

Drought surged across Oklahoma as the driest September since 1956 took its toll on the state’s landscape. The amount of drought in the state remained largely unchanged through September at approximately 99%, but the intensity of that drought increased dramatically according to the U.S. Drought Monitor. Extreme and exceptional drought, the Drought Monitor’s two worst categories, jumped from 47% on Aug. 30 to 64% at the end of September, the highest such levels seen in the state since Feb. 19, 2013. Exceptional drought alone rose to 17%, its highest level since May 8, 2018. Soil moisture plummeted and fire danger increased in the hot, dusty conditions. The USDA estimated that 91% of the state’s topsoil moisture was considered “short to very short” by the end of the month. The Oklahoma Mesonet measured critically dry soils down to at least 32 inches, which helped boost large wildfire potential into the extreme category. Farm ponds were reported low to completely dry across

and ranked as the 21st driest January through September on record. The Oklahoma Panhandle was particularly dry at 11.63 for their ninth driest such period on record.

The statewide average temperature of 75.7 degrees ranked as the 24th warmest September since records began in 1895, 2.8 degrees above normal. Temperatures were solidly above normal for most of the month, at times 10 to 15 degrees higher than the seasonal averages. The 120 Mesonet sites recorded triple-digit temperatures 342 times on 10 separate days, with 102 degrees being the top mark at many locations across several days. The month’s—and possibly the seasons’—final 100s occurred on the 25th at the Burneyville, Hugo, and Valliant Mesonet sites. September’s coldest reading of 36 degrees occurred on the 30th at Wister. That reading and the 39 degrees at Talihina the same day were the first 30s recorded in the state since May 22. The year continued very

### September 2022 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	102°F	Several	Several
Low Temperature	36°F	Wister	30
High Precipitation	2.36 in.	Fittstown	--
Low Precipitation	0.03 in.	Eva, Grandfield, Hollis	--

many parts of the state, and the bulk of Oklahoma’s larger reservoirs sat 5-10 feet below normal through the third week of September.

The statewide average rainfall total was 0.71 inches according to the Oklahoma Mesonet, 2.61 inches below normal and ranked as the fifth driest September since records began in 1895. None of the 120 Mesonet sites came even close to a surplus for the month. Fittstown led the way with 2.36 inches. Three western Oklahoma sites—Eva, Grandfield, and Hollis—shared the bottom spot with three-hundredths. Eighty-seven sites recorded less than an inch for the month, and 54 of those sites actually had less than a half-inch. Much of the state had gone at least a month without a quarter-inch of rainfall in a single day, with some locations across northern Oklahoma missing out for more than 60 days. The first nine months of the year remained squarely on the dry side with a statewide average of 22.01 inches, 6.56 inches below normal

### September 2022 Statewide Statistics

#### Temperature

	Average	Depart.	Rank (1895-2022)
Month (September)	75.7°F	2.8°F	24th Warmest
Year-to-Date (Jan-Sept)	64.8°F	1°F	22nd Warmest

