Oklahoma Monthly Climate Summary

JUNE 2021

OKLAHOMA CLIMATOLOGICAL SURVEY

A slow start to summer gave way to sweltering heat through the middle of June before once again succumbing to mild, wet weather to end the month. There were occasional bouts with severe weather—mostly high winds and large hail—although flooding was a common concern as well. Winds of up to 75 mph hit Snyder overnight on June 7, producing widespread damage to the town. The Oklahoma Mesonet site at Boise City measured winds in excess of 65 mph for 25 consecutive minutes the evening of June 12. Several homes reported significant roof damage, and the high school gym's roof was partially blown off. Nearly 100 power poles were destroyed between Balko and Elmwood the evening of the 24th due to estimated winds of up to 95 mph. The Mesonet site at Hooker measured a wind gust of 85 mph on the 25th associated with severe storms in the area that toppled trucks on local highways. Unusually heavy rains along the Interstate-44 corridor June 25-30 produced widespread totals of 6-8 inches, and more than a foot of rain in some locations. A volunteer observer near Lawton reported 12.32 inches of rain during that period, and 14.29 inches for the month's highest total. Heavy downpours on the 27th inundated areas of central Oklahoma with flash flooding, resulting in numerous water rescues from stalled vehicles.

The statewide average rainfall total was 4.97 inches according to preliminary data from the Oklahoma Mesonet. That ranked the month as the 34th wettest June since records began in 1895, 0.45 inches above normal. The extreme wet conditions along the I-44 corridor, with totals 4-6 inches above normal, were countered by dry weather that plagued much of the rest of the state. The far southeast was also considerably wetter than normal with surpluses of 6-8 inches. Cloudy led the Mesonet sites with 12.62 inches of rain during the month, but the central Oklahoma stations at Minco and Spencer were close behind with 11.46 and 11.36 inches, respectively. Thirty-nine of the Mesonet's 120 sites recorded at least 6 inches of rain during June. Kenton reported 1.2 inches for the month's lowest total. Another seven sites also recorded less than 2 inches. The first six months of the year ended 0.83 inches above normal with a statewide average of 19.86 inches, the 39th wettest January-June period on record for Oklahoma.

The statewide average temperature still managed to come out on the warm side during June, despite the extended mild weather that bookended the month. The statewide average finished at 77.1 degrees, 0.6 degrees above normal, and ranked as the 59th warmest June on record. Much of the middle of the month was dominated by oppressively hot weather, fueled by high humidity. The Mesonet sites at Eva and Goodwell recorded June's highest readings of 107 degrees on the 23rd, while Boise City reported the lowest temperature of 47 degrees on June 2. Heat index values soared into the low 110s during June's second week, topping out at 113 degrees on the 11th. The Mesonet's 120 sites reported heat index values of at least 105 degrees 369 times during the month, but none coming before June 9 or after June 25. The first six months of the year fell 1.3 degrees below normal with a statewide average of 54.5 degrees, the 36th coolest such period on record.

June 2021 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	107°F	Eva, Goodwell	23
Low Temperature	47°F	Boise City	2
High Precipitation	12.62 in.	Cloudy	--
Low Precipitation	1.20 in.	Buffalo, Kenton	--

June 2021 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2021)
Month (Jun)	77.1°F	0.6°F	59th Warmest
Year-to-Date (Jan-Jun)	54.5°F	-1.3°F	36th Coolest

