Oklahoma Monthly Climate Summary **JUNE 2023**

June took up the slack for May's relatively tame severe weather output-at least by Oklahoma's standardswith 10 tornadoes and two possible derechos that left over half of a million Oklahomans without power. While storms threatened the state throughout the month, the most intense severe weather was concentrated within just a few days from June 15–18 thanks to two powerful storms systems, both aided by an unusually strong jet stream overhead. The first disturbance kicked off several rounds of storms that impacted the southeastern half of the state and the Panhandle on the 15th. The storms dropped golf ball to grapefruit

bringing large hail, tornadoes, and severe straight line winds to the northern half of the state. The Tulsa area bore the brunt of the storms' fury with reported wind gusts of over 100 mph late on the 17th into the early morning hours on the 18th. The winds devastated the power grid in the area and left nearly 200,000 homes and businesses without power, prompting power utility officials to declare the outages "the most significant restoration event" in the area since a catastrophic

OKLAHOMA

June 2023 Statewide Statistics

June 2023 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	113°F	Altus	16
Low Temperature	50°F	Boise City, Kenton	28
High Precipitation	11.85 in.	Butler	
Low Precipitation	1.72 in.	Hollis	

size hail from the eastern Panhandle to south central Oklahoma. At least four tornadoes were confirmed on the 15th, including a strong EF2 twister that damaged numerous homes on its 4.1-mile path from Stephens County to Jefferson County. Widespread damage was reported indicative of straight-line winds gusting to over 80 mph along a broad path from northwestern through south central Oklahoma. The Oklahoma Mesonet site at Norman recorded a wind gust of 84 mph that evening. Roofs, power lines and poles, and trees suffered considerable damage due to the storms.

A remarkably similar storm system struck Oklahoma just a couple of days later on the 17th, but this time

Temperature										
Period	Average	Departure	Rank (1895-2023							
Month (Jun)	76.2°F	-1.1°F	44th Coolest							
Year-to-Date (Jan-Jun)	56.9°F	0.6°F	28th Warmest							

Precipitation

Period	Total	Departure	Rank (1895-2023)
Month (Jun)	4.58 in.	0.32 in.	44th Wettest
Year-to-Date (Jan-Jun)	17.99 in.	-0.83 in.	59th Wettest

Departure from 30-year normal

2007 ice storm. At least four tornadoes were spawned by the storms along their paths across northern Oklahoma. The straight-line winds and tornadoes on June 17-18 alone left more than 350,000 Oklahomans without power, some for over a week in stifling heat. A preliminary total of 10 tornadoes was confirmed by National Weather Service personnel, bringing the state's 2023 total to 62 through the first six months of the year. Oklahoma averages just over 57 tornadoes per year based on data from 1950 through 2022.

The statewide average rainfall total was 4.58 inches, 0.32 inches above normal and ranked as the 44th wettest June since records began in 1895. As is usually the case, the rainfall fortunes varied widely across the state. West central Oklahoma and the Panhandle both experienced large average surpluses of 4.09 inches and 2.18 inches, respectively. In an unusual feat for Oklahoma, the west central site at Butler led the state's totals with 11.85 inches, and its close neighbor Bessie was second with 11.45 inches. Another west central site, Chevenne, came in a close third with 10.36 inches. Continuing with that theme, 19 of the 20 highest June Mesonet totals came from western Oklahoma-only Centrahoma's 6.45 inches could make the list from the eastern half of the state. In contrast, east central and northeastern Oklahoma experienced their 33rd and 39th driest Junes on record, respectively. Hollis had the lowest total with 1.72 inches. The first 6 months of the year ended as the 59th wettest on record at 17.99 inches, 0.83 inches below normal.

The statewide average temperature was 76.2 degrees, 1.1 degrees below normal and ranked as the 44th coolest June since records began in 1895. Temperatures were seasonable through most the month until the final week. A persistent heat dome that had camped across Texas crept north, engulfing Oklahoma and bringing extreme heat with it. Altus hit 113 degrees on the 28th, the highest temperature in the state since July 19, 2022. Heat index values soared into the 110s, topping out at 120 degrees at Grandfield on the 19th and again on the 27th, and Ringling on the 28th. The first 6 month of the year finished at 56.9 degrees, 0.6 degrees above normal and ranked as the 28th warmest January-June on record.