#### Precipitation

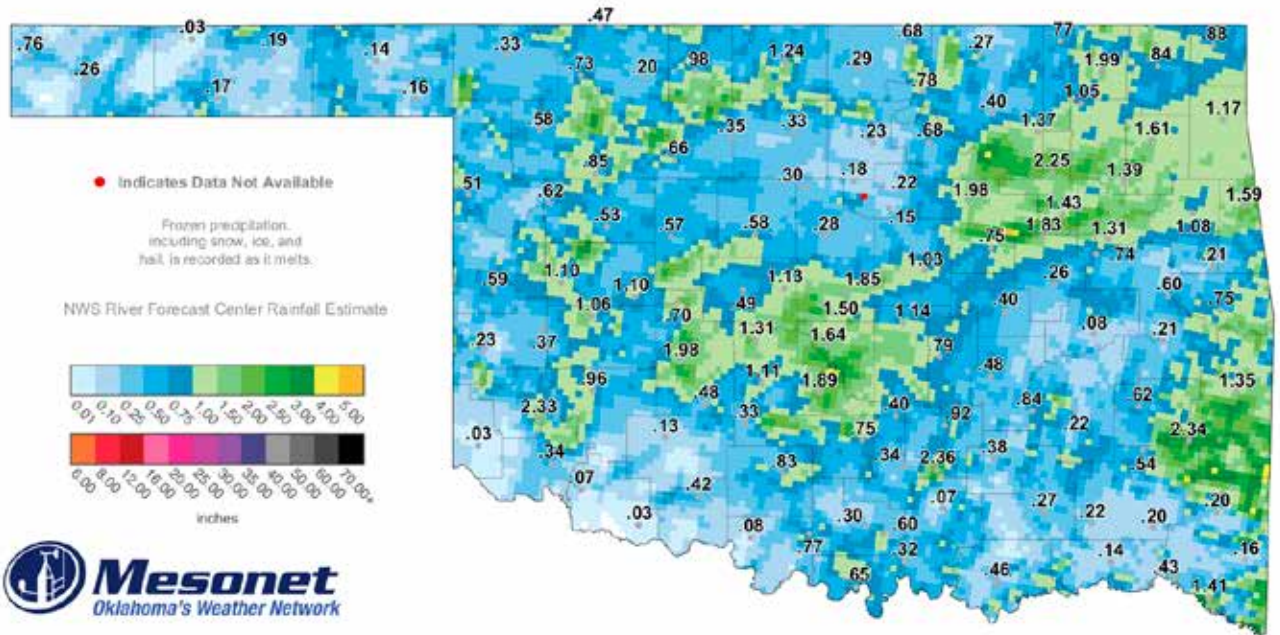
	Total	Depart.	Rank (1895-2022)
Month (September)	0.71 in.	-2.61 in.	5th Driest
Year-to-Date (Jan-Sept)	22.01 in.	-6.56 in.	21st Driest

Depart. = departure from 30-year normal

warm with a January through September statewide average of 64.8 degrees, a degree above normal and ranked as the 22nd warmest such period on record.

The Climate Prediction Center’s outlooks for October portray possible warm and dry conditions continuing, with increased odds of above normal temperatures for the entire state and below normal precipitation for all but the western Panhandle. The western Panhandle has equal chances for above-, below-, and near-normal precipitation for October. CPC’s October drought outlook indicates drought persisting across the entire state through the end of the month, and expanding to cover most of the Southern Plains through that same period.

