# Oklahoma Monthly Climate Summary

Oklahomans experienced the gamut of their state's annual

weather hazards during October. Flooding rains, extreme

heat, an arctic blast, the season's first snow, severe

thunderstorms, and a slew of tornadoes - all were present

during an active weather month. A weak tornado formed

near Fairfax on Oct. 7, damaging roofs and power poles.

Tornadoes struck again just after daybreak on Oct. 9, forming

along the leading edge of a squall line moving across central

Oklahoma. Eight tornadoes touched down that day according

to preliminary data from the National Weather Service, most

in and around the Oklahoma City area. The twisters damaged homes and businesses, but no injuries were reported. The

most significant tornado started near Tinker Air Force Base

and produced significant roof damage, later flipping cars in a

Midwest City parking lot. Straight-line wind damage was also

reported across central and eastern Oklahoma with the line

of storms. The preliminary count of at least nine confirmed

drier than normal for some, particularly across northeastern Oklahoma. Oilton recorded the lowest total at 2.82 inches. Combined with the abundant moisture of the previous two months, the Mesonet's August-October total jumped to 16.01 inches, 6.05 inches above normal to rank as the fifth wettest August-October on record for Oklahoma. That's somewhat similar to last year's 13th wettest total of 12.61 inches for the same period. The January-October average total of 36.16 inches was 4.23 inches above normal, the 17th wettest such period on record.

Mesonet stations saw heat index values of at least 95 degrees 125 times during the month's first week, with four of those sites reaching 100 degrees. The month's top actual air temperature of 97 degrees was reported at several sites on Oct. 3. The season's first freeze arrived on the 14th with temperatures plunging into the 20s across northern

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#### **October 2018 Statewide Extremes**

Description	Extreme	Station	Day
High Temperature	97°F	Multiple	3
Low Temperature	25°F	Eva	16
High Precipitation	12.89 in.	Hobart	
Low Precipitation	2.82 in.	Oilton	

tornadoes is the third highest October tally in the state since records began in 1950, behind 1998's record total of 27 and 19 in 2001. For excitement of a different sort, the state's first measurable snowfall of the season occurred on Oct. 14 in the western Panhandle, although a few flakes were reported as far south as Clinton in western Oklahoma. More snow was reported in the Panhandle on a cold and dreary Halloween day.

Moisture was plentiful – and at times overwhelming – for the third consecutive month. According to preliminary data from the Oklahoma Mesonet, October finished with a statewide average of 6.78 inches, sixth wettest since records began in 1895 with a surplus of 3.24 inches. Western and south central Oklahoma were especially wet with widespread totals of 6-12 inches. Sixty-eight of the Mesonet's 120 sites had at least 6 inches for the month, 13 of which had more than 10 inches. Hobart led the state with 12.89 inches. It was

#### October 2018 Statewide Statistics Temperature

	Average	Depart.	Rank (1895-2018)						
Month (October)	59.9°F	-1.0°F	30th Coolest						
Year-to-Date (Jan-Oct)	63.8°F	0.7°F	32nd Warmest						
Precipitation									
	Total	Depart.	Rank (1895-2018)						
Month (October)	6.78 in.	3.24 in.	6th Wettest						

Depart. = departure from 30-year normal

36.16 in.

Year-to-Date

(Jan-Oct)

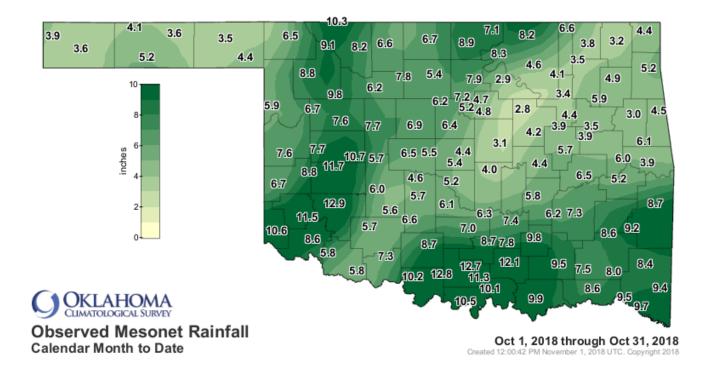
Oklahoma. Wind chills dipped into the teens on the 14th and 15th during Oklahoma's first bout of the season with true arctic air. Eva recorded October's lowest temperature of 25 degrees on the 16th. The statewide average temperature fell a degree below normal at 59.9 degrees, the 30th coolest October on record. The January-October average of 63.8 degrees was 0.7 degrees above normal to rank as the 32nd warmest such period since 1895.

