83	11	22	19	431	8	3.89	1.78	23
Yukon	49.7	80	11	19	19	480	5	.80	.36	23

#### EAST CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24- HR	DAY
Cookson	50.5	82	31	18	19	456	7	6.27	1.45	24
Eufaula	52.2	82	31	23	19	412	13	5.27	1.38	2
Haskell	50.7	83	31	22	19	453	8	6.99	2.29	23
Hectorville	51.4	81	22	21	19	433	11	7.03	3.00	23
Holdenville	51.6	80	22	22	19	427	11	4.78	1.30	23
McAlester	52.5	82	31	20	19	402	15	5.70	2.26	24
Okmulgee	51.3	82	22	20	19	436	11	7.60	2.91	23
Sallisaw	51.9	83	31	24	20	416	10	6.58	2.07	2
Stigler	52.1	81	31	25	20	406	7	6.47	2.09	2
Stuart	52.4	79	22	22	19	402	11	6.43	2.11	24
Tahlequah	50.3	81	31	17	19	463	7	5.81	1.10	24
Webbers Falls	51.1	83	31	23	19	435	4	5.47	1.20	24
Westville	49.5	80	31	20	19	487	5	6.41	1.40	24

#### SOUTHWEST

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Altus	51.1	90	11	22	19	440	8	.50	.29	16
Apache	50.6	84	11	21	19	453	5	1.48	.81	16
Fort Cobb	49.8	82	11	17	19	476	4	.75	.33	16
Grandfield	52.8	87	11	22	19	388	9	2.13	.73	7
Hinton	48.6	80	11	16	19	509	2	.11	.04	9
Hobart	49.5	88	11	17	19	485	5	.48	.18	16
Hollis	50.4	87	11	20	19	458	5	.25	.13	14
Mangum	50.3	90	11	17	19	459	3	.36	.17	14
Medicine Park	52.3	88	11	26	19	401	6	1.04	.50	16
Tipton	51.3	89	11	21	19	432	9	.59	.48	16
Walters	52.8	87	11	25	19	387	7	1.60	.53	7

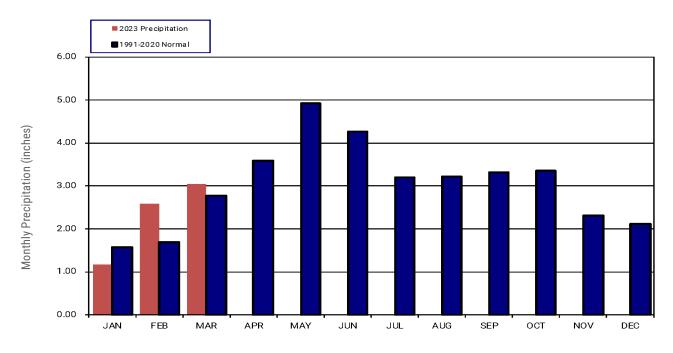
#### SOUTH CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Ada	52.5	83	11	18	19	402	15	4.92	1.25	23
Ardmore	55.0	85	11	26	19	333	23	6.05	2.10	24
Burneyville	55.1	89	11	21	19	333	26	4.51	1.62	8
Byars	52.1	83	11	22	19	409	10	4.03	1.18	23
Centrahoma	53.8	82	6	23	19	364	17	7.01	1.85	24
Durant	56.1	82	31	27	19	302	25	7.18	2.39	8
Fittstown	53.1	83	11	22	19	387	18	5.56	2.52	24
Ketchum Ranch	53.0	85	11	24	19	382	10	2.58	.56	8
Lane	54.4	83	31	23	19	351	21	7.39	1.83	24
Madill	55.3	86	11	25	19	325	25	8.02	3.06	9
Newport	55.0	85	11	26	19	333	23	4.96	1.51	24
Pauls Valley	52.8	84	11	22	19	392	12	3.52	1.02	23
Ringling	54.4	85	11	24	19	344	15	3.70	1.38	8
Sulphur	53.0	83	11	19	19	386	13	4.25	1.11	24
Tishomingo	53.9	82	6	24	19	362	17	5.56	2.04	24
Waurika	54.8	87	11	23	19	332	16	3.72	1.45	23

#### SOUTHEAST

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Antlers	54.3	84	31	22	19	354	22	9.15	2.50	9
Broken Bow	54.9	84	23	23	20	325	11	7.17	1.68	24
Clayton	53.4	82	31	23	19	382	22	9.65	5.00	24
Cloudy	54.0	82	23	24	20	357	17	13.22	3.32	9
Hugo	56.1	83	31	25	19	299	24	9.98	3.21	2
Idabel	56.4	83	23	25	20	282	17	7.33	1.92	8
Mt Herman	53.5	80	31	21	19	369	12	12.87	3.03	9
Talihina	53.9	83	31	21	19	364	21	8.25	3.16	24
Valliant	55.4	82	23	22	19	317	18	7.61	1.87	24
Wilburton	***	***	***	***	***	***	***	5.45	1.88	2
Wister	52.7	84	31	18	20	402	20	8.17	3.94	24