## SEPTEMBER 2022 OBSERVED PRECIPITATION

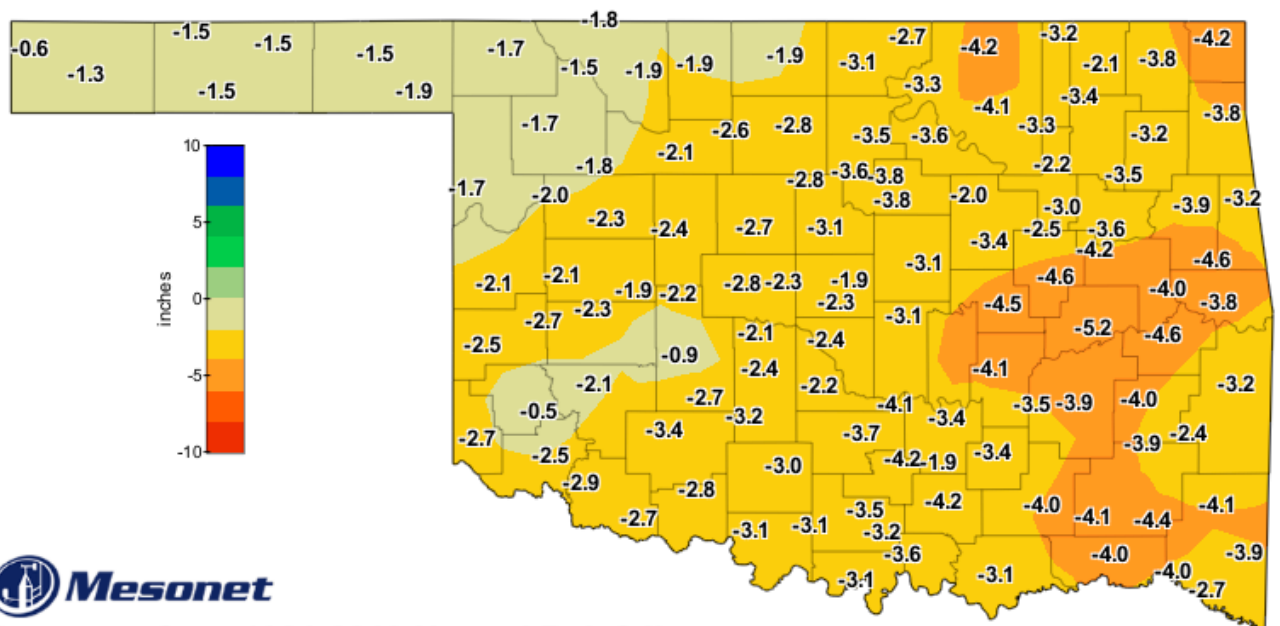


30-Day Rainfall Accumulation (inches)

