Oklahoma Monthly Climate Summary

OCTOBER 2020

OKLAHOMA CLIMATOLOGICAL SURVEY

A historic winter ice storm struck the state during the last week of October, leaving nearly 400,000 residences and businesses without power. The extreme nature of the event – arguably the most impactful early-season winter storm in the history of Oklahoma – was punctuated by heavy snow in the Panhandle and flooding rains in eastern sections of the state. Trees, still burdened with a full head of leaves so early in the season, were easy prey for radial ice accumulations of up to 3 inches across western and central Oklahoma. Downed branches felled power lines, clogged streets and snarled traffic. The power lines themselves sagged and fell under the weight of the frozen accumulation. Many school districts in the ice storm's footprint closed for the remainder of the week due to continued challenges with debris and lack of power. Areas to the west received more sleet and snow than freezing rain, and areas to the east were inundated with cold, flooding rains. Snow and sleet totals across far western Oklahoma were generally between 2-4 inches, although as much as 9 inches was reported in localized areas. The frigid weather that came with the storm was as historic as the ice. Record low minimum and maximum temperatures were shattered across western Oklahoma October 26-27. Highs in the Panhandle on the 26th only rose into the low to mid-20s, breaking their previous record low maximum temperature by 15-20 degrees. The Oklahoma Department of Emergency Management and Homeland Security reported 132 injuries as a result of the storm, with 58 of those from falls and another 28 due to motor vehicle accidents.

The late winter storm provided the first significant moisture since early September for much of western Oklahoma. According to preliminary data from the Oklahoma Mesonet, the statewide average total for the month ended at 3.37 inches, 0.17 inches above normal, to rank as the 45th wettest October since records began in 1895. Individual amounts from Mesonet sites ranged from 6.9 inches in Cookson to 0.57 inches in Kenton. Despite the deluge, parts of southern Oklahoma were still 2-3 inches below normal for the month. The late burst of moisture helped propel the January-October statewide average to 35.75 inches, 3.82 inches above normal, to rank as the 21st wettest January-October on record. That surplus was mostly built on gaudy totals 10-20 inches above normal across the southeastern half of the state, however. The western Panhandle and parts of west central Oklahoma had deficits of 7-10 inches over the first 10 months of the year.

The month began on the cool side and finished on the frigid side, resulting in a statewide average temperature of 57.8 degrees, 3.1 degrees below normal, to rank as the 13th coolest October on record. The state's first freeze of the season came at Eva and Hooker on the 12th – just a few days earlier than average – when each bottomed out at 32 degrees. On the other side of the thermometer, 2020's presumable final triple-digit readings came on the 14th when Altus, Hollis and Mangum each reached 100 degrees. Grandfield and Hollis each recorded 102 degrees on the 11th for the month's highest reading. Boise City and Kenton reported the lowest temperature of the month at 14 degrees on the 26th. The

October 2020 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	102°F	Grandfield, Hollis	11
Low Temperature	14°F	Boise City, Kenton	26
High Precipitation	6.90 in.	Cookson	--
Low Precipitation	0.57 in.	Kenton	--

October 2020 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2020)
Month (October)	57.8°F	-3.1°F	13th Coolest
Season-to-Date (Sept-Oct)	63.9°F	-2.6°F	7th Coolest
Year-to-Date (Jan-Oct)	63.4°F	0.4°F	47th Warmest

Precipitation

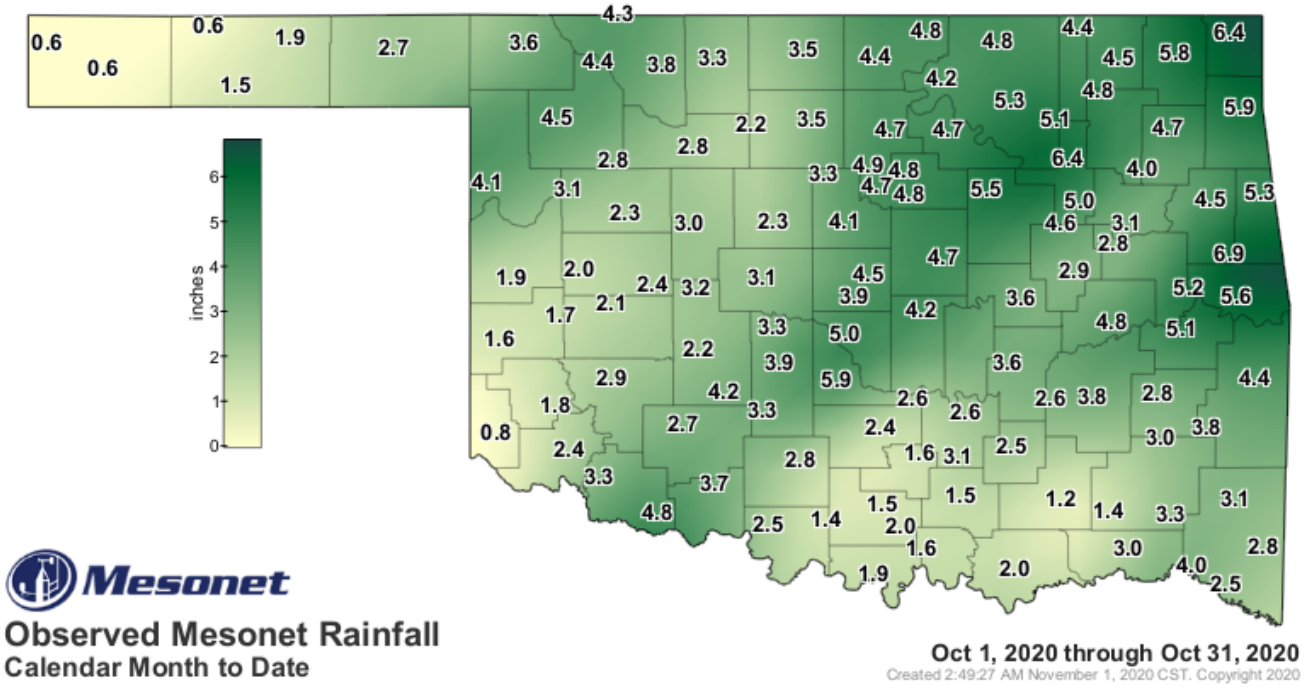
	Total	Depart.	Rank (1895-2020)
Month (October)	3.34 in.	-0.20 in.	45th Wettest
Season-to-Date (Sept-Oct)	7.66 in.	0.59 in.	37th Wettest
Year-to-Date (Jan-Oct)	35.75 in.	3.82 in.	21st Wettest