## 2023 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL IN INCHES



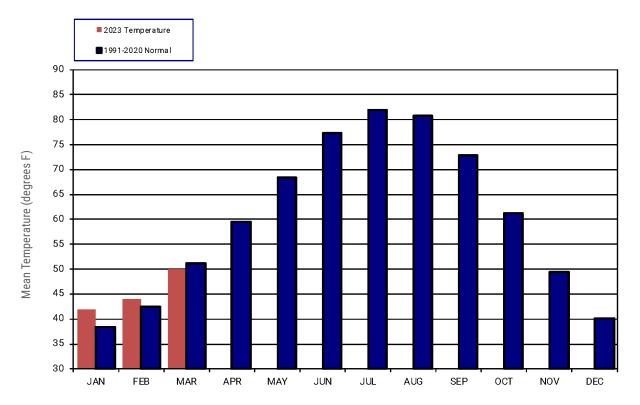
## TABLE OF 2023 STATEWIDE PRECIPITATION MONTHLY TOTALS AND NORMALS IN INCHES

Year	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023	1.17	2.58	3.04									
1991-2020	1.57	1.69	2.78	3.59	4.93	4.26	3.20	3.23	3.32	3.36	2.32	2.11

## MARCH 2023 MESONET PRECIPITATION COMPARISON

<b>Climate Division</b>	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Mar-22 (inches)
Panhandle	0.13	-1.17	12th Driest	5.66 (1973)	0.01 (1936)	0.88
North Central	0.17	-2.08	7th Driest	8.27 (1973)	0.00 (1936)	2.62
Northeast	3.74	0.54	36th Wettest	9.33 (1973)	0.33 (1971)	3.56
West Central	0.31	-1.67	15th Driest	6.76 (1973)	0.00 (1971)	1.05
Central	2.43	-0.31	60th Wettest	7.45 (1990)	0.10 (1971)	2.61
East Central	6.22	2.49	12th Wettest	10.02 (1945)	0.52 (1941)	4.13
Southwest	0.84	-1.28	32nd Driest	5.61 (1973)	0.00 (1940)	1.12
South Central	5.19	1.91	14th Wettest	8.15 (1945)	0.28 (1950)	2.53
Southeast	8.99	4.43	4th Wettest	12.50 (1945)	0.96 (2011)	4.69
Statewide	3.04	0.26	38th Wettest	7.43 (1973)	0.39 (1971)	2.58

## 2023 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL IN DEGREES FAHRENHEIT



## TABLE OF 2023 STATEWIDE TEMPERATURE MONTHLY TOTALS AND NORMALS IN DEGREES FAHRENHEIT

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023	41.9	44.1	50.0									
1991-2020	38.3	42.4	51.2	59.5	68.4	77.3	81.9	80.8	72.9	61.3	49.4	40.1

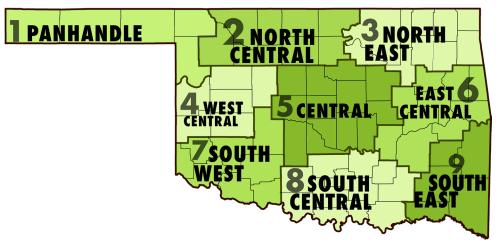
## MARCH 2023 MESONET TEMPERATURE COMPARISON

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Mar-22 (F)
Panhandle	45.4	-2.0	64th Warmest	55.4 (2012)	34.1 (1958)	45.6
North Central	47.4	-1.8	62nd Coolest	58.5 (2012)	36.0 (1915)	48.7
Northeast	48.9	-1.2	65th Coolest	59.7 (2012)	36.9 (1960)	50.0
West Central	48.8	-1.6	62nd Warmest	58.3 (1907)	37.2 (1915)	49.8
Central	49.7	-2.0	58th Coolest	60.7 (2012)	38.6 (1915)	51.2
East Central	51.3	-0.9	62nd Warmest	61.2 (2012)	39.8 (1915)	51.7
Southwest	50.9	-2.0	59th Coolest	61.4 (1907)	40.6 (1915)	51.9
South Central	54.0	0.0	50th Warmest	62.1 (1907)	41.6 (1915)	53.2
Southeast	54.3	1.3	39th Warmest	62.0 (1907)	40.3 (1915)	52.2
Statewide	50.0	-1.2	60th Warmest	59.6 (2012)	38.5 (1915)	50.5