Sep 1, 2022 12:00 AM CDT - Oct 1, 2022 12:00 AM CDT

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## SEPTEMBER 2022 DEPARTURE FROM NORMAL PRECIPITATION

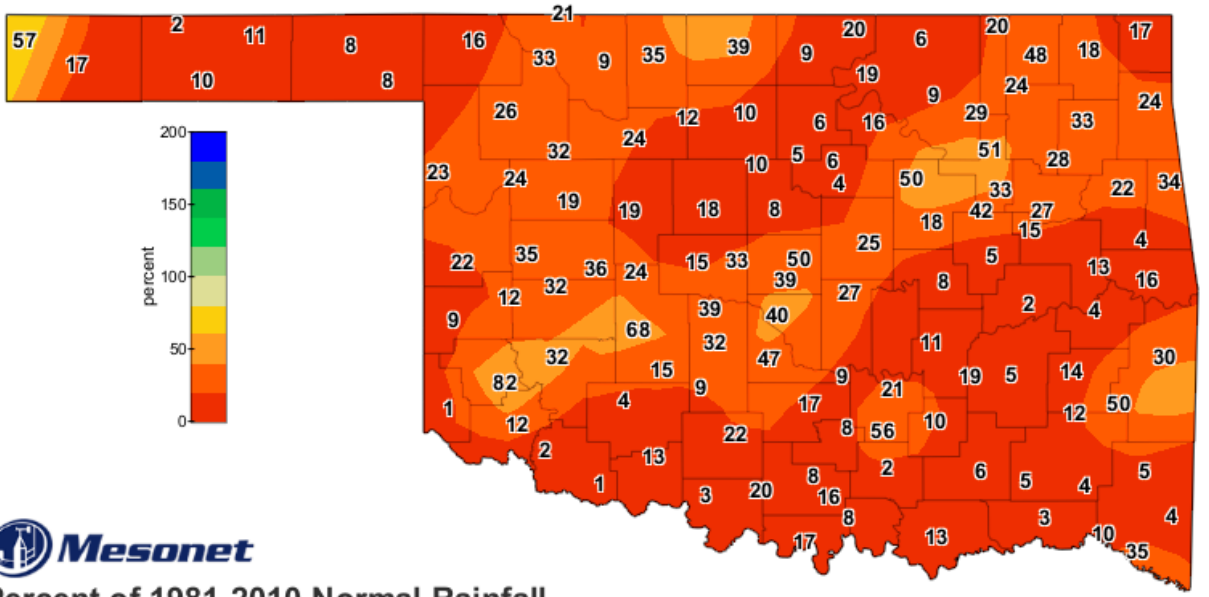


Departure from 1981-2010 Normal Rainfall  
Calendar Month to Date

Sep 1, 2022 through Sep 30, 2022

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# SEPTEMBER 2022 PERCENT OF NORMAL PRECIPITATION



Percent of 1981-2010 Normal Rainfall  
Calendar Month to Date

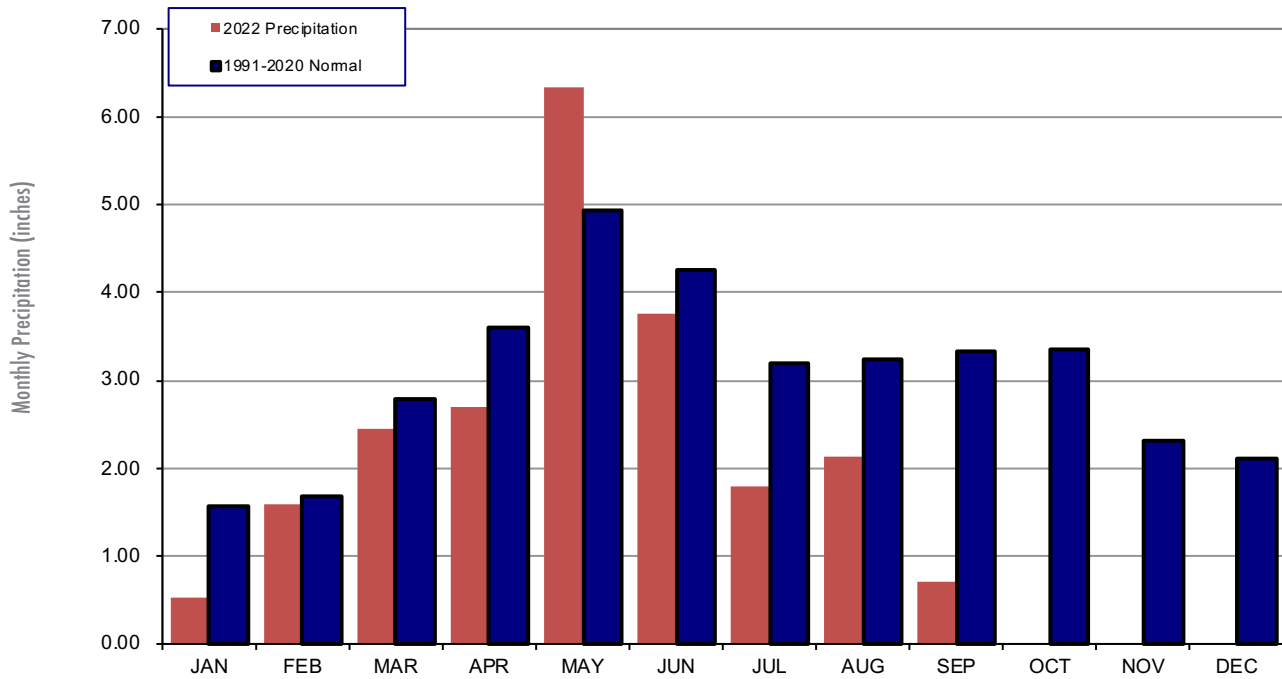
Sep 1, 2022 through Sep 30, 2022  
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# MESONET MONTHLY SUMMARY FOR SEPTEMBER 2022