Depart. = departure from 30-year normal

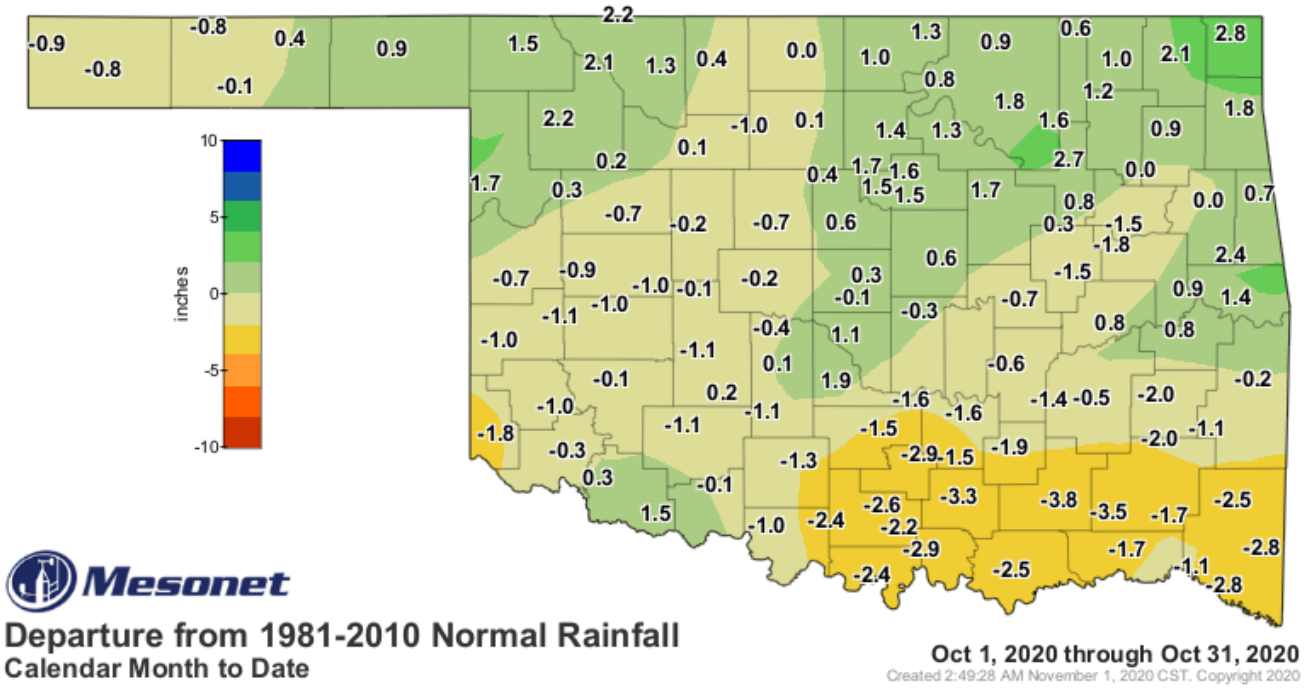
statewide average year-to-date temperature of 63.4 degrees was 0.4 degrees above normal to rank as the 47th warmest January-October on record.

Drought surged during October before abating somewhat due to the late-month moisture. Drought coverage reached a high of 38% of the state on October 20 according to the U.S. Drought Monitor, up from 18% at the end of September. The month's final map on October 27 reflected improvements with drought coverage down to 32% of the state. The outlook for further drought improvement is slim through November for much of the remaining drought area, according to the Climate Prediction Center (CPC). CPC's November outlooks indicate increased odds of above normal temperature and below normal precipitation for Oklahoma. Their November drought outlook does see some drought improvement across the northwest, but that is for moisture from late October not yet accounted for in the latest Drought Monitor map. The remaining area of drought is expected to persist through November.