4.23 in. 17th Wettest

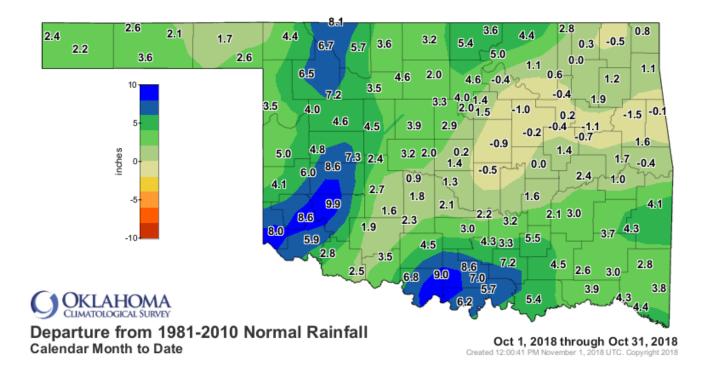


The wet August-October nearly eradicated drought across the state. Drought dropped from 55 percent of the state at the beginning of August to less than 2 percent at the end of October according to the U.S. Drought Monitor. Far northeast Oklahoma retained the last vestiges of drought as deficits there have continued since October 2017. The November outlooks from the Climate Prediction Center indicate increased odds of below normal temperatures for all but the far western Panhandle, and above normal precipitation across the entire state. That results in a November drought outlook with complete drought removal likely in northeastern Oklahoma, and no new development across the rest of the state.

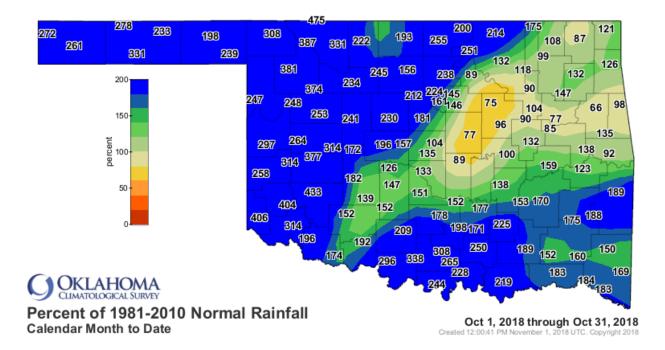
#### **OCTOBER 2018 OBSERVED PRECIPITATION**



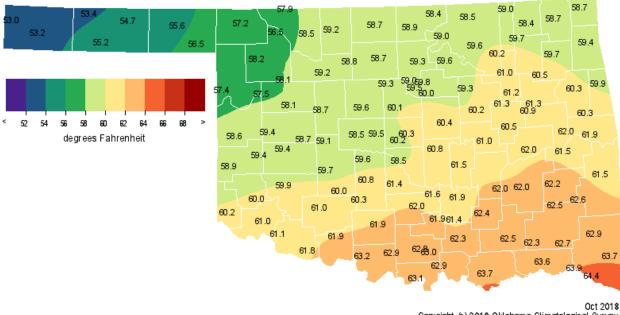
#### **OCTOBER 2018 DEPARTURE FROM NORMAL PRECIPITATION**