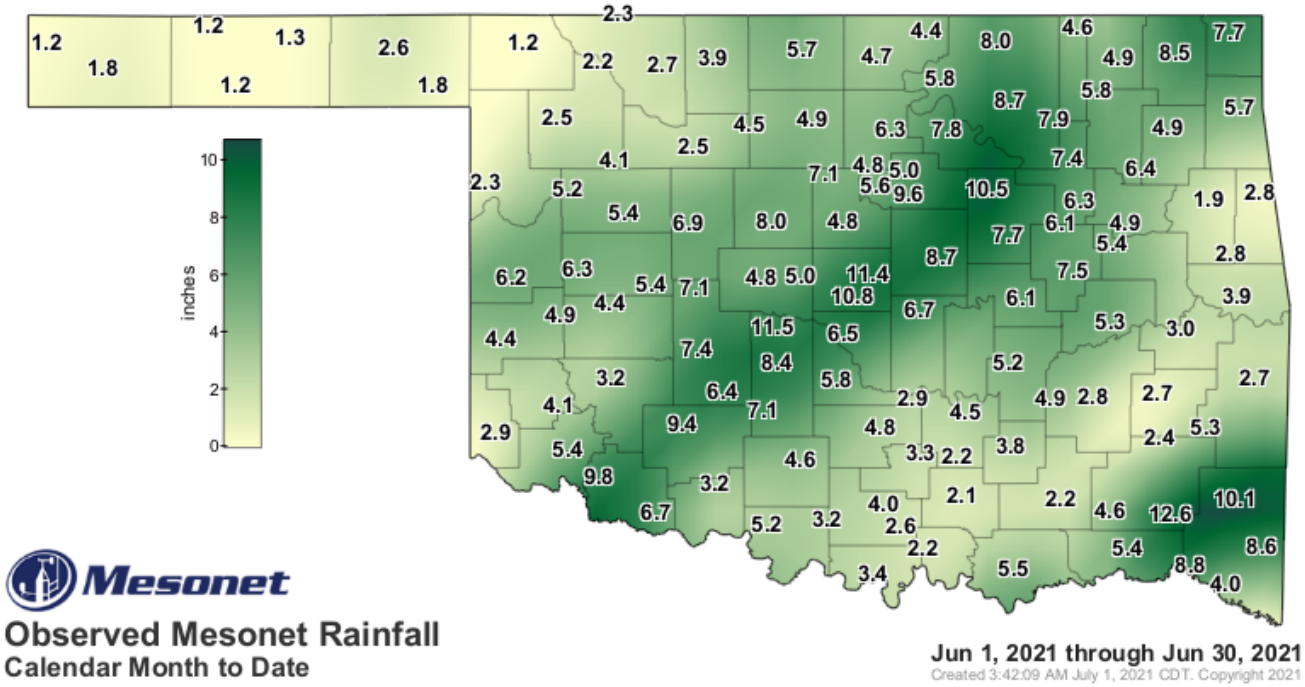
Precipitation

	Total	Depart.	Rank (1895-2021)
Month (Jun)	4.97 in.	0.45 in.	34th Wettest
Year-to-Date (Jan-Jun)	19.86 in.	0.83 in.	39th Wettest

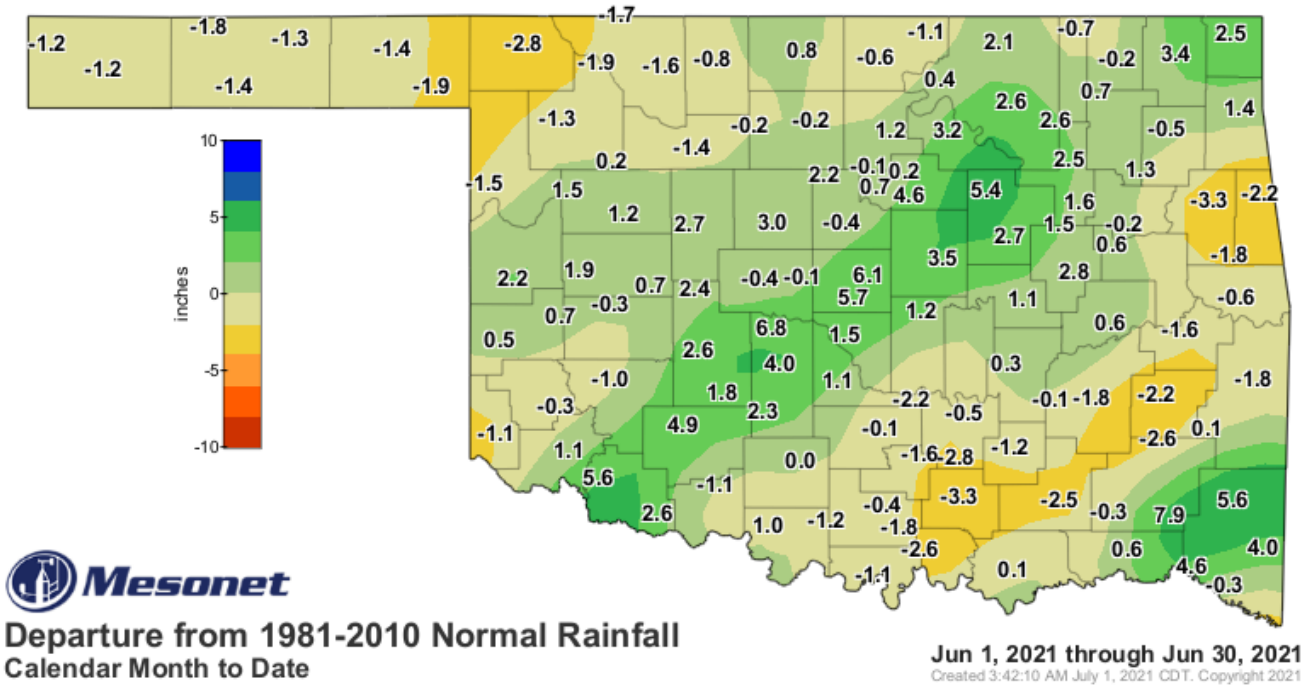
Depart. = departure from 30-year normal

Drought coverage across Oklahoma continued to shrink during June, decreasing from 8 percent of the state in late May to less than 2 percent at the beginning of July. Prospects for complete removal from the state appear favorable according to the July outlooks from the Climate Prediction Center (CPC). Increased odds for above normal precipitation and below normal temperatures cover virtually the entire state, with even greater chances of below normal temperatures across the southern two-thirds of Oklahoma. The possible reduction in heat and increase in moisture lends confidence in complete drought removal across the state by the end of July, as depicted in CPC's monthly drought outlook.