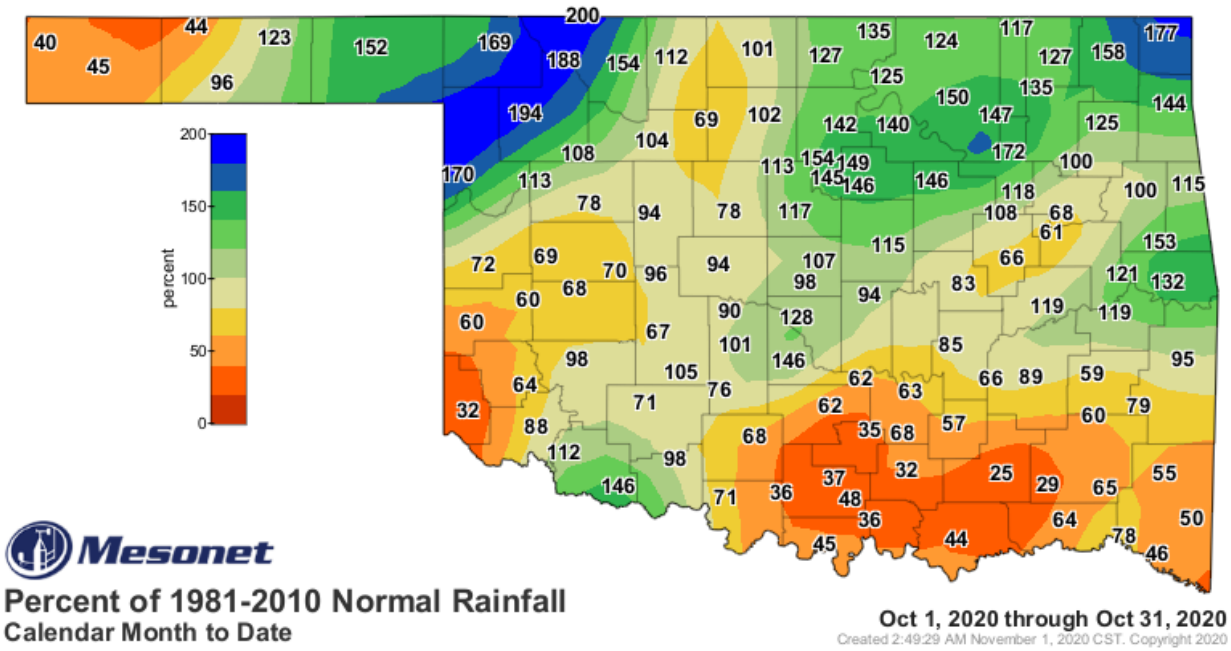
OCTOBER 2020 OBSERVED PRECIPITATION



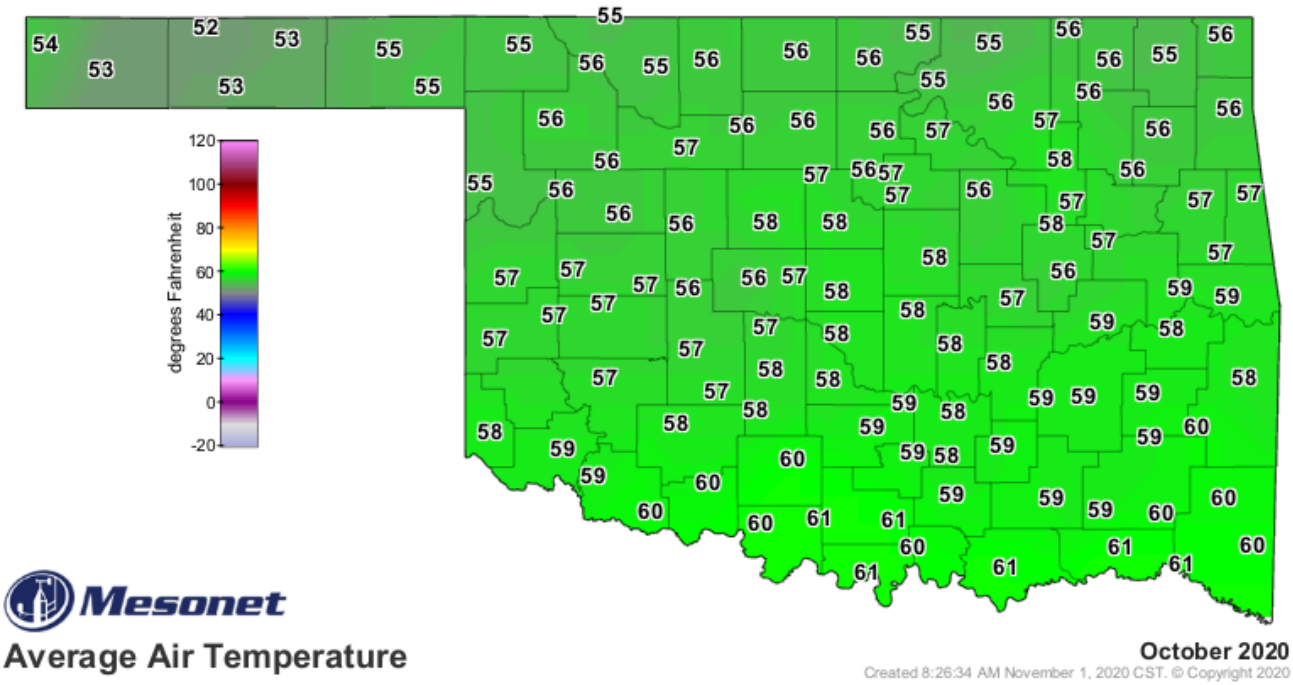
OCTOBER 2020 DEPARTURE FROM NORMAL PRECIPITATION