## **OCTOBER 2018 PERCENT OF NORMAL PRECIPITATION**

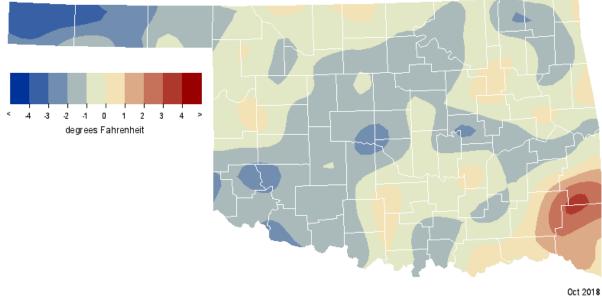


## **OCTOBER 2018 AVERAGE TEMPERATURE**



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# **OCTOBER 2018 DEPARTURE FROM NORMAL TEMPERATURE**

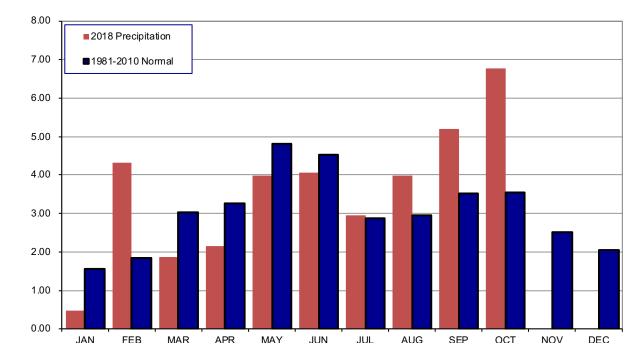


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# **MESONET MONTHLY SUMMARY FOR OCTOBER 2018**