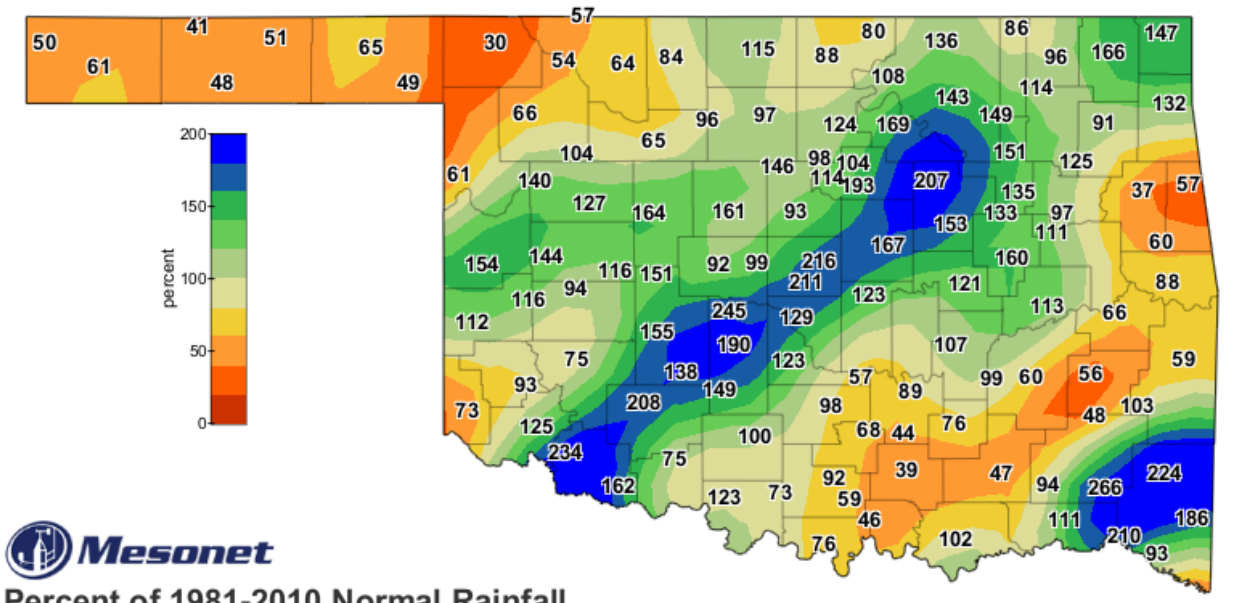
JUNE 2021 OBSERVED PRECIPITATION



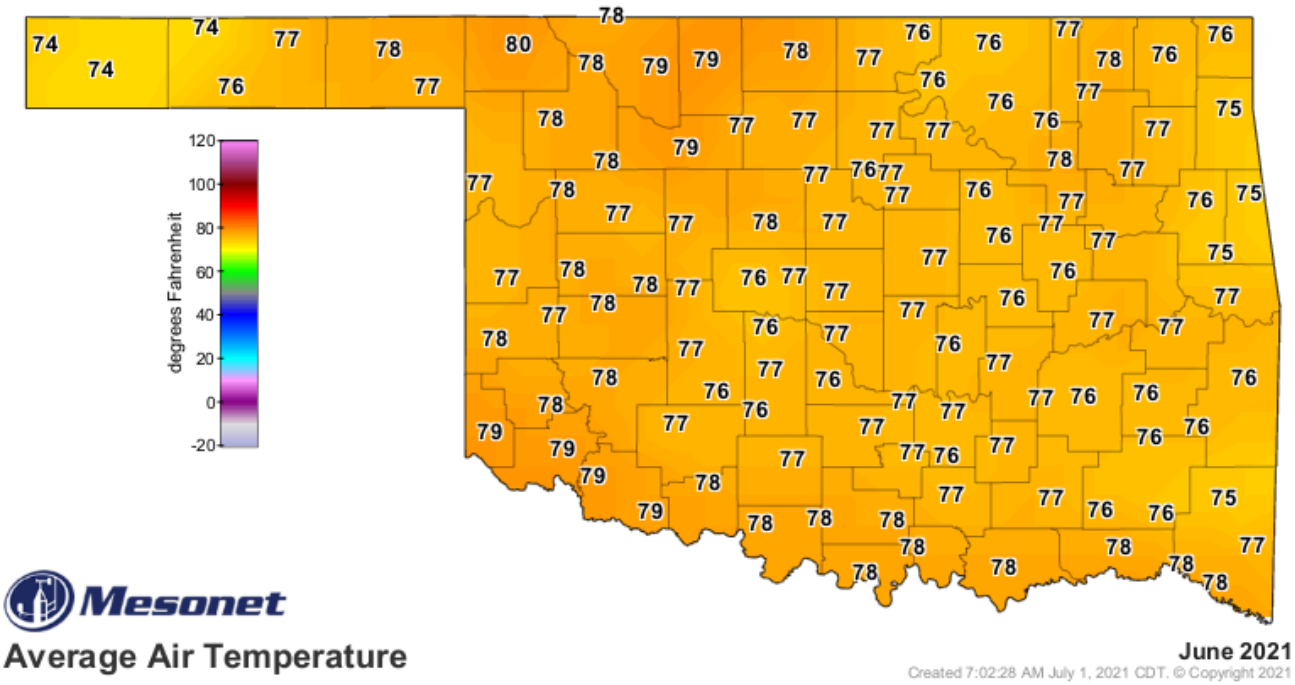
JUNE 2021 DEPARTURE FROM NORMAL PRECIPITATION