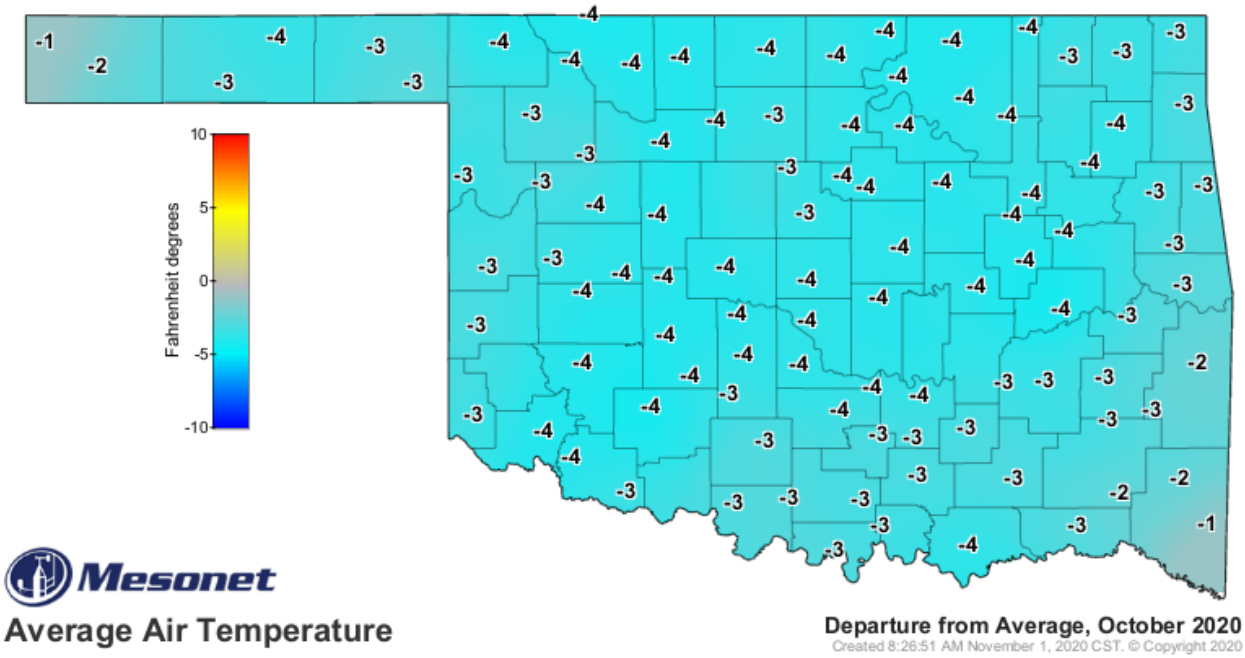
OCTOBER 2020 PERCENT OF NORMAL PRECIPITATION