PANHANDLE										NORTH CENTRAL										NORTHEAST										WEST CENTRAL										CENTRAL										EAST CENTRAL										SOUTHWEST										SOUTH CENTRAL										SOUTHEAST																																																																																																																																																																	
NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY	NAME	MEAN TEMP	HIGH TEMP	LOW TEMP	DAY	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY																																																																																																																																																																																
<b>PANHANDLE</b>										<b>PANHANDLE</b>										<b>NORTH CENTRAL</b>										<b>NORTHEAST</b>										<b>WEST CENTRAL</b>										<b>CENTRAL</b>										<b>EAST CENTRAL</b>										<b>SOUTHWEST</b>										<b>SOUTH CENTRAL</b>										<b>SOUTHEAST</b>																																																																																																																																																							
Arnett	75.1	97	17	50	26	7	309	.51	.45	10	Goodwell	74.0	99	7	48	26	18	289	.17	.10	14	Alva	76.2	102	21	47	12	5	339	.20	.14	10	May Ranch	75.7	100	21	49	11	9	330	.47	.24	16	Bixby	74.5	100	21	47	27	1	285	1.43	.86	2	Burbank	74.7	101	21	46	12	3	294	.78	.34	1	Porter	75.2	100	21	46	26	3	318	1.24	.94	3	Burlington	74.8	101	21	47	12	3	308	.90	.42	1	Copan	74.9	102	21	46	30	2	300	.77	.37	2	Pryor	72.9	99	21	40	30	6	243	1.61	1.52	2	Foraker	75.2	102	21	50	30	4	308	.27	.13	3	Skiatook	76.1	100	21	54	30	0	334	1.37	.83	1	Inola	74.6	102	21	42	30	3	291	1.39	1.13	2	Talala	75.5	102	21	47	30	1	315	1.05	.82	2	Jay	72.8	96	21	42	30	8	242	1.17	1.07	2	Tulsa	76.5	99	21	51	27	0	345	2.25	1.76	2	Miami	73.6	99	21	41	30	8	265	.88	.82	2	Vinita	73.3	101	21	42	30	5	255	.84	.78	2	Nowata	73.4	101	21	41	30	6	258	1.99	1.39	2	Wynona	75.1	100	21	48	12	0	304	.40	.32	1																						
Bessie	76.5	98	21	52	23	0	344	1.06	.66	1	Erick	76.0	99	21	47	26	0	331	.23	.19	1	Butler	75.5	98	21	46	26	0	316	1.10	.61	1	Putnam	76.3	98	21	51	23	2	341	.53	.47	10	Camargo	75.0	100	21	45	26	3	303	.62	.35	1	Watonga	77.1	98	21	51	23	2	365	.57	.35	10	Cheyenne	75.7	96	21	51	23	2	322	.59	.45	11	Weatherford	76.4	98	21	52	26	0	342	1.10	.59	2	Elk City	76.0	98	21	52	23	0	330	.37	.23	11																																																																																																																																															
Acme	76.5	98	21	46	12	0	344	.33	.29	1	Norman	76.5	98	21	50	12	0	344	1.64	1.41	1	Bristow	73.7	100	21	43	12	3	263	.75	.69	1	Oilton	74.2	101	21	45	26	3	277	1.98	1.30	1	Lake Carl Blac	74.0	99	21	44	12	2	272	.18	.10	10	OKC East	76.1	97	21	50	26	0	332	1.50	1.14	1	Chandler	75.7	99	21	49	12	0	320	1.03	.64	1	Okemah	76.4	100	21	46	12	0	342	.40	.40	1	Chickasha	75.9	98	21	48	26	0	328	1.11	1.09	1	Parkins	76.6	101	21	49	12	0	348	.15	.07	1	El Reno	74.5	101	21	42	12	3	289	.49	.19	1	Seminole	76.5	100	21	48	12	0	344	.79	.78	1	Guthrie	77.0	99	21	49	26	****	****	.28	.18	10	Shawnee	76.9	99	19	50	12	0	358	1.14	.87	1	Kingfisher	76.9	101	21	46	26	0	357	.58	.25	10	Spencer	76.0	97	21	52	12	0	330	1.85	1.02	1	Marena	76.0	99	21	51	26	0	331	****	****	***	Stillwater	75.8	101	21	47	12	0	325	.22	.14	11	Minco	76.0	97	21	53	23	0	329	1.31	.80	1	Washington	75.2	97	24	50	12	0	307	1.89	1.79	1	Marshall	76.2	101	21	47	26	0	336	.30	.19	10	Yukon	75.0	96	21	51	26	0	299	1.13	.50	1