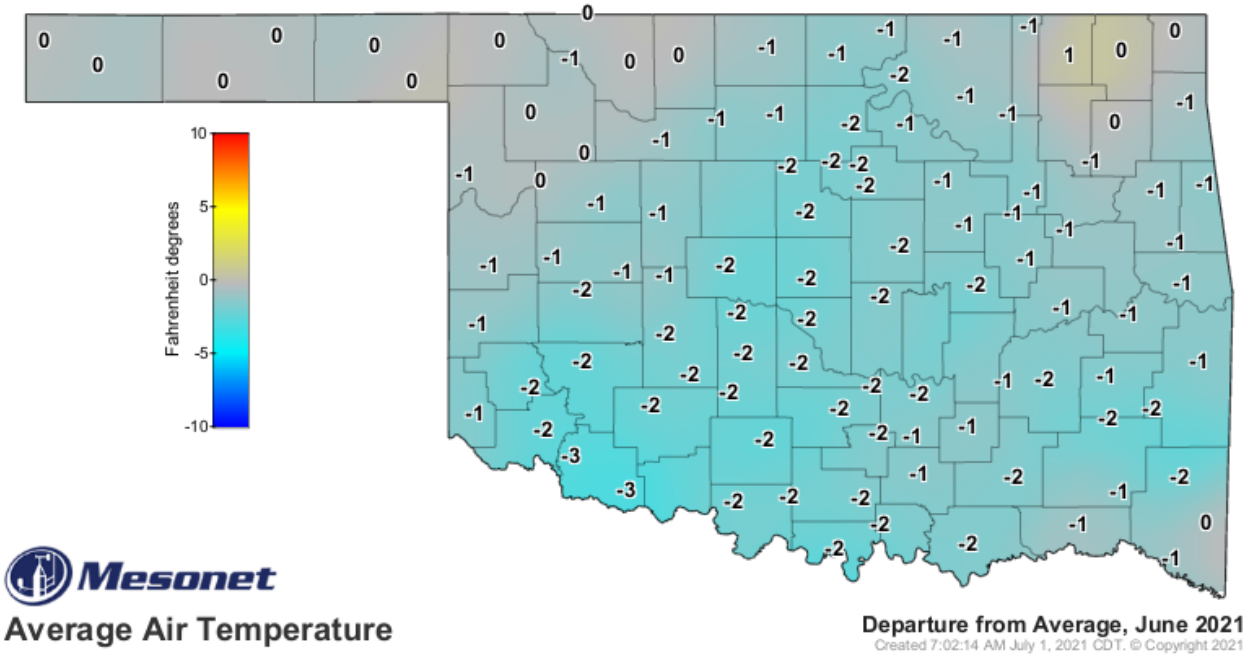
JUNE 2021 PERCENT OF NORMAL PRECIPITATION