The prolific June rains across western Oklahoma reduced drought from 50% of the state at the end of May to 36% of the state at the end of June according to the U.S. Drought Monitor, and the amount of drought considered at least severe dropped from 43% to 14% over that same period. New drought areas in south central and east central Oklahoma had emerged by the end of the month, however. The July drought outlook from the Climate Prediction Center considered additional development unlikely, and more improvements possible across north central and eastern Oklahoma by the end of the month. CPC's July temperature and precipitation outlooks showed increased odds of warmer and wetter than normal conditions across the entire state.

JUNE 2023 OBSERVED PRECIPITATION



30-Day Rainfall Accumulation (inches)

Jun 1, 2023 12:00 AM CDT - Jul 1, 2023 12:00 AM CDT

The accumulated rainfall for June provided much needed rain for northwest Oklahoma. Hollis received the least amount of rainfall with 1.72 in. and Butler received the most with 11.85 in. Most sites saw at least 1.7 in. for the month.

JUNE 2023 DEPARTURE FROM NORMAL PRECIPITATION



Comparing the June rainfall accumulation to the 1991 to 2020 normal rainfall, sites in the northwest were above normal with pockets below normal near Hollis, Copan to Miami, and Eufaula to Muskogee. Sallisaw had the highest deficit with 2.9 in. below normal. Butler had the highest surplus with 8.3 in. above normal.

JUNE 2023 PERCENT OF NORMAL PRECIPITATION



The Panhandle percent of normal ranged from 119% at Goodwell to 268% of normal at Beaver. The largest increase occurred near Butler where sites in the area ranged from 171% to 338%. The drier areas near Hollis and Vinita saw 50-52% of normal while near Muskogee values ranged from 40-58% of normal.

JUNE AVERAGE TEMPERATURE IN DEGREES FAHRENHEIT



Temperatures ranged from the upper 60s in the panhandle to the mid 70s in the northern, central and eastern counties to the low 80s in southwest counties.



JUNE 2023 DEPARTURE FROM NORMAL TEMPERATURE

The temperature departures from normal ranged from -6°F to 0°F statewide. Nearly all sites were below normal with only Tishomingo and Broken Bow reporting normal temperatures.

MESONET MONTHLY SUMMARY FOR JUNE 2023

PANHANDLE

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Arnett	73.5	103	28	55	14	2	257	6.55	1.77	2
Goodwell	70.7	99	20	51	16	7	177	3.82	.95	22
Beaver	72.4	99	28	51	14	2	225	8.96	2.39	17
Hooker	71.7	101	20	52	16	5	205	4.35	1.25	22
Boise City	69.0	100	28	50	14	17	137	3.50	.90	4
Kenton	68.6	98	28	49	14	22	129	4.70	1.62	6
Buffalo	74.9	104	28	56	14	0	297	6.46	1.43	17
Slapout	37.6	103	28	***	7	1	239	4.87	1.57	2
Eva	69.3	96	20	49	18	10	139	3.02	.89	22

NORTH CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Alva	75.4	104	28	58	15	0	313	9.26	4.92	2
May Ranch	74.5	101	28	58	14	***	***	5.18	1.12	2
Blackwell	76.2	103	28	57	15	0	336	3.47	.84	17
Medford	76.4	103	28	59	7	0	343	4.14	.89	10
Breckinridge	76.0	101	28	58	15	0	330	4.01	1.12	1
Newkirk	75.3	98	28	59	12	0	308	6.42	1.30	10
Cherokee	76.6	105	28	59	15	0	347	5.46	1.95	2
Red Rock	76.2	102	28	58	15	0	336	2.43	.67	1
Fairview	76.4	106	28	59	18	0	342	6.43	2.53	2
Seiling	74.9	105	28	56	15	0	297	4.66	2.00	2
Freedom	74.4	104	28	55	14	0	282	5.95	2.58	2
Woodward	74.5	102	28	56	16	0	285	5.48	2.33	2
Lahoma	75.5	101	28	59	13	0	316	6.80	2.50	2