NAME	MEAN TEMP		DAY	LOW TEMP	DAY	HDD	CDD		HIGH 24-HR	DAY	NAME	MEAN TEMP		DAY	LOW TEMP	DAY	HDD	CDD		HIGH 24-HR	DAY
<b>PANHANDLE</b> Arnett Beaver Boise City Buffalo Eva	57.4 55.6 53.2 57.3 53.4	93 97 93 97 96	3 3 3 3 3	29 27 26 30 25	15 16 15 15 16	272 330 393 283 392	37 38 27 44 32	5.88 3.49 3.58 6.50 4.06	2.94 1.63 1.08 3.19 1.45	8 9 8 7	Goodwell Hooker Kenton Slapout	55.2 54.7 53.0 56.6	96 97 93 97	3 3 3 3	28 30 27 29	16 16 15 15	341 356 401 296	36 38 29 36	5.16 3.64 3.86 4.39	1.43 1.25 1.08 1.99	7 8 8 8
NORTH CENTRAL Alva Blackwell Breckinridge Cherokee Fairview Freedom Lahoma	58.5 58.8 58.7 59.2 59.2 58.4 58.8	92 92 92 92 91 95 91	3 3 3 3 3 3 3 3	31 32 33 32 32 29 32	15 16 15 15 15 15	248 251 252 233 231 **** 242	48 60 56 55 53 **** 49	8.18 8.88 5.41 6.61 6.18 9.06 7.78	3.52 2.53 2.40 3.05 2.06 4.33 3.31	8 7 8 7 8 7	May Ranch Medford Newkirk Red Rock Seiling Woodward	58.0 58.7 58.4 59.3 58.0 58.2	94 92 90 91 91 92	3 3 3 3 3 3	29 32 31 33 30 29	15 15 15 15 15 15	263 253 259 240 259 254	46 57 56 64 44 43	10.26 6.71 7.14 7.91 9.83 8.84	5.50 2.62 1.68 2.46 3.93 5.20	8 7 8 7 8 8
NORTHEAST Bixby Burbank Copan Foraker Inola Jay Miami Nowata	61.2 59.0 58.9 58.5 60.5 59.5 58.7 58.4	90 90 91 90 88 89 90	3 3 3 3 3 3 3 3 3 3 3 3 3	36 33 30 35 34 32 30	17 16 21 16 17 21 21 21	215 246 254 260 237 263 271 274	97 60 58 97 92 76 69	4.42 8.33 6.58 8.21 5.86 5.17 4.39 3.84	1.34 2.21 2.07 2.07 2.39 1.89 1.46 1.19	9 7 4 6 9 9	Pawnee Porter Pryor Skiatook Talala Tulsa Vinita Wynona	59.6 61.4 59.7 60.1 59.7 61.0 58.8 59.6	90 89 91 90 92 89 90 91	3 5 3 5 3 5 3 3 3	34 37 35 33 37 32 35	15 17 21 15 21 21 21 21 15	233 215 254 225 244 214 270 234	66 103 91 74 80 89 76 67	2.94 3.54 4.94 4.07 3.52 3.38 3.17 4.63	.88 .94 1.44 1.94 .96 1.42 1.54 1.54	19 9 6 9 9 9 9
WEST CENTRAL Bessie Butler Camargo Cheyenne Elk City	59.3 59.4 57.5 58.6 59.4	88 91 91 91 89	3 3 3 3 3	31 32 30 30 31	15 15 15 15 15	225 224 271 236 220	49 50 38 37 45	11.71 7.68 6.73 7.60 8.80	4.97 2.04 2.55 2.53 3.54	7 7 7 8 7	Erick Putnam Watonga Weatherford	58.9 58.1 58.7 58.7	92 88 88 87	3 3 3 3	32 30 31 31	15 15 15 15	236 256 244 240	47 43 47 46	6.70 7.56 7.72 10.66	1.65 2.31 4.33 5.17	7 7 7 7
CENTRAL Acme Bowlegs Bristow Lake Carl Blac Chandler Chickasha El Reno Guthrie Kingfisher Marena Minco Marshall	60.2 61.3 60.2 58.9 60.4 60.7 58.5 60.1 59.6 59.6 59.6 59.2	87 99 90 89 90 88 90 91 90 86 89	4 3 5 4 5 5 5 3 5 3 5 3	35 37 33 36 36 32 34 33 34 33 33	15 15 17 16 15 15 15 15 15	226 **** 241 251 218 211 255 217 229 230 226 236	78 **** 91 63 77 77 54 65 61 63 58 58	$\begin{array}{c} 6.61\\ 5.01\\ 4.15\\ 7.15\\ 3.13\\ 5.69\\ 6.46\\ 6.40\\ 6.88\\ 5.22\\ 4.56\\ 6.15\\ \end{array}$	1.42 1.09 1.00 2.55 65 1.31 2.67 2.32 2.20 1.54 98 2.02	7 9 8 19 7 7 8 7 7 9 7	Norman Oilton OKC East Okemah Perkins Seminole Shawnee Spencer Stillwater Washington Yukon	60.5 59.3 60.2 61.0 60.0 ***** 60.8 59.7 61.4 59.5	87 89 88 89 89 *** 88 88 89 88 87	5 3 5 3 ** 5 3 5 5 5	36 33 36 37 35 *** 36 35 35 37 33	15 21 15 15 15 *** 15 15 15 15	**** 253 220 225 **** 214 232 196 231	**** 76 73 96 70 **** 82 74 69 84 60	5.18 2.82 5.44 4.35 4.83 ***** 4.00 4.38 4.67 6.07 5.51	1.02 .69 .84 1.16 1.45 ***** 1.03 .72 1.40 1.65 1.59	7 9 9 9 9 9 9 *** 19 9 8 7 7
EAST CENTRAL Cookson Eufaula Haskell Hectorville Holdenville McAlester Okmulgee	60.3 62.0 60.9 61.3 ***** 61.9 60.5	88 89 90 89 *** 89 90	3 4 4 *** 4 4	35 38 36 37 *** 37 33	21 15 21 15 *** 21 21	253 205 228 213 **** 200 238	108 111 101 98 **** 106 99	6.10 6.50 3.91 3.87 5.77 7.30 5.70	1.78 1.56 1.27 1.57 1.45 1.61 1.68	19 9 9 19 13 9	Sallisaw Stigler Stuart Tahlequah Webbers Falls Westville	61.9 61.5 62.0 60.3 62.0 59.8	90 90 89 93 87	4 4 3 4 5	37 36 37 35 37 36	21 21 15 17 21 21	213 215 199 251 212 255	115 106 105 104 120 94	3.85 5.20 6.15 2.97 5.95 4.47	.94 1.16 1.43 .68 1.53 .95	31 31 13 19 19 19
SOUTHWEST Altus Apache Fort Cobb Grandfield Hinton Hobart	61.0 60.1 59.8 61.9 59.1 59.9	88 87 88 91 88 88	3 5 5 3 5 3	35 34 36 32 33		193 225 223 187 235 217	68 71 60 89 53 59	8.60 5.55 6.02 5.75 5.71 12.89	3.76 1.22 2.56 1.22 2.80 5.79	7 7 31 7 7	Hollis Mangum Medicine Park Tipton Walters	60.2 60.0 61.0 61.1 62.0	92 92 87 89 89		34 34 33 35 37	15 15 15 15 15	209 217 200 200 179	63 76 79	10.55 11.47 5.69 5.77 7.31	5.13 5.56 1.56 1.16 2.14	7 7 7 7 7
SOUTH CENTRAL Ada Ardmore Burneyville Byars Centrahoma Durant Fittstown Ketchum Ranch	61.9 63.0 63.2 61.7 62.3 63.7 61.3 61.9	88 89 91 89 90 89 88 88	4 4 4 4 4 4 4 4	37 39 36 37 40 36 37	21 15 15	196 173 175 200 190 161 206 186	111	7.42 11.31 10.50 6.29 9.83 9.94 7.82 8.72	1.68 2.85 2.47 1.40 2.12 1.35 1.56 2.29	7 6 19 13 9 13 7	Lane Madill Newport Pauls Valley Ringling Sulphur Tishomingo Waurika	62.5 62.8 62.8 62.0 62.9 61.9 62.2 63.2	89 89 90 89 91 88 89 90	4 4 4 4	39 38 37 39 37 38 38	21 15 15 15 15 15 15	182 179 175 190 173 199 187 165	111 106 98 107 103 101	9.45 10.14 12.70 6.95 12.75 8.70 12.08 10.24	1.91	13 6 19 6 7 6 7
SOUTHEAST Antlers Broken Bow Clayton Cloudy Hugo Idabel	62.3 63.8 62.5 62.7 63.6 64.4	90 90 89 89 89 89	4 4 4 4 4	36 36 37 38 40 39	21 22 21 22 22 22	187 151 191 174 161 141	105 113 114 101 117 122	7.48 9.39 8.58 7.99 8.57 9.72	1.46 3.22 2.06 1.50 1.37 3.05	13 31 13 31 15 31	Mt Herman Talihina Valliant Wilburton Wister	62.9 62.6 63.9 62.2 61.4	87 91 90 89 90	4	37 36 38 36 36	22 22 22 21 22	176 195 153 203 209	110 119 119 115 99	8.40 9.17 9.47 7.03 8.65	1.93 2.25 3.07 1.82 1.86	