JUNE 2021 AVERAGE TEMPERATURE



JUNE 2021 DEPARTURE FROM NORMAL TEMPERATURE

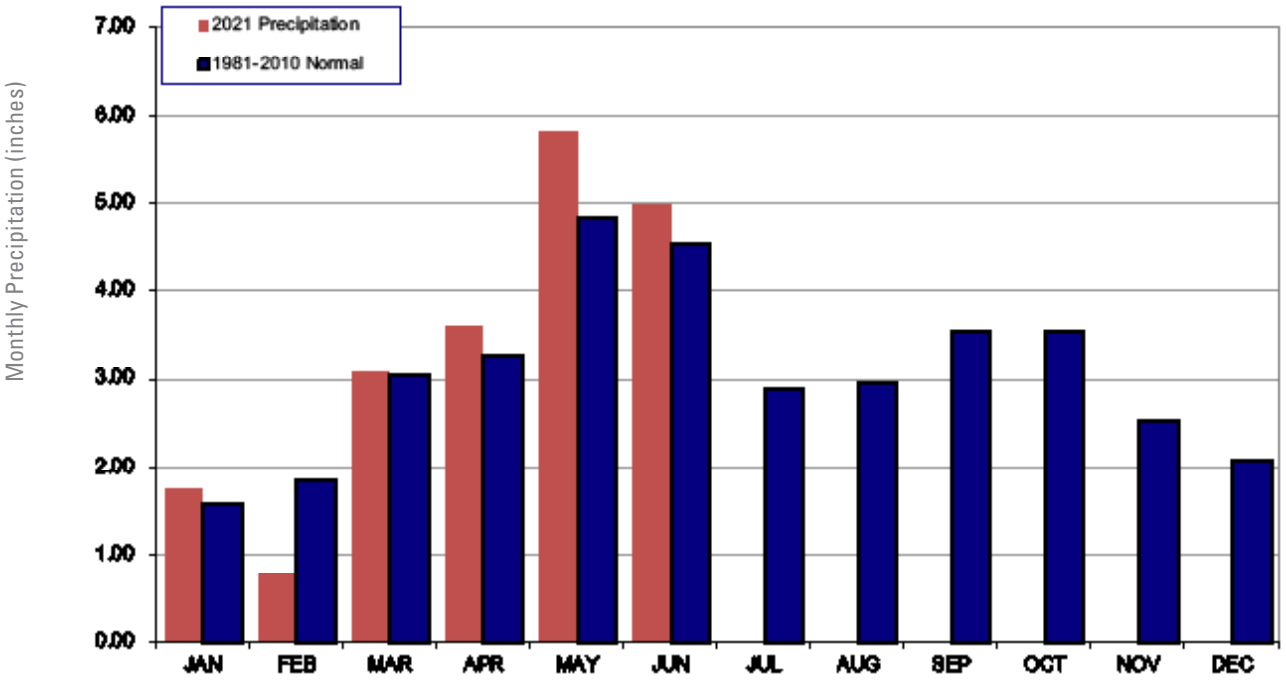


MESONET MONTHLY SUMMARY FOR JUNE 2021

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	77.4	101	20	55	22	2	373	2.25	1.74	25
Beaver	77.7	103	24	53	3	0	380	2.59	1.14	2
Boise City	73.3	105	23	47	2	8	258	1.81	1.46	12
Buffalo	80.1	105	20	56	2	1	453	1.20	.55	21
Eva	73.8	107	23	48	1	7	273	1.21	.62	25
NORTH CENTRAL										
Alva	79.4	106	20	52	2	3	435	2.71	.96	21
Blackwell	77.0	100	20	53	2	0	361	4.73	1.07	27
Breckinridge	77.4	100	20	53	2	3	374	4.94	1.18	26
Cherokee	79.4	105	20	51	1	4	435	3.86	1.02	27
Fairview	79.6	103	20	54	2	1	439	2.54	1.20	26
Freedom	78.6	105	20	52	2	2	410	2.19	.66	27
Lahoma	77.7	102	20	53	2	1	383	4.47	1.80	29
NORTHEAST										
Bixby	77.3	96	17	55	22	2	370	6.26	2.97	27
Burbank	75.6	95	17	53	2	2	319	5.81	1.51	7
Copan	76.8	98	17	53	2	4	357	4.60	2.36	28
Foraker	75.7	94	17	53	2	4	325	8.01	3.64	28
Inola	76.6	96	17	54	22	2	350	6.36	2.07	28
Jay	75.3	93	17	53	22	6	314	5.72	2.63	27
Miami	76.3	95	17	52	22	4	344	7.66	5.51	26
Nowata	77.5	96	17	52	22	****	****	4.93	2.83	26
WEST CENTRAL										
Bessie	78.2	101	24	56	2	0	395	4.40	2.04	26
Butler	78.2	101	20	54	1	1	396	6.28	4.42	26
Camargo	77.7	103	20	52	1	3	383	5.22	1.70	25
Cheyenne	77.5	99	20	55	1	2	376	6.24	1.61	26
Elk City	77.4	99	20	55	1	1	372	4.86	2.23	26
CENTRAL										
Acme	76.7	94	24	51	22	2	355	7.08	1.93	28
Bristow	76.1	94	17	52	3	3	336	7.73	2.33	28
Lake Carl Blac	76.2	99	17	52	3	2	339	4.75	2.21	26
Chandler	77.0	95	17	55	2	2	361	8.68	3.67	26
Chickasha	41.8	97	20	***	3	1	366	8.38	3.42	26
El Reno	75.7	94	24	50	2	4	325	4.81	1.74	26
Guthrie	77.4	98	17	55	2	2	375	4.82	2.41	26
Kingfisher	77.9	102	20	54	2	2	388	7.96	3.20	28
Marena	76.0	95	17	54	2	3	332	5.64	2.52	27
Minco	76.5	93	20	55	2	2	347	11.46	3.71	27
Marshall	77.3	99	20	53	2	1	369	7.05	3.20	26
EAST CENTRAL										
Cookson	75.1	92	17	50	22	5	307	2.75	.62	28
Eufaula	77.5	95	17	55	3	2	378	5.25	3.27	7
Haskell	76.8	96	17	54	3	2	356	5.41	1.93	28
Hectorville	76.8	94	17	54	3	3	357	6.14	3.17	27
Holdenville	77.0	94	17	56	3	3	362	5.23	1.87	28
McAlester	76.6	93	16	53	22	0	348	2.78	.72	28
Okmulgee	76.4	95	17	53	22	3	344	7.52	3.06	7
SOUTHWEST										
Altus	79.4	102	17	56	22	0	433	5.44	2.19	26
Apache	76.9	96	20	54	22	1	357	6.42	2.87	26
Fort Cobb	77.2	98	20	54	22	0	367	7.37	4.25	26
Grandfield	79.1	98	20	56	22	0	423	6.66	2.58	7
Hinton	77.6	100	17	54	2	1	380	7.05	2.31	29
Hobart	78.0	99	24	53	22	0	390	3.19	1.29	27
SOUTH CENTRAL										
Ada	76.7	95	17	53	3	3	354	4.45	2.47	27
Ardmore	78.2	95	17	56	2	2	399	2.62	.68	5
Burneyville	77.8	95	17	53	2	1	384	3.37	1.62	27
Byars	77.0	94	17	55	2	4	365	2.91	.78	21
Centrahoma	77.4	94	17	54	22	1	374	3.82	2.33	28
Durant	78.4	95	17	57	3	0	401	5.45	2.87	5
Fittstown	76.0	93	17	54	3	4	334	2.17	.51	12
Ketchum Ranch	77.2	94	24	54	2	2	369	4.61	1.54	29
SOUTHEAST										
Antlers	77.0	95	13	54	3	0	361	4.55	1.27	7
Broken Bow	77.5	97	13	55	3	0	374	8.61	2.47	8
Clayton	76.8	95	16	55	3	1	355	2.37	.59	8
Cloudy	76.6	94	13	54	3	0	348	12.62	4.88	8
Hugo	78.5	96	13	56	3	0	404	5.36	1.53	5
Idabel	78.6	97	13	57	3	0	408	3.97	.92	8