Cookson	75.4	100	21	46	26	0	311	.21	.20	1	Sallisaw	75.1	99	21	42	30	3	306	.75	.73	1	Eufaula	76.3	98	21	48	30	1	341	.08	.06	1	Stigler	75.8	101	20	42	30	4	328	.21	.19	1	Haskell	75.1	101	20	46	12	1	303	.74	.59	1	Stuart	77.5	100	24	48	30	0	375	.84	.58	2	Hectorville	76.7	102	21	51	12	0	352	1.83	1.17	2	Tahlequah	73.5	98	21	41	30	6	261	1.08	1.03	2	Holdenville	77.5	99	21	51	30	0	376	.48	.38	1	Webbers Falls	****	***	***	***	***	****	****	.60	.34	1	McAlester	76.4	100	21	45	30	1	342	.22	.16	1	Westville	72.8	96	21	43	30	8	240	1.59	1.43	2	Okmulgee	74.8	100	21	43	30	2	295	.26	.40	1																																																																																																			
Altus	78.3	98	21	52	26	0	399	.34	.32	1	Hollis	78.5	99	17	52	26	0	404	.03	.03	1	Apache	75.9	96	21	51	30	0	327	.48	.40	1	Mangum	76.0	98	21	46	26	0	330	2.33	2.30	1	Fort Cobb	****	***	***	***	***	****	****	1.98	1.89	1	Medicine Park	78.0	98	21	56	30	0	389	.13	.10	1	Grandfield	78.7	100	21	53	26	0	412	.03	.03	1	Tipton	77.5	98	21	50	26	0	376	.07	.04	1	Hinton	75.5	99	21	50	26	0	316	.70	.42	1	Walters	76.9	97	21	53	27	0	358	.42	.33	2	Hobart	77.5	99	21	49	26	0	376	.96	.80	1																																																																																																																									
Ada	76.4	100	21	48	12	0	341	.92	.52	1	Lane	76.2	99	21	46	30	0	335	.27	.15	1	Ardmore	76.9	98	21	51	30	0	356	.60	.59	4	Madill	76.6	97	21	48	27	0	349	.32	.29	4	Burneyville	76.0	100	21	45	27	0	329	.65	.64	4	Newport	77.3	97	21	52	30	0	368	.30	.27	4	Byars	77.2	98	20	54	12	0	366	.40	.20	1	Pauls Valley	76.9	99	21	50	12	0	357	.75	.50	4	Centrahoma	77.2	101	21	46	12	0	365	.38	.31	1	Ringling	76.6	96	21	53	27	0	349	.77	.70	1	Durant	77.9	99	21	51	30	0	387	.46	.40	4	Sulphur	77.1	100	21	49	26	0	362	.34	.30	4	Fittstown	75.6	98	21	48	12	0	317	2.36	1.17	1	Tishomingo	76.5	99	21	48	30	0	345	.07	.05	4	Ketchum Ranch	77.0	98	21	53	27	0	361	.83	.83	1	Waurika	76.8	97	21	51	27	0	354	.08	.06	1																																																																		
Antlers	75.5	100	22	41	30	2	318	.22	.19	1	Mt Herman	74.9	97	22	43	30	3	299	.20	.15	1	Broken Bow	75.2	101	22	42	30	3	308	.16	.13	1	Talihina	75.2	99	21	39	30	3	309	2.34	2.30	1	Clayton	76.3	100	20	42	30	2	340	.54	.53	1	Valliant	75.7	101	22	40	30	3	325	.43	.22	4	Cloudy	****	***	***	***	***	****	****	.20	.19	1	Wilburton	77.2	102	21	46	30	1	366	.62	.33	2	Hugo	77.2	100	22	47	30	0	366	.14	.14	1	Wister	73.9	101	21	36	30	10	278	1.35	1.21	1	Idabel	75.0	98	22	41	30	4	303	1.41	1.39	1																																																																																																																									