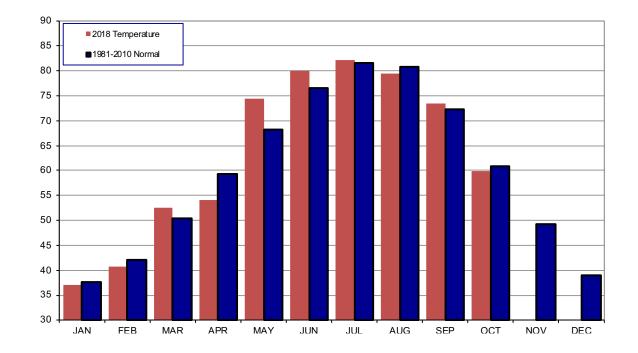


#### **October 2018 Mesonet Precipitation Comparison**

<b>Climate Division</b>	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Oct-17 (inches)
Panhandle	4.51	2.81	6th Wettest	6.84 (1923)	0.03 (2001)	1.22
North Central	7.91	5.00	3rd Wettest	8.97 (1998)	0.00 (1952)	2.97
Northeast	4.81	1.03	31st Wettest	14.98 (1941)	0.05 (1952)	6.03
West Central	8.35	5.59	2nd Wettest	9.57 (1923)	0.00 (1952)	2.94
Central	5.21	1.46	20th Wettest	13.34 (1941)	0.03 (1952)	5.03
East Central	5.21	0.77	30th Wettest	14.00 (1941)	0.15 (1963)	4.88
Southwest	7.76	4.61	7th Wettest	11.03 (1983)	0.00 (1952)	2.80
South Central	9.68	5.31	5th Wettest	14.83 (1981)	0.09 (1921)	2.57
Southeast	8.74	3.78	7th Wettest	12.89 (1984)	0.20 (1924)	3.49
Statewide	6.78	3.24	6th Wettest	10.75 (1941)	0.14 (1952)	3.62

#### 2018 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL

Main Temperature (degrees F)