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	76.3	107	23	49	2	6	344	1.22	.50	12
Hooker	77.2	106	23	53	2	1	369	1.34	.36	25
Kenton	73.7	103	23	48	2	7	269	1.20	.71	12
Slapout	77.7	104	24	56	3	2	381	1.84	.89	30
May Ranch	78.4	103	20	53	2	2	405	2.25	.72	30
Medford	78.3	103	20	56	3	2	399	5.69	1.57	29
Newkirk	76.2	96	17	54	2	2	336	4.36	.91	11
Red Rock	77.0	98	17	55	2	1	360	6.30	3.79	26
Seiling	78.1	102	20	53	2	2	397	4.05	1.56	25
Woodward	78.1	102	20	54	2	3	396	2.54	.95	25
Pawnee	76.6	97	17	53	3	3	353	7.83	3.30	26
Porter	76.9	95	17	54	3	2	360	4.94	1.43	27
Pryor	76.8	96	17	53	22	3	357	4.87	1.87	26
Skiatook	76.7	93	17	55	1	4	354	7.92	4.06	26
Talala	76.9	96	17	55	3	3	359	5.79	3.27	26
Tulsa	78.0	97	17	57	1	3	394	7.44	2.16	27
Vinita	76.3	96	17	52	22	4	344	8.52	4.99	26
Wynona	76.8	96	17	54	2	3	358	8.66	3.13	26
Erick	77.6	101	24	53	22	0	379	4.40	1.73	26
Putnam	77.0	99	24	54	1	2	361	5.40	2.09	26
Watonga	77.9	100	20	55	2	2	391	6.94	2.82	26
Weatherford	78.3	101	20	56	2	0	401	5.38	2.44	26
Norman	77.0	95	24	54	2	3	363	6.54	3.06	26
Oilton	76.0	94	17	53	3	5	336	10.50	4.16	26
OKC East	77.3	95	17	54	2	2	372	10.76	3.71	27
Okemah	76.5	95	17	53	22	4	350	6.08	2.19	7
Perkins	77.4	98	17	55	2	2	375	9.58	3.38	27
Seminole	76.6	93	17	54	3	3	350	4.18	2.11	28
Shawnee	77.4	95	17	55	3	****	****	6.65	2.36	26
Spencer	77.1	95	17	53	2	3	366	11.36	3.58	27
Stillwater	77.2	97	17	54	2	2	368	4.99	1.95	26
Washington	76.7	94	20	54	2	3	354	5.75	1.81	28
Yukon	76.9	96	17	54	2	2	359	4.99	2.01	27
Sallisaw	77.0	94	18	54	3	1	362	3.91	1.35	21
Stigler	76.9	95	17	53	3	1	358	3.02	1.28	7
Stuart	77.1	94	17	55	3	2	366	4.93	2.62	27
Tahlequah	75.5	93	17	51	22	6	320	1.90	.57	27
Webbers Falls	*****	***	***	***	***	****	****	*****	*****	***
Westville	74.7	91	17	52	3	7	299	2.84	.67	21
Hollis	79.4	102	24	55	22	0	432	2.93	1.39	26
Mangum	77.9	100	24	53	22	0	387	4.12	1.59	27
Medicine Park	77.2	94	24	56	2	0	366	9.38	3.61	26
Tipton	43.3	98	19	***	22	0	411	10.22	4.37	26
Walters	78.1	96	20	56	2	0	394	3.22	1.29	27
Lane	77.6	95	13	55	3	0	377	2.18	.79	29
Madill	77.9	94	13	55	2	1	389	2.22	1.58	5
Newport	77.6	94	24	54	2	2	380	3.98	1.33	13
Pauls Valley	77.0	94	13	54	2	3	363	4.80	2.59	28
Ringling	78.2	95	24	55	2	0	396	3.17	.79	12
Sulphur	76.7	94	16	53	3	5	356	3.25	1.06	27
Tishomingo	77.3	94	16	54	3	2	372	2.06	.81	21
Waurika	78.3	95	17	53	2	0	399	5.17	1.38	29
Mt Herman	75.9	93	13	52	3	3	328	10.14	2.55	7
Talihina	76.8	96	17	56	3	2	355	5.27	1.21	27
Valliant	78.3	96	13	55	3	0	398	8.77	3.25	7
Wilburton	76.9	94	17	53	3	1	359	2.72	1.24	8
Wister	76.1	94	17	55	3	2	335	2.69	.76	1

