Oklahoma Monthly Climate Summary

FEBRUARY 2021

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma experienced a historic cold air event during February, boosting the month into the company of other legendary frozen periods from calendar pages long torn away and discarded. February 1895, February 1899, and January 1930 all suffered through exceedingly long cold spells. More recently, December 1983 still lives in the minds of many Oklahomans as the bellwether of cold months, which followed those winters of the late 1970s when bone-chilling cold was simply a way of life; but those cold times were more than 37 years ago. Even February 2011 and its all-time state record low temperature of minus 31 degrees at Nowata, and all-time low wind chill of minus 47 degrees at Medford, still managed to finish only 2 degrees below normal. All the more shocking then to see the return of a generational winter blast, complete with ice, snow, and plenty of misery.

A seasonable first few days of February soon gave way to a preliminary blast of Arctic air on Feb. 7, dropping temperatures across the state into the 20s and 30s. Several rounds of freezing drizzle provided treacherous travel conditions across the state. Temperatures continued to plummet over the next 7-10 days, culminating with historically cold air Feb. 14-16. The statewide average temperature on Feb. 15 was minus 0.7 degrees, more than 40 degrees below normal and the single coldest day statewide since at least 1915. Sparse station coverage prior to 1915 prevented accurate statewide estimates for comparison. The previous record coldest day was Dec. 22, 1989, with an average of 1.9 degrees. Feb. 15-16 and Feb. 14-16 also set records as the coldest 2-day and 3-day periods at -0.1 degrees and 2.1 degrees, respectively. Lowest minimum and maximum temperature records fell throughout the state over those days. The records for 4-day through 7-day periods were all set in Dec. 1983.

Unlike many of the state's garden variety cold spells, this event extended to Oklahoma's southern border and beyond. Ninety-six of the Mesonet's 120 sites recorded their all-time record low temperature on either Feb. 15 or Feb. 16. Mesonet temperature data go back to 1997. Overnight on Feb. 16, all 120 Mesonet sites were below zero for the first time in its history. The Mesonet site at Broken Bow reached a low of minus 9 degrees on Feb. 16, topping the town's previous all-time record low of minus 5 degrees set at the National Weather Service's (NWS) cooperative observer site on both Jan. 12 and Jan. 22, 1918. The cooperative site at Idabel reached a low of minus 12 degrees the morning of the 16th, breaking the previous all-time record low of minus 11 degrees from Feb. 2, 1951. Healdton's minus 17 degrees from the 16th now tops all its record lows dating back to 1894. Oklahoma City's minus 14 degrees on Feb. 16 is its second lowest temperature on record behind minus 17 degrees from Feb. 12, 1899. Tulsa's minus 14 degrees, also on the 16th, is its fourth lowest temperature dating back to 1905, with a top mark of minus 16 degrees from Jan. 22, 1930. At least eight long-term NWS sites with periods of record of more than 70 years broke their all-time record lows during the event. Even the high temperatures were extraordinarily cold, at times below the record daily low temperatures. Billings and Medford both recorded high temperatures of 1 degree—

February 2021 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	81°F	Waurika	23
Low Temperature	-22°F	Kenton, Nowata	15, 16
High Precipitation	4.22 in.	Broken Bow	
Low Precipitation	0.04 in.	Buffalo	--

February 2021 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2021)
Month (February)	31.0°F	-11.1°F	6th Coolest
Season-to-Date (Dec-Feb)	37.4°F	-2.0°F	29th Coolest
Year-to-Date (Jan-Feb)	35.6°F	-4.2°F	21st Coolest

Precipitation

	Total	Depart.	Rank (1895-2021)
Month (February)	0.78 in.	-1.05 in.	27th Driest
Season-to-Date (Dec-Feb)	5.23 in.	-0.22 in.	51st Wettest
Year-to-Date (Jan-Feb)	2.93 in.	-0.46 in.	63rd Wettest

Depart. = departure from 30-year normal

Billings on the 16th and Medford on the 15th—which would have broken the previous record low temperatures for the day at those locations. That feat was repeated across the state numerous times between Feb. 14 and Feb. 16.

The Oklahoma Mesonet's 120 stations recorded wind chill values of minus 10 degrees or lower 439 times between Feb. 12 and Feb. 19, bottoming out at minus 36 degrees at Boise City on the 15th. The state's all-time record lowest wind chill is minus 47 degrees on Feb. 10, 2011, at Medford. There were 38 wind chills of less than minus 30 degrees, and 251 less than minus 20 degrees. Temperatures slowly climbed back to something akin to seasonable by Feb. 20 when every site in the state broke the freezing barrier, many for the first time since Feb. 7. That 13-day span matches what many locations experienced in the deep freeze of December 1983. The Mesonet site at Lahoma spent the most time under the freezing mark at 334 hours from the afternoon of Feb. 6 through the afternoon of Feb. 20. Even locations in far southeastern Oklahoma spent over 200 hours below freezing.

Another key similarity to past extreme cold events was an abundance of frozen precipitation. Snow shovels were still busy clearing sidewalks and driveways after the first storm over Feb. 14-15 when the second storm hit on Feb. 16-17. Between the two snowfalls, totals of 5-15 inches were common across the main body of the state, with a bit less in the far northwest and the Panhandle. The NWS cooperative observer at Roosevelt in southwestern Oklahoma led the state with an official report 17 inches of snow, although unofficial reports of higher totals were scattered around. Strong winds gusting to over 40 mph pushed the dry snow into piles several feet high, drifting roads shut and creating hazardous driving conditions.