#### October 2018 Mesonet Temperature Comparison

<b>Climate Division</b>	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Oct-17 (F)
Panhandle	55.1	-2.3	18th Coolest	65.9 (1963)	50.1 (1925)	58.7
North Central	58.5	-1.2	28th Coolest	68.9 (1963)	51.6 (1925)	61.5
Northeast	59.7	-0.5	37th Coolest	70.2 (1963)	53.9 (1925)	61.0
West Central	58.7	-1.6	25th Coolest	68.5 (1963)	52.1 (1925)	61.8
Central	60.0	-1.4	23rd Coolest	70.2 (1963)	55.0 (2009)	62.6
East Central	61.2	-0.5	37th Coolest	70.9 (1963)	55.5 (1976)	62.7
Southwest	60.5	-2.0	22nd Coolest	70.2 (1963)	55.4 (1925)	63.4
South Central	62.5	-0.8	34th Coolest	71.0 (1963)	56.8 (1976)	63.7
Southeast	62.9	0.9	56th Warmest	69.8 (1963)	55.3 (1976)	63.4
Statewide	59.9	-1.0	30th Coolest	69.5 (1963)	54.6 (1925)	62.1

# **MESONET EXTREMES FOR OCTOBER 2018**

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	97	3rd	Buffalo	25	16th	Eva	6.50	Buffalo	3.19	8th	Buffalo
North Central	95	3rd	Freedom	29	15th	May Ranch	10.26	May Ranch	5.50	8th	May Ranch
Northeast	92	3rd	Talala	30	21st	Nowata	8.33	Burbank	2.39	6th	Inola
West Central	92	3rd	Erick	30	15th	Cheyenne	11.71	Bessie	5.17	7th	Weatherford
Central	91	3rd	Kingfisher	32	15th	El Reno	7.15	Lake Carl Blackwell	2.67	7th	El Reno
East Central	93	4th	Webbers Falls	33	21st	Okmulgee	7.30	McAlester	1.78	19th	Cookson
Southwest	92	3rd	Hollis	32	15th	Hinton	12.89	Hobart	5.79	7th	Hobart
South Central	91	4th	Burneyville	36	15th	Fittstown	12.75	Ringling	3.95	6th	Ringling
Southeast	91	4th	Talihina	36	21st	Antlers	9.72	Idabel	3.22	31st	Broken Bow
Statewide	97	3rd	Buffalo	25	16th	Eva	12.89	Hobart	5.79	7th	Hobart

#### **Oklahoma Climate Divisions**



# U.S. Drought Monitor Oklahoma

#### October 30, 2018 (Released Thursday, Nov. 1, 2018) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	92.31	7.69	1.60	0.00	0.00	0.00
Last Week 10-23-2018	92.31	7.69	1.60	0.00	0.00	0.00
3 Month s Ago 07-31-2018	22.31	77.69	55.48	32.39	6.81	0.00
Start of Calendar Year 01-02-2018	0.00	100.00	77.15	38.76	0.00	0.00
Start of Water Year 09-25-2018	72.93	27.07	9. 11	4.16	0.00	0.00
One Year Ago 10-31-2017	77.85	22.15	2.75	0.00	0.00	0.00



D0 Abnormally Dry

D3 Extreme Drought D1 Moderate Drought D4 Exceptional Drought D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<u>Author:</u> Deborah Bathke National Drought Mitigation Center



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 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: <u>http://aa.usno.navy.mil/data</u>

**SEVERE STORM REPORTS** Storm Prediction Center: <u>http://spc.noaa.gov/climo/</u>

National Centers for Environmental Information: <a href="https://www.ncdc.noaa.gov/stormevents/">https://www.ncdc.noaa.gov/stormevents/</a>

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 is the State Climate Office for Oklahoma

Dr. Kevin Kloesel Director Dr. Chris Fiebrich Associate Director

EDITOR Gary D. McManus State Climatologist

DESIGN Ada Hoang Creative Director

For more information, contact: Oklahoma Climatological Survey The University of Oklahoma 120 David L. Boren Blvd., Suite 2900 Norman, OK 73072-7305

TEL: 405-325-2541 FAX: 405-325-7282 E-MAIL: <u>ocs@ou.edu</u> WEBSITE: <u>http://climate.ok.gov</u>