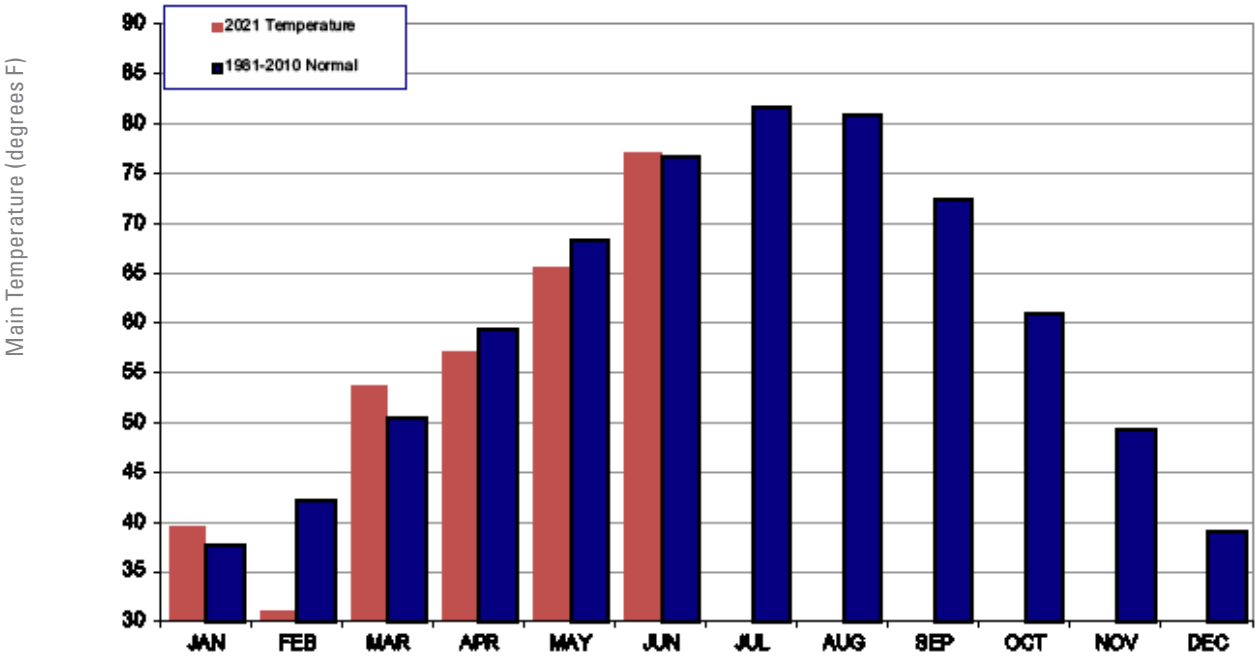
2021 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



June 2021 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jul-20 (inches)
Panhandle	1.63	-1.54	30th Driest	7.09 (1962)	0.29 (1911)	1.28
North Central	3.89	-0.64	54th Wettest	10.87 (2007)	0.40 (1933)	2.11
Northeast	6.58	1.35	26th Wettest	12.64 (2007)	0.28 (1933)	1.29
West Central	5.46	1.31	21st Wettest	8.90 (1962)	0.30 (1933)	2.28
Central	7.26	2.34	19th Wettest	12.63 (2007)	0.41 (1933)	2.14
East Central	4.09	-0.71	55th Driest	12.47 (1935)	0.69 (2011)	1.58
Southwest	6.00	1.73	15th Wettest	9.96 (2007)	0.43 (1911)	3.03
South Central	3.51	-1.22	54th Driest	11.30 (1908)	0.25 (1933)	2.64
Southeast	6.10	1.45	25th Wettest	11.51 (1935)	0.77 (1933)	2.67
Statewide	4.97	0.45	34th Wettest	9.52 (2007)	0.44 (1933)	2.09