OCTOBER 2020 AVERAGE TEMPERATURE



OCTOBER 2020 DEPARTURE FROM NORMAL TEMPERATURE

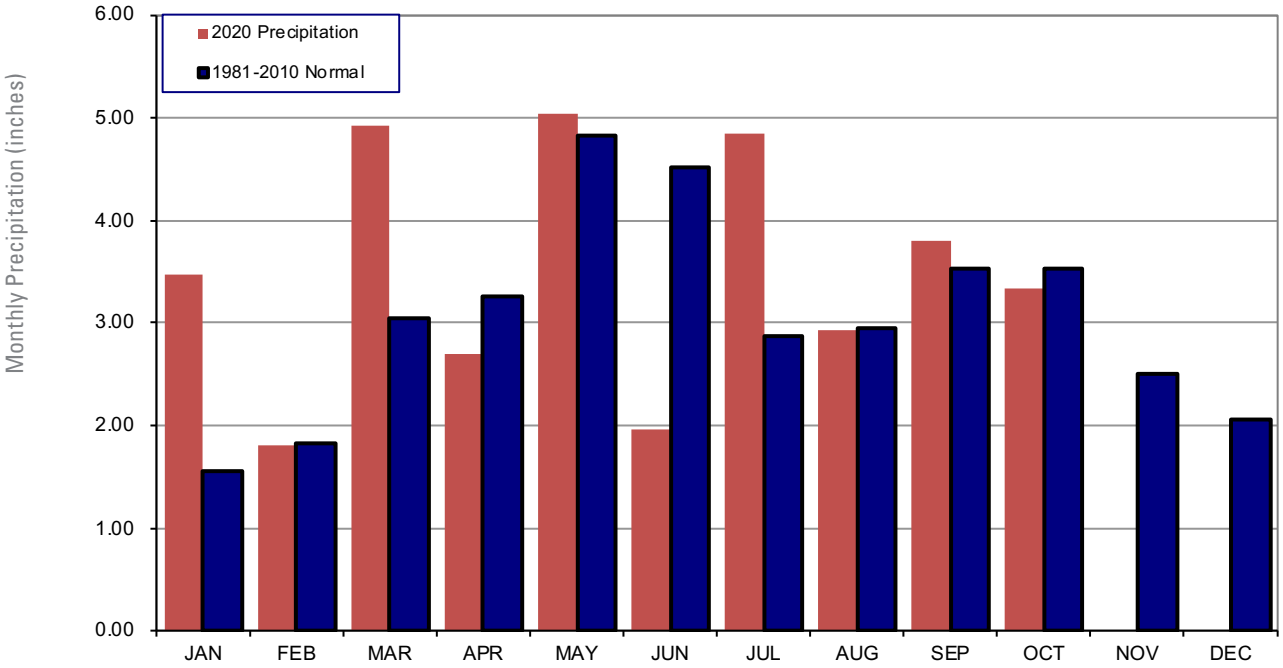


MESONET MONTHLY SUMMARY FOR OCTOBER 2020

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	56.3	98	11	20	27	332	62	4.05	2.14	29
Beaver	55.5	97	7	18	27	352	59	2.68	2.31	28
Boise City	53.6	92	7	14	26	382	28	.62	.59	28
Buffalo	55.9	98	11	20	24	343	62	3.57	2.77	28
Eva	53.1	96	14	16	26	402	33	.64	.52	28
NORTH CENTRAL										
Alva	55.9	97	14	23	26	****	****	3.81	2.19	28
Blackwell	56.5	93	14	28	26	318	53	4.43	2.60	28
Breckinridge	57.1	92	11	27	27	306	60	3.54	1.94	28
Cherokee	56.5	93	14	24	26	316	53	3.33	1.88	28
Fairview	57.2	95	14	25	26	302	59	2.75	1.46	28
Freedom	56.5	98	11	23	26	328	65	4.40	2.74	28
Lahoma	57.0	93	11	26	26	306	56	2.19	1.51	28
NORTHEAST										
Bixby	57.6	88	11	31	30	278	49	5.02	2.42	26
Burbank	55.8	91	14	28	27	327	42	4.15	1.72	28
Copan	56.6	88	14	29	27	316	54	4.41	1.31	28
Foraker	55.9	90	14	27	27	328	45	4.77	2.07	28
Inola	56.9	86	11	29	30	294	43	3.99	1.99	26
Jay	56.8	88	11	30	30	304	51	5.94	2.24	26
Miami	56.1	89	11	29	30	322	46	6.40	1.94	26
Nowata	56.0	88	11	27	30	325	46	4.53	1.39	27
WEST CENTRAL										
Bessie	57.6	97	14	24	27	295	66	2.10	1.17	29
Butler	57.2	98	11	24	27	309	66	2.02	1.08	28
Camargo	55.9	99	11	23	27	338	55	3.05	1.58	28
Cheyenne	57.6	98	11	22	27	307	76	1.85	1.07	28
Elk City	57.7	98	11	23	27	292	67	1.69	.80	28
CENTRAL										
Acme	59.1	94	11	28	27	263	80	3.31	2.17	26
Bristow	*****	***	***	***	***	****	****	*****	*****	***
Lake Carl Blac	56.8	92	14	27	30	307	52	4.92	2.17	28
Chandler	58.8	89	11	29	27	257	65	4.65	2.13	26
Chickasha	58.3	96	11	29	27	271	64	3.93	1.67	26
El Reno	56.6	92	11	26	27	313	53	3.10	1.17	29
Guthrie	58.9	92	11	28	27	264	76	4.13	1.64	28
Kingfisher	57.9	95	11	27	27	284	62	2.33	.70	28
Marena	57.8	91	11	28	27	283	59	4.70	1.72	28
Minco	58.0	92	11	26	27	277	61	3.27	1.10	28
Marshall	57.9	92	11	28	27	285	65	3.29	1.85	28
EAST CENTRAL										
Cookson	57.4	84	11	30	30	277	42	6.90	3.33	26
Eufaula	58.9	86	11	33	30	240	51	4.84	2.93	26
Haskell	57.2	87	11	31	30	282	41	2.81	1.48	26
Hectorville	58.7	88	7	31	27	260	65	4.61	2.14	26
Holdenville	58.9	87	11	32	27	248	60	3.55	1.63	26
McAlester	59.0	87	11	30	30	240	55	3.83	1.53	26
Okmulgee	56.9	88	11	29	30	292	39	2.86	1.52	26
SOUTHWEST										
Altus	59.7	101	11	26	27	243	78	2.40	.55	27
Apache	58.4	92	11	26	27	271	65	4.18	1.75	26
Fort Cobb	58.0	94	14	27	27	277	62	2.21	1.23	29
Grandfield	61.3	102	11	29	27	213	98	4.81	1.78	23
Hinton	57.1	93	11	24	27	308	62	3.20	1.68	29
Hobart	58.1	95	14	25	27	278	64	2.93	1.37	29
SOUTH CENTRAL										
Ada	59.0	89	11	30	30	251	63	2.63	1.03	26
Ardmore	60.7	92	11	33	30	205	71	2.04	1.05	26
Burneyville	60.9	95	11	30	30	215	87	1.94	.77	26
Byars	60.0	90	11	30	27	230	74	2.58	1.28	26
Centrahoma	59.5	89	11	30	30	229	57	2.48	.98	26
Durant	61.1	90	11	33	30	192	71	1.99	.88	28
Fittstown	58.6	88	11	31	27	248	49	3.09	1.82	26
Ketchum Ranch	60.4	94	11	30	27	225	84	2.84	1.11	28
SOUTHEAST										
Antlers	59.4	88	11	31	30	223	49	1.44	.60	28
Broken Bow	61.0	86	10	34	30	182	59	2.80	2.01	28
Clayton	59.6	87	11	32	30	222	53	2.95	1.67	28
Cloudy	60.0	86	11	32	30	207	50	3.25	2.38	28
Hugo	60.9	88	11	35	30	188	61	2.97	2.18	28
Idabel	*****	***	***	***	***	****	****	2.46	1.74	28