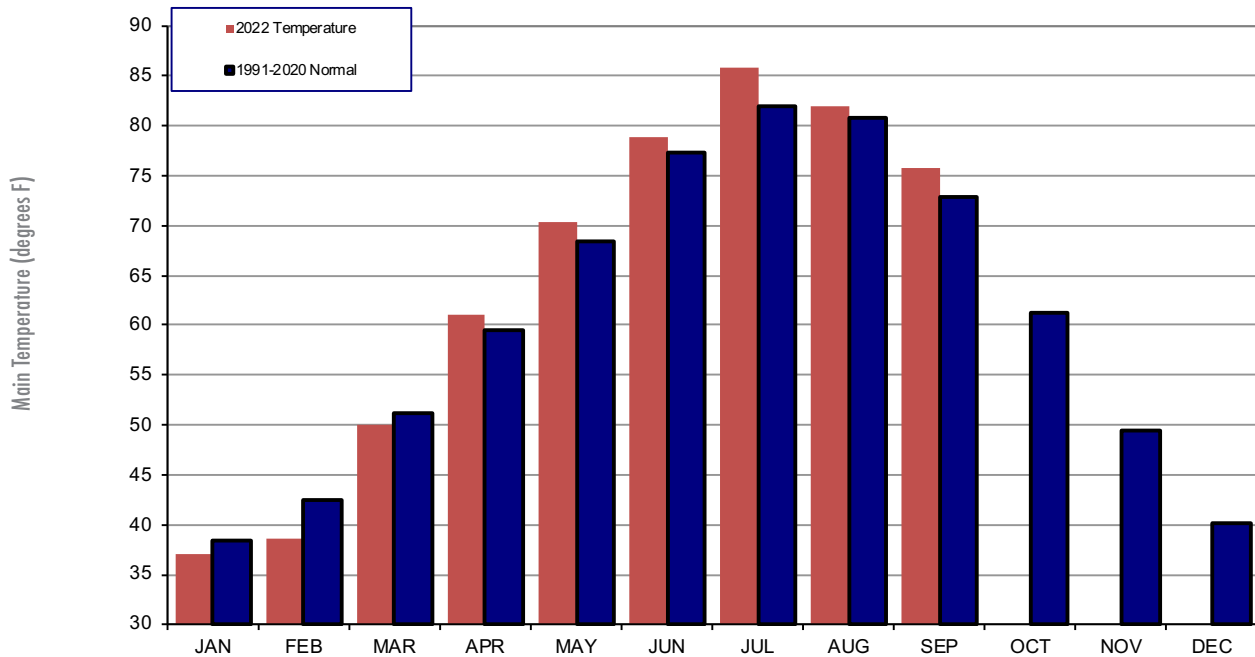
## 2022 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