2021 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



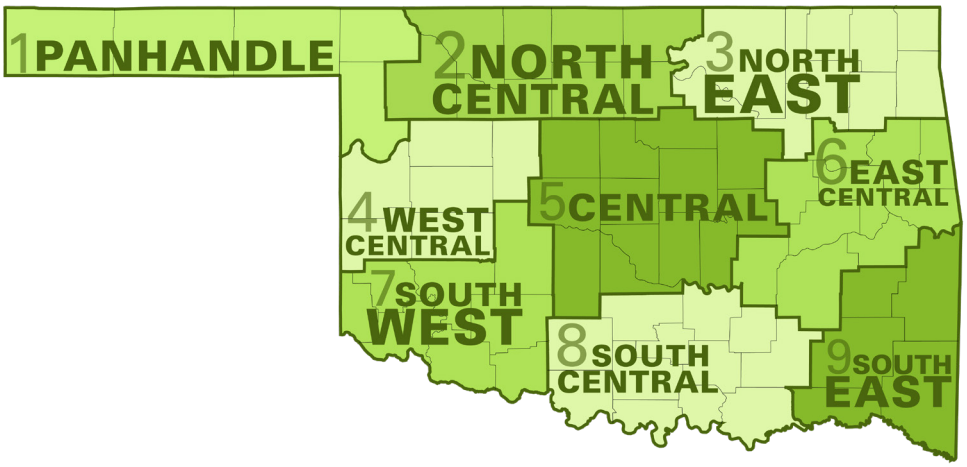
June 2021 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jul-20 (F)
Panhandle	76.4	2.2	33rd Warmest	82.9 (1953)	67.0 (1903)	78.2
North Central	78.1	1.5	38th Warmest	85.2 (1953)	69.1 (1903)	79.6
Northeast	76.6	0.8	57th Warmest	84.4 (1911)	70.3 (1903)	78.3
West Central	77.7	1.0	49th Warmest	85.7 (1953)	70.0 (1903)	79.4
Central	76.6	-0.2	47th Coolest	85.2 (1911)	71.1 (1903)	78.8
East Central	76.5	0.1	53rd Coolest	84.5 (1953)	70.3 (1903)	78.5
Southwest	78.0	-0.3	50th Coolest	87.3 (2011)	72.4 (1903)	79.9
South Central	77.5	-0.4	43rd Coolest	85.7 (1911)	72.0 (1903)	78.7
Southeast	77.2	1.1	54th Warmest	83.5 (1953)	70.6 (1903)	77.6
Statewide	77.1	0.6	59th Warmest	84.8 (1953)	70.3 (1903)	78.8

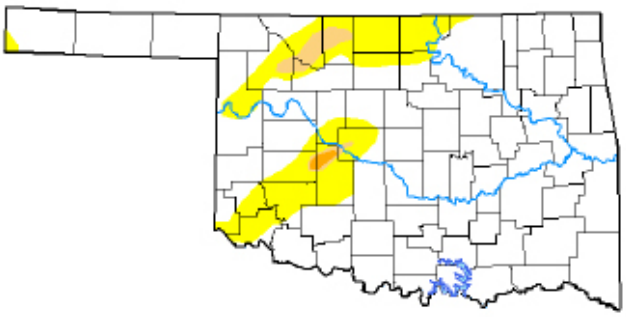
MESONET EXTREMES FOR JUNE 2021

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	107	23rd	Eva	47	2nd	Boise City	2.59	Beaver	1.74	25th	Arnett
North Central	106	20th	Alva	51	1st	Cherokee	6.30	Red Rock	3.79	26th	Red Rock
Northeast	98	17th	Copan	52	22nd	Vinita	8.66	Wynona	5.51	26th	Miami
West Central	103	20th	Camargo	52	1st	Camargo	6.94	Watonga	4.42	26th	Butler
Central	102	20th	Kingfisher	50	2nd	El Reno	11.46	Minco	4.16	26th	Oilton
East Central	96	17th	Haskell	50	22nd	Cookson	7.52	Okmulgee	3.27	7th	Eufaula
Southwest	102	24th	Hollis	53	22nd	Mangum	10.22	Tipton	4.37	26th	Tipton
South Central	95	17th	Burneyville	53	2nd	Burneyville	5.45	Durant	2.87	5th	Durant
Southeast	97	13th	Broken Bow	52	3rd	Mt Herman	12.62	Cloudy	4.88	8th	Cloudy
Statewide	107	23rd	Eva	47	2nd	Boise City	12.62	Cloudy	5.51	26th	Miami

Oklahoma Climate Divisions



U.S. Drought Monitor
Oklahoma



June 29, 2021
(Released Thursday, Jul. 1, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	84.11	15.89	1.77	0.24	0.00	0.00
Last Week 06-22-2021	75.77	24.23	5.75	0.74	0.00	0.00
3 Months Ago 03-30-2021	63.05	36.95	10.71	3.42	0.08	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 06-30-2020	34.87	65.13	43.03	15.39	4.46	0.10

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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National Drought Mitigation Center

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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