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	54.2	97	14	17	27	374	41	1.49	.73	29
Hooker	54.2	95	7	17	27	375	40	1.92	1.48	28
Kenton	54.0	92	14	14	26	372	31	.57	.52	28
Slapout	56.4	96	7	19	27	337	70	*****	*****	***
May Ranch	55.6	94	7	22	26	348	57	4.31	3.44	28
Medford	56.6	93	14	26	26	313	53	3.50	2.00	28
Newkirk	55.9	91	14	27	27	326	42	4.82	2.59	28
Red Rock	57.3	93	14	28	27	298	59	4.72	2.50	28
Seiling	56.7	96	11	23	27	332	74	2.84	1.40	28
Woodward	57.2	99	11	21	27	326	83	4.50	2.26	28
Pawnee	57.8	91	14	28	27	290	66	4.65	1.70	28
Porter	58.1	88	11	31	30	264	49	3.14	1.76	26
Pryor	56.4	87	11	30	30	306	41	4.67	2.10	26
Skiatook	58.3	88	7	30	27	280	71	5.06	1.64	26
Talala	57.0	88	11	31	27	303	54	4.78	1.65	26
Tulsa	58.7	87	7	32	27	261	66	6.44	2.48	26
Vinita	55.6	89	11	28	30	332	41	5.75	1.49	26
Wynona	57.1	90	14	29	27	299	54	5.29	2.22	28
Erick	56.9	100	11	23	27	313	63	1.56	1.13	28
Putnam	56.6	95	14	23	27	329	67	2.34	1.26	29
Watonga	57.2	93	11	24	27	313	70	3.01	1.71	29
Weatherford	57.4	93	14	24	27	304	69	2.39	1.19	29
Norman	59.2	91	11	29	27	253	72	5.00	2.05	28
Oilton	56.5	89	11	29	30	****	****	5.50	2.00	26
Oklahoma City	58.9	91	11	28	27	261	71	3.94	1.57	26
Okemah	57.7	87	11	30	30	275	50	3.61	2.07	26
Perkins	58.6	92	11	29	27	268	71	4.83	1.82	28
Seminole	58.8	89	11	31	30	254	60	3.64	2.07	26
Shawnee	58.7	88	11	29	27	257	63	4.20	2.32	26
Spencer	59.2	90	11	28	27	257	78	4.49	1.73	26
Stillwater	57.9	92	14	29	27	281	62	4.80	1.77	28
Washington	59.1	93	11	29	27	243	62	5.86	2.89	26
Yukon	58.1	92	11	27	27	282	68	*****	*****	***
Sallisaw	59.3	87	11	31	30	229	52	5.55	2.34	26
Stigler	58.4	87	11	32	30	247	42	5.05	2.60	26
Stuart	59.2	88	11	32	30	236	56	2.64	1.54	26
Tahlequah	57.1	85	11	29	30	284	40	4.51	1.57	26
Webbers Falls	59.0	89	11	32	30	230	44	5.22	3.18	26
Westville	57.1	84	11	30	30	286	41	5.26	1.90	26
Hollis	59.2	102	11	25	27	257	78	.82	.55	28
Mangum	*****	***	***	***	***	****	****	1.82	.77	28
Medicine Park	25.4	93	14	***	21	240	72	2.65	1.14	26
Tipton	60.1	100	11	27	27	236	86	3.29	1.01	26
Walters	60.5	98	11	29	27	225	86	3.72	1.59	26
Lane	59.9	89	11	31	30	216	56	1.24	.49	26
Madill	60.8	92	11	31	30	208	77	1.58	.51	26
Newport	60.8	92	11	32	27	204	73	1.54	.68	26
Pauls Valley	59.9	92	11	31	27	230	73	2.43	1.00	26
Ringling	61.1	95	11	30	30	210	89	1.36	.52	28
Sulphur	59.5	91	11	29	30	240	69	1.55	.61	26
Tishomingo	59.2	90	11	31	30	231	52	1.54	.49	26
Waurika	61.1	97	11	30	30	215	93	2.45	.75	27
Mt Herman	59.9	84	11	33	30	209	51	3.08	2.10	28
Talihina	59.7	88	11	31	30	220	57	3.83	2.57	28
Valliant	61.0	89	11	32	30	185	62	4.01	2.39	28
Wilburton	59.1	88	11	31	30	239	55	2.80	1.23	28
Wister	58.5	87	11	32	31	236	36	4.35	3.03	28