NORTHEAST

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Bixby	77.6	99	29	62	13	0	377	3.60	1.20	3
Pawnee	76.7	100	29	59	7	0	350	2.13	.76	17
Burbank	75.7	99	29	58	15	0	321	4.52	1.24	10
Porter	77.4	97	29	61	12	0	371	3.90	1.78	3
Copan	76.5	100	29	60	12	0	344	2.89	1.01	3
Pryor	76.3	100	29	58	12	0	340	2.96	1.07	14
Foraker	75.2	97	29	58	7	0	306	3.55	1.42	14
Skiatook	77.1	98	29	59	14	0	364	4.07	1.53	17
Inola	77.0	99	29	61	12	0	361	2.82	1.14	9
Talala	77.0	100	29	59	12	0	360	3.91	1.41	14
Jay	74.9	96	29	56	12	0	298	2.97	1.07	14
Tulsa	78.4	100	29	61	12	0	401	3.30	1.08	3
Miami	75.6	100	29	56	4	0	318	2.05	.67	18
Vinita	75.5	99	29	56	12	0	315	2.73	1.27	18
Nowata	75.6	100	29	57	7	0	317	2.75	.92	14
Wynona	75.8	97	29	59	12	0	324	3.97	1.33	9

WEST CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Bessie	75.4	100	29	59	18	***	***	11.45	4.39	2
Erick	76.4	110	28	54	18	2	344	2.91	1.02	2
Butler	75.4	104	28	57	18	0	313	11.85	3.63	2
Putnam	74.7	102	28	55	18	1	292	7.23	3.29	2
Camargo	74.3	103	28	54	14	0	279	7.19	2.50	2
Watonga	75.6	102	28	58	18	0	317	7.01	2.20	2
Cheyenne	73.6	99	28	56	16	2	260	10.36	2.47	30
Weatherford	75.6	102	28	58	18	2	320	8.48	2.53	2
Elk City	75.3	104	28	57	18	2	312	7.47	2.15	2

CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Acme	77.1	100	28	59	8	0	364	6.53	1.46	23
Norman	77.3	98	29	61	13	1	370	5.13	1.10	3
Bristow	76.2	96	29	57	7	0	335	3.53	1.18	27
Oilton	76.0	99	29	57	7	0	330	2.61	.74	17
Lake Carl Blac	75.4	98	28	57	15	0	313	3.77	1.16	17
OKC East	77.2	99	28	60	13	1	366	2.58	.63	10
Chandler	76.9	97	29	61	12	0	359	4.37	1.91	27
Okemah	76.8	96	29	61	12	1	354	6.23	1.67	3
Chickasha	77.8	102	28	60	19	0	385	3.11	.76	12
Perkins	77.2	99	29	60	7	0	365	4.27	1.60	27
El Reno	75.1	99	28	56	6	3	304	7.37	1.20	10
Seminole	77.0	96	29	60	12	2	360	2.93	.60	15
Guthrie	76.8	99	29	60	18	0	354	3.94	1.20	17
Shawnee	77.3	98	29	60	12	2	371	3.23	.87	10
Kingfisher	76.8	104	28	60	7	0	355	3.65	.80	17
Spencer	76.6	98	29	60	12	2	349	3.83	.62	15
Marena	75.9	98	29	60	13	0	328	4.19	1.74	17
Stillwater	76.9	98	29	59	15	0	358	3.96	1.28	17
Minco	76.9	100	28	60	18	1	357	4.72	1.57	2
Washington	77.1	98	28	60	12	1	364	3.93	.97	12
Marshall	76.3	100	28	59	7	0	340	4.76	1.60	17
Yukon	76.0	97	28	59	18	1	331	4.57	1.27	17