### September 2022 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Aug-21 (inches)
Panhandle	0.28	-1.28	8th Driest	5.03 (1925)	0.04 (1956)	0.94
North Central	0.58	-1.90	9th Driest	7.43 (1923)	0.07 (2000)	1.52
Northeast	1.14	-2.82	12th Driest	12.12 (1986)	0.29 (1948)	1.51
West Central	0.69	-1.90	14th Driest	8.68 (1923)	0.06 (1956)	0.72
Central	0.91	-2.71	9th Driest	9.81 (1945)	0.21 (1956)	0.69
East Central	0.72	-3.77	5th Driest	10.16 (1993)	0.24 (1948)	1.74
Southwest	0.68	-2.20	13th Driest	8.48 (1936)	0.04 (1939)	0.95
South Central	0.59	-3.33	9th Driest	10.58 (2018)	0.13 (1956)	0.56
Southeast	0.69	-3.56	6th Driest	11.97 (1974)	0.36 (2017)	1.28
Statewide	0.71	-2.61	5th Driest	7.77 (1945)	0.25 (1956)	1.0

## 2022 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



### September 2022 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Aug-21 (F)
Panhandle	73.8	3.8	13th Warmest	76.9 (1931)	62.3 (1974)	74.4
North Central	75.9	3.5	17th Warmest	80.6 (1931)	63.6 (1974)	77.4
Northeast	74.6	2.6	30th Warmest	79.8 (1939)	63.9 (1974)	76.6
West Central	76.1	3.5	15th Warmest	80.2 (1931)	64.5 (1974)	76.9
Central	75.7	2.4	32nd Warmest	81.7 (1931)	64.9 (1974)	77.5
East Central	75.6	2.4	35th Warmest	81.8 (1939)	65.1 (1974)	76.7
Southwest	77.3	2.8	18th Warmest	81.6 (1931)	66.2 (1974)	77.8
South Central	76.8	2.2	34th Warmest	81.8 (1939)	66.6 (1974)	77.2
Southeast	75.6	2.0	32nd Warmest	81.0 (1939)	65.8 (1974)	75.9
Statewide	75.7	2.8	24th Warmest	80.1 (1931)	64.7 (1974)	76.7

## MESONET EXTREMES FOR SEPTEMBER 2022

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	102	17th	Beaver	43	12th	Eva	0.76	Kenton	0.45	10th	Arnett
North Central	102	21st	Red Rock	44	26th	Seiling	1.24	Medford	0.94	3rd	Medford
Northeast	102	21st	Talala	40	30th	Pryor	2.25	Tulsa	1.76	2nd	Tulsa
West Central	100	21st	Camargo	45	26th	Camargo	1.10	Butler	0.66	1st	Bessie
Central	101	21st	Oilton	42	12th	El Reno	1.98	Oilton	1.79	1st	Washington
East Central	102	21st	Hectorville	41	30th	Tahlequah	1.83	Hectorville	1.43	2nd	Westville
Southwest	100	21st	Grandfield	46	26th	Mangum	2.33	Mangum	2.30	1st	Mangum
South Central	101	21st	Centrahoma	45	27th	Burneyville	2.36	Fittstown	1.17	1st	Fittstown
Southeast	102	21st	Wilburton	36	30th	Wister	2.34	Talihina	2.30	1st	Talihina
Statewide	102	21st	Red Rock	36	30th	Wister	2.36	Fittstown	2.30	1st	Talihina

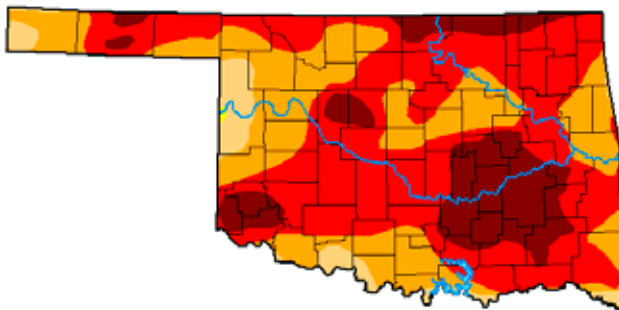
Oklahoma Climate Divisions





# U.S. Drought Monitor Oklahoma

**September 27, 2022**  
(Released Thursday, Sep. 29, 2022)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.00	100.00	99.88	94.44	64.44	17.25
<b>Last Week</b> 09-20-2022	0.03	99.97	98.91	89.25	53.99	13.64
<b>3 Months Ago</b> 06-26-2022	54.09	45.91	30.76	14.79	5.07	1.45
<b>Start of Calendar Year</b> 01-04-2022	5.02	94.98	88.14	72.26	40.44	0.00
<b>Start of Water Year</b> 09-26-2021	6.45	93.55	73.23	23.72	2.65	0.00
<b>One Year Ago</b> 09-28-2021	6.45	93.55	73.23	23.72	2.65	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:  
Richard Heim  
NCEI/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 differs 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

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