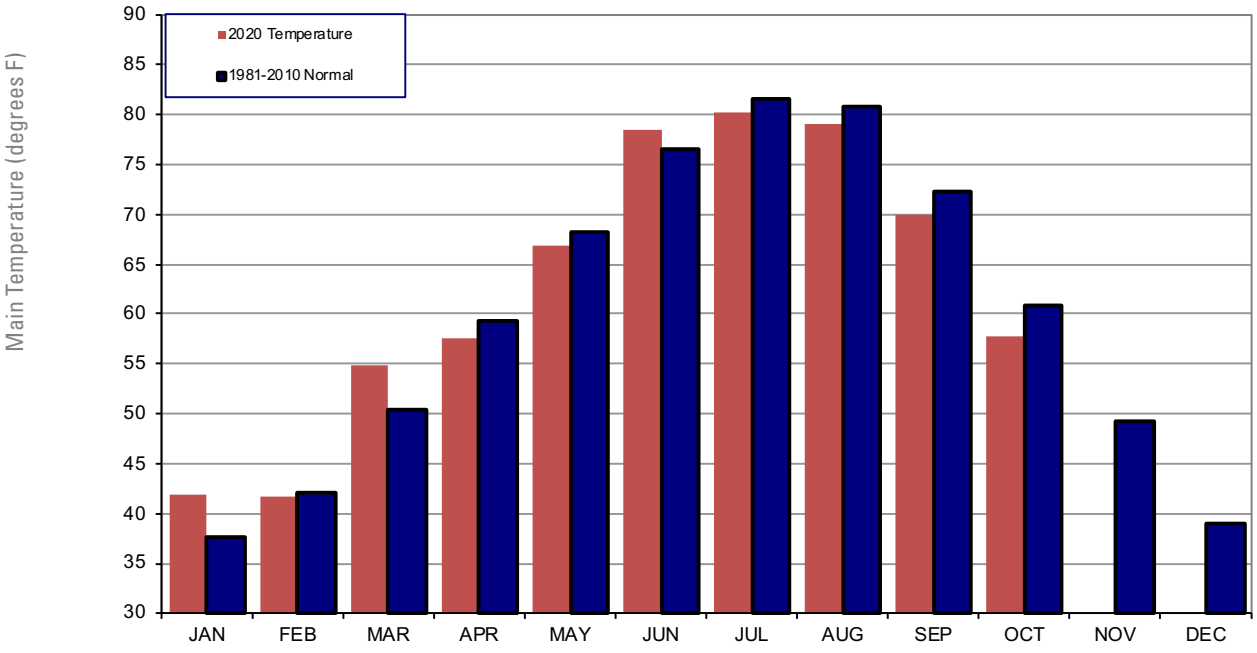
2020 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



October 2020 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Oct-19 (inches)
Panhandle	1.94	0.24	33rd Wettest	6.84 (1923)	0.03 (2001)	2.05
North Central	3.78	0.87	23rd Wettest	8.97 (1998)	0.00 (1952)	3.59
Northeast	4.94	1.16	29th Wettest	14.98 (1941)	0.05 (1952)	6.53
West Central	2.22	-0.54	53rd Wettest	9.57 (1923)	0.00 (1952)	1.77
Central	4.18	0.43	31st Wettest	13.34 (1941)	0.03 (1952)	4.31
East Central	4.43	-0.01	48th Wettest	14.00 (1941)	0.15 (1963)	9.34
Southwest	2.91	-0.24	43rd Wettest	11.03 (1983)	0.00 (1952)	1.19
South Central	2.08	-2.29	42nd Driest	14.83 (1981)	0.09 (1921)	5.64
Southeast	3.09	-1.87	54th Driest	12.89 (1984)	0.20 (1924)	8.14
Statewide	3.34	-0.20	45th Wettest	10.75 (1941)	0.14 (1952)	4.74