EAST CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Cookson	75.9	98	29	59	12	0	327	2.81	1.16	3
Sallisaw	77.7	100	29	61	5	0	380	1.83	.70	27
Eufaula	78.3	98	30	61	12	0	398	2.01	.82	10
Stigler	78.0	99	29	61	5	0	391	2.22	1.24	23
Haskell	77.5	98	29	60	12	0	374	1.79	.77	17
Stuart	77.7	96	29	60	3	1	383	4.83	.74	12
Hectorville	77.3	98	29	61	12	0	368	3.51	.98	17
Tahlequah	76.0	98	29	59	5	0	331	2.33	.65	18
Holdenville	77.3	97	29	62	12	1	369	2.82	.56	12
Webbers Falls	77.4	99	29	60	19	0	373	1.80	.46	16
McAlester	77.3	95	29	60	3	0	368	4.60	1.55	10
Westville	74.8	96	29	59	7	0	295	4.32	1.31	14
Okmulgee	77.1	98	29	60	12	0	362	3.58	1.02	27

SOUTHWEST

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Altus	80.7	113	28	60	18	0	472	2.05	.50	12
Hollis	79.2	111	28	58	18	0	425	1.72	.72	12
Apache	76.7	102	28	60	18	1	353	5.37	1.61	2
Mangum	77.9	111	28	56	18	0	386	2.29	.62	12
Fort Cobb	76.8	105	28	59	18	1	354	6.68	2.29	2
Medicine Park	77.3	104	28	60	12	0	370	4.72	1.88	2
Grandfield	81.1	111	28	62	12	0	484	4.30	1.31	5
Tipton	80.3	111	28	60	6	0	460	2.98	1.06	30
Hinton	75.7	102	28	58	18	1	321	6.99	1.79	2
Walters	79.4	108	28	61	12	0	431	3.53	1.50	7
Hobart	***	***	***	***	***	***	***	6.84	1.82	17

SOUTH CENTRAL

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Ada	77.4	98	29	59	13	1	373	5.46	1.84	3
Lane	78.5	97	29	62	6	0	405	4.56	1.14	12
Ardmore	79.0	99	29	58	4	0	420	4.02	.84	12
Madill	78.8	98	29	59	4	0	415	5.65	.96	13
Burneyville	78.5	98	28	59	4	0	404	4.85	1.80	15
Newport	78.6	99	29	58	4	0	409	3.64	.83	12
Byars	77.3	96	29	60	13	1	370	5.14	2.14	12
Pauls Valley	77.9	98	29	61	13	0	387	4.28	1.23	12
Centrahoma	78.0	96	29	60	13	0	391	6.45	2.00	3
Ringling	78.8	102	28	61	4	0	414	4.34	1.65	15
Durant	78.6	95	25	61	3	0	407	4.75	1.51	13
Sulphur	77.9	97	29	60	3	0	386	5.01	1.61	12
Fittstown	76.8	97	29	60	6	0	353	4.73	1.31	23
Tishomingo	78.7	98	29	60	4	0	411	3.65	1.32	12
Ketchum Ranch	78.1	103	28	60	12	0	392	5.14	1.24	15
Waurika	79.3	106	28	60	4	0	430	4.12	1.18	12

SOUTHEAST

NAME	MEAN TEMP	HIGH TEMP	DAY	LOW TEMP	DAY	HDD	CDD	TOT PPT	HIGH 24-HR	DAY
Antlers	77.3	95	29	60	7	0	370	2.97	.68	12
Mt Herman	76.4	95	29	60	19	0	341	3.37	.94	12
Broken Bow	77.7	97	28	60	1	0	382	5.24	1.41	17
Talihina	77.2	98	28	59	1	0	367	3.18	.80	17
Clayton	77.4	97	29	59	1	0	373	4.36	1.20	6
Valliant	78.5	98	29	61	5	0	405	4.34	1.05	10
Cloudy	76.8	96	29	60	19	0	353	3.52	.88	10
Wilburton	77.0	97	29	59	5	0	359	3.48	.70	12
Hugo	78.4	96	29	63	3	***	***	4.37	1.30	10
Wister	76.3	98	29	59	1	0	339	4.88	1.47	8
Idabel	78.8	96	29	62	5	0	413	4.45	.74	17

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	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2023	1.17	2.58	3.04	2.26	4.09	4.58						
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