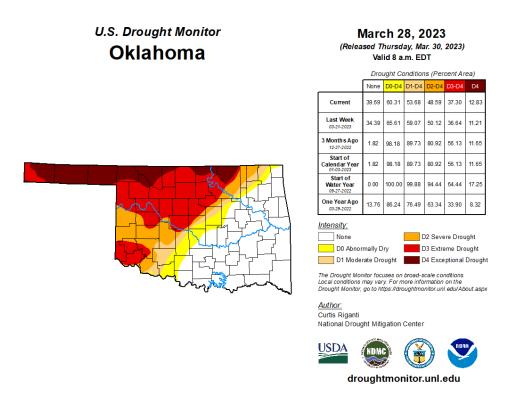
## **MESONET EXTREMES FOR MARCH 2023**

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	83	5th	Arnett	11	19th	Buffalo	0.29	Goodwell	0.19	23rd	Goodwell
North Central	84	5th	Woodward	9	19th	Alva	0.39	Blackwell	0.23	25th	Cherokee
Northeast	82	31st	Porter	11	19th	Burbank	8.76	Inola	3.91	23rd	Inola
West Central	85	11th	Elk City	11	19th	Camargo	0.67	Elk City	0.42	16th	Elk City
Central	85	11th	Acme	9	19th	Kingfisher	5.89	Okemah	2.53	23rd	Shawnee
East Central	83	31st	Webbers Falls	17	19th	Tahlequah	7.60	Okmulgee	3.00	23rd	Hectorville
Southwest	90	11th	Mangum	16	19th	Hinton	2.13	Grandfield	0.81	16th	Apache
South Central	89	11th	Burneyville	18	19th	Ada	8.02	Madill	3.06	9th	Madill
Southeast	84	23rd	Broken Bow	18	20th	Wister	13.22	Cloudy	5.00	24th	Clayton
Statewide	90	11th	Mangum	9	19th	Kingfisher	13.22	Cloudy	5.00	24th	Clayton

**Oklahoma Climate Divisions** 



Climate Division	Counties
Panhandle - Division 1	Beaver, Cimarron, Ellis, Harper, and Texas
North Central - Division 2	Alfalfa, Garfield, Grant, Kay, Major, Noble, Woods, and Woodward
Northeast - Division 3	Craig, Delaware, Mayes, Nowata, Osage, Ottawa, Pawnee, Rogers, Tulsa, and Washington
West Central - Division 4	Beckham, Blaine, Custer, Dewey, Roger Mills, and Washita
Central - Division 5	Canadian, Cleveland, Creek, Grady, Kingfisher, Lincoln, Logan, McClain, Okfuskee, Oklahoma, Payne, Pottawatomie, and Seminole
East Central - Division 6	Adair, Cherokee, Haskell, Hughes, McIntosh, Muskogee, Okmulgee, Pittsburg, Sequoyah, and Wagoner
Southwest - Division 7	Caddo, Comanche, Cotton, Greer, Harmon, Jackson, Kiowa, and Tillman
South Central - Division 8	Atoka, Bryan, Carter, Coal, Garvin, Jefferson, Johnston, Love, Marshall, Murray, Pontotoc, and Stephens
Southeast - Division 9	Choctaw, Latimer, LeFlore, McCurtain, and Pushmataha



Drought condition intensity levels used for the US Drought Monitor are None, D0 Abnormally Dry, D1 Moderate Drought, D2 Severe Drought, D3 Extreme Drought, and 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.

## U.S. DROUGHT MONITOR FOR OKLAHOMA DROUGHT CONDITIONS (PERCENT AREA)

#### MARCH 28, 2023 (RELEASED THURSDAY, MAR. 2, 2023)

Period	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	39.69	60.31	53.68	48.59	37.30	12.83
Last Week 03-21-2023	34.39	65.61	59.07	50.12	36.64	11.21
3 Months Ago 12-27-2022	1.82	98.18	89.73	80.92	56.13	11.65
Start of Current Year 01-03-2023	1.82	98.18	89.73	80.92	56.13	11.65
Start of Water Year 09-27-2022	0.00	100.00	99.88	94.44	64.44	17.25
One Year Ago 03-29-2022	13.76	86.24	76.49	63.34	33.90	8.32

#### VALID 8 A.M. EDT

### **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 may 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 may result in an artificially high or low value.

## ADDITIONAL RESOURCES

SUNRISE / SUNSET TABLES U.S. Naval Observatory: <u>https://aa.usno.navy.mil/data/</u>

SEVERE STORM REPORTS STORM PREDICTION CENTER: <u>https://spc.noaa.gov/climo/</u>

NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION: https://www.ncdc.noaa.gov/stormevents/

SEASONAL OUTLOOKS CLIMATE PREDICTION CENTER: https://www.cpc.ncep.noaa.gov/products/OUTLOOKS\_index.php/

CLIMATE CALENDARS AND OTHER LOCAL WEATHER AND CLIMATE INFORMATION OKLAHOMA CLIMATOLOGICAL SURVEY: https://climate.ok.gov/



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