2020 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



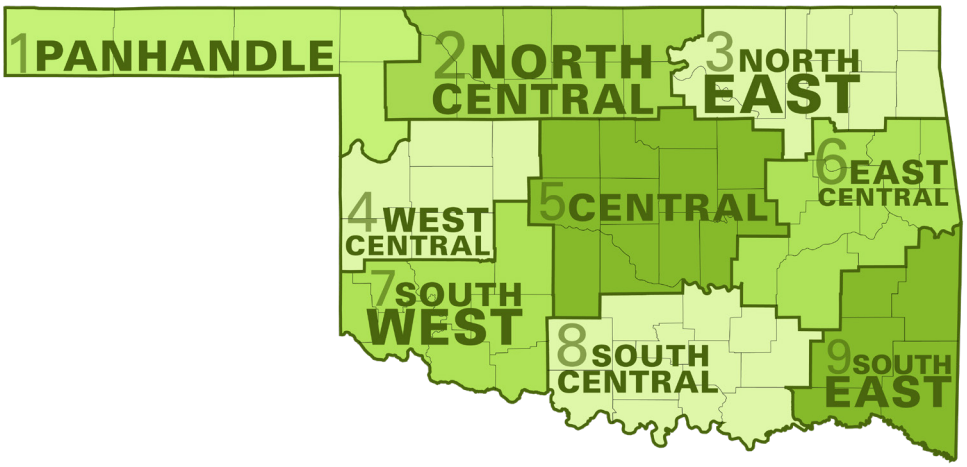
October 2020 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Oct-19 (F)
Panhandle	54.8	-2.6	18th Coolest	65.9 (1963)	50.1 (1925)	51.5
North Central	56.3	-3.4	13th Coolest	68.9 (1963)	51.6 (1925)	55.6
Northeast	56.9	-3.3	11th Coolest	70.2 (1963)	53.9 (1925)	56.9
West Central	57.1	-3.2	15th Coolest	68.5 (1963)	52.1 (1925)	55.6
Central	58.1	-3.3	13th Coolest	70.2 (1963)	55.0 (2009)	57.6
East Central	58.3	-3.4	10th Coolest	70.9 (1963)	55.5 (1976)	58.9
Southwest	59.0	-3.5	13th Coolest	70.2 (1963)	55.4 (1925)	58.7
South Central	60.2	-3.1	13th Coolest	71.0 (1963)	56.8 (1976)	61.1
Southeast	59.9	-2.1	21st Coolest	69.8 (1963)	55.3 (1976)	61.2
Statewide	57.8	-3.1	13th Coolest	69.5 (1963)	54.6 (1925)	57.4

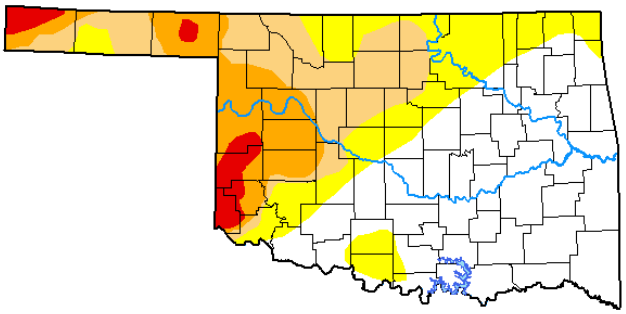
MESONET EXTREMES FOR OCTOBER 2020

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	98	11th	Arnett	14	26th	Boise City	4.05	Arnett	2.77	28th	Buffalo
North Central	99	11th	Woodward	21	27th	Woodward	4.82	Newkirk	3.44	28th	May Ranch
Northeast	91	14th	Burbank	27	30th	Nowata	6.44	Tulsa	2.48	26th	Tulsa
West Central	100	11th	Erick	22	27th	Cheyenne	3.05	Camargo	1.71	29th	Watonga
Central	96	11th	Chickasha	26	27th	El Reno	5.86	Washington	2.89	26th	Washington
East Central	89	11th	Webbers Falls	29	30th	Okmulgee	6.90	Cookson	3.33	26th	Cookson
Southwest	102	11th	Grandfield	24	27th	Hinton	4.81	Grandfield	1.78	23rd	Grandfield
South Central	97	11th	Waurika	29	30th	Sulphur	3.09	Fittstown	1.82	26th	Fittstown
Southeast	89	11th	Valliant	31	30th	Wilburton	4.35	Wister	3.03	28th	Wister
Statewide	102	11th	Grandfield	14	26th	Boise City	6.90	Cookson	3.44	28th	May Ranch

Oklahoma Climate Divisions



U.S. Drought Monitor
Oklahoma



October 27, 2020
(Released Thursday, Oct. 29, 2020)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	47.94	52.06	32.42	15.58	3.61	0.00
Last Week *10-20-2020*	36.91	63.09	38.38	15.93	3.69	0.00
3 Months Ago *07-28-2020*	39.83	60.17	25.96	10.26	2.79	0.00
Start of Calendar Year *12-31-2019*	76.45	23.55	10.47	3.64	0.00	0.00
Start of Water Year *09-29-2020*	66.79	33.21	17.71	11.97	1.55	0.00
One Year Ago *10-29-2019*	75.22	24.78	7.62	0.78	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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NOAA/NWS/NCEP/CPC

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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