JUNE 2023 MESONET PRECIPITATION COMPARISON

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Jun-22 (inches)
Panhandle	5.14	2.18	8th Wettest	7.09 (1962)	0.29 (1911)	3.09
North Central	5.36	0.96	29th Wettest	10.87 (2007)	0.40 (1933)	3.40
Northeast	3.26	-1.72	39th Driest	12.64 (2007)	0.28 (1933)	3.23
West Central	7.81	4.09	5th Wettest	8.90 (1962)	0.30 (1933)	3.72
Central	4.24	-0.44	53rd Wettest	12.63 (2007)	0.41 (1933)	3.39
East Central	2.96	-1.76	33rd Driest	12.47 (1935)	0.69 (2011)	4.69
Southwest	4.32	0.56	38th Wettest	9.96 (2007)	0.43 (1911)	4.16
South Central	4.74	0.31	39th Wettest	11.30 (1908)	0.25 (1933)	3.36
Southeast	4.01	-0.42	64th Wettest	11.51 (1935)	0.77 (1933)	4.85
Statewide	4.58	0.32	44th Wettest	9.52 (2007)	0.44 (1933)	3.71

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	58.1	68.8	76.2						
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

JUNE 2023 MESONET TEMPERATURE COMPARISON

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Jun-22 (F)
Panhandle	71.2	-4.0	15th Coolest	82.9 (1953)	67.0 (1903)	76.5
North Central	75.4	-2.0	36th Coolest	85.2 (1953)	69.1 (1903)	79.4
Northeast	76.4	-0.1	65th Coolest	84.4 (1911)	70.3 (1903)	78.3
West Central	74.6	-3.0	25th Coolest	85.7 (1953)	70.0 (1903)	80.1
Central	76.7	-0.8	47th Coolest	85.2 (1911)	71.1 (1903)	79.9
East Central	77.1	0.0	65th Coolest	84.5 (1953)	70.3 (1903)	78.7
Southwest	78.5	-0.8	60th Coolest	87.3 (2011)	72.4 (1903)	81.5
South Central	78.3	-0.3	64th Coolest	85.7 (1911)	72.0 (1903)	81.1
Southeast	77.4	0.5	49th Warmest	83.5 (1953)	70.6 (1903)	79.2
Statewide	76.2	-1.1	44th Coolest	84.8 (1953)	70.3 (1903)	79.4

MESONET EXTREMES FOR JUNE 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	104	28th	Buffalo	49	14th	Kenton	8.96	Beaver	2.39	17th	Beaver
North Central	106	28th	Fairview	55	14th	Freedom	9.26	Alva	4.92	2nd	Alva
Northeast	100	29th	Tulsa	56	4th	Miami	4.52	Burbank	1.78	3rd	Porter
West Central	110	28th	Erick	54	18th	Erick	11.85	Butler	3.63	2nd	Butler
Central	104	28th	Kingfisher	56	6th	El Reno	7.37	El Reno	1.91	27th	Chandler
East Central	100	29th	Sallisaw	59	12th	Cookson	4.83	Stuart	1.55	10th	McAlester
Southwest	113	28th	Altus	56	18th	Mangum	6.99	Hinton	2.29	2nd	Fort Cobb
South Central	106	28th	Waurika	58	4th	Ardmore	6.45	Centrahoma	2.14	12th	Byars
Southeast	98	28th	Talihina	59	5th	Wilburton	5.24	Broken Bow	1.47	8th	Wister
Statewide	113	28th	Altus	49	14th	Kenton	11.85	Butler	4.92	2nd	Alva

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)

Period	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	23.06	76.94	36.08	14.26	4.79	0.52
Last Week 06-20-2023	26.79	73.21	41.91	16.59	4.79	0.52
3 Months Ago 03-28-2023	39.69	60.31	53.68	48.59	37.30	12.83
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 06-28-2022	54.09	45.91	30.76	14.79	5.07	1.46

JUNE 27, 2023 (RELEASED THURSDAY, JUN. 29, 2023)

VALID 8 A.M. EST

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: https://aa.usno.navy.mil/data/

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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