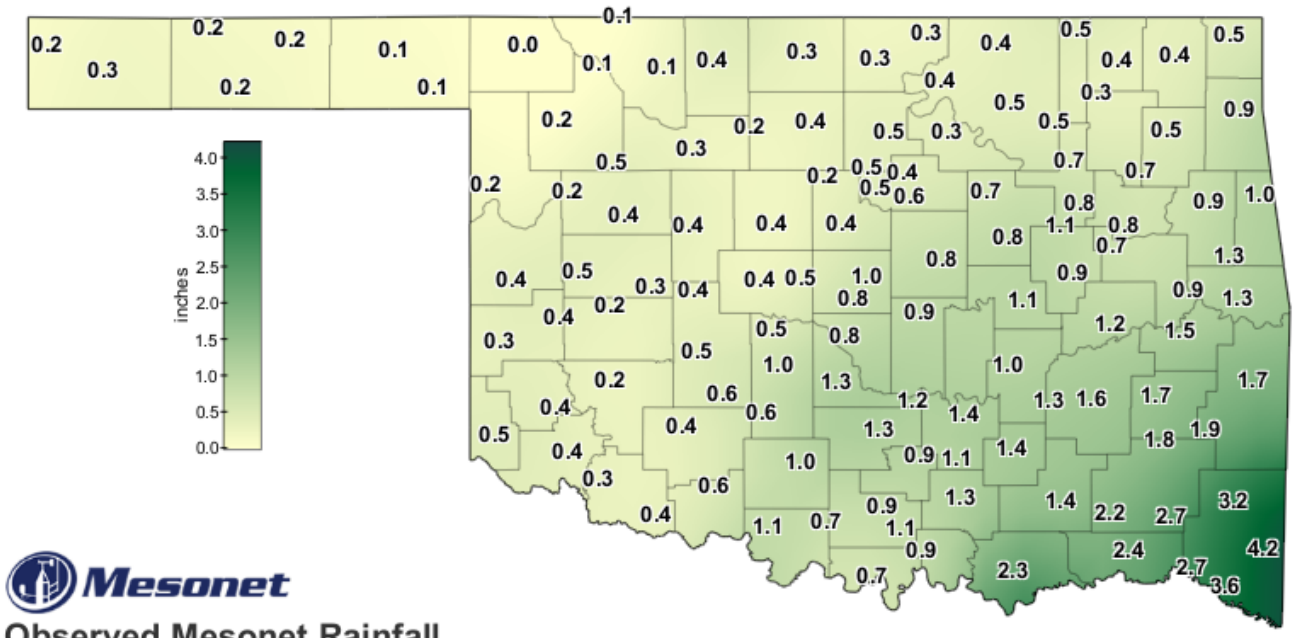
The frosty 2-week span took a tremendous toll on Oklahoma. A state of emergency was declared by Gov. Kevin Stitt on Feb. 12 for all 77 Oklahoma counties, and President Joe Biden declared all 77 counties as federal disaster areas on Feb. 18 at the request of Gov. Stitt. The Oklahoma Department of Emergency Management and Homeland Security (ODEMHS) reported a total of 750 weather-related injures, with 538 of those being due to slips or falls. The cold placed immense strain on the region's power suppliers and infrastructure, forcing rolling blackouts of electricity and cutbacks in gas service. The extended freezing weather damaged more than 120 public water systems according to ODEMHS, and many residences and business across the state faced frozen and burst pipes. The damage to agriculture was still being assessed, including harm to winter crops and livestock.

The statewide average temperature for the month was 31 degrees according to preliminary data from the Oklahoma Mesonet, the sixth coldest February on record and an astounding 11.1 degrees below normal. The record belongs to February 1905 at 27.6 degrees. February was also the 20th coldest of any calendar month out of a possible 1513 months dating back to 1895, well short of January 1940's record lowest of 23.7 degrees. The lowest temperature of the month was minus 22 degrees, recorded at Kenton on Feb. 15 and Nowata on Feb. 16. Those are the lowest reported temperatures in Oklahoma since Nowata set the all-time record low of minus 31 degrees on Feb. 10, 2011. The state's highest temperature of 81 degrees came at Waurika on Feb. 23. Despite warmer than normal weather for December and January, the climatological winter (December-February) finished 2 degrees below normal at 37.4 degrees statewide, the 29th coolest winter on record.

The heavy snows were unfortunately light on moisture. Rains on February's final two days helped to lessen deficits that had built during the month, but every section of the state finished below normal. The statewide average for the month finished at 0.78 inches, 1.05 inches below normal and ranked as the 27th driest February on record. Broken Bow led the state with 4.22 inches of rain. Totals dropped quickly to the northwest, however, with much of northern and western Oklahoma seeing less than a third of an inch of liquid moisture. Buffalo had a paltry 0.04 inches for the month. Eighty-six of the Mesonet's 120 sites recorded less than an inch of rain for the month, and 54 recorded less than a half-inch. Deficits ranged from less than a half-inch in the Panhandle to 1-2 inches over the main body of the state. The winter in its entirety fared a bit better with a statewide average of 5.23 inches, 0.22 inches below normal, to rank as the 51st wettest on record.

Drought was mostly unchanged during February, given the frigid conditions. Continued dry weather forced intensification across south central and southeastern Oklahoma, however, with a new area of moderate drought indicated in those areas on the month's final U.S. Drought Monitor map. Only 15% of the state remained in drought at the end of February. The March outlooks from the Climate Prediction Center (CPC) show increased odds of above normal temperatures across the entire state—but especially southwestern Oklahoma—and below normal precipitation over the western two-thirds of the state. Those odds for drier weather are greater across the western one-third, but especially the western Panhandle. CPC's drought outlook showed no changes to the drought depiction are expected through March.

FEBRUARY 2021 OBSERVED PRECIPITATION



Mesonet

Observed Mesonet Rainfall
Calendar Month to Date

Feb 1, 2021 through Feb 28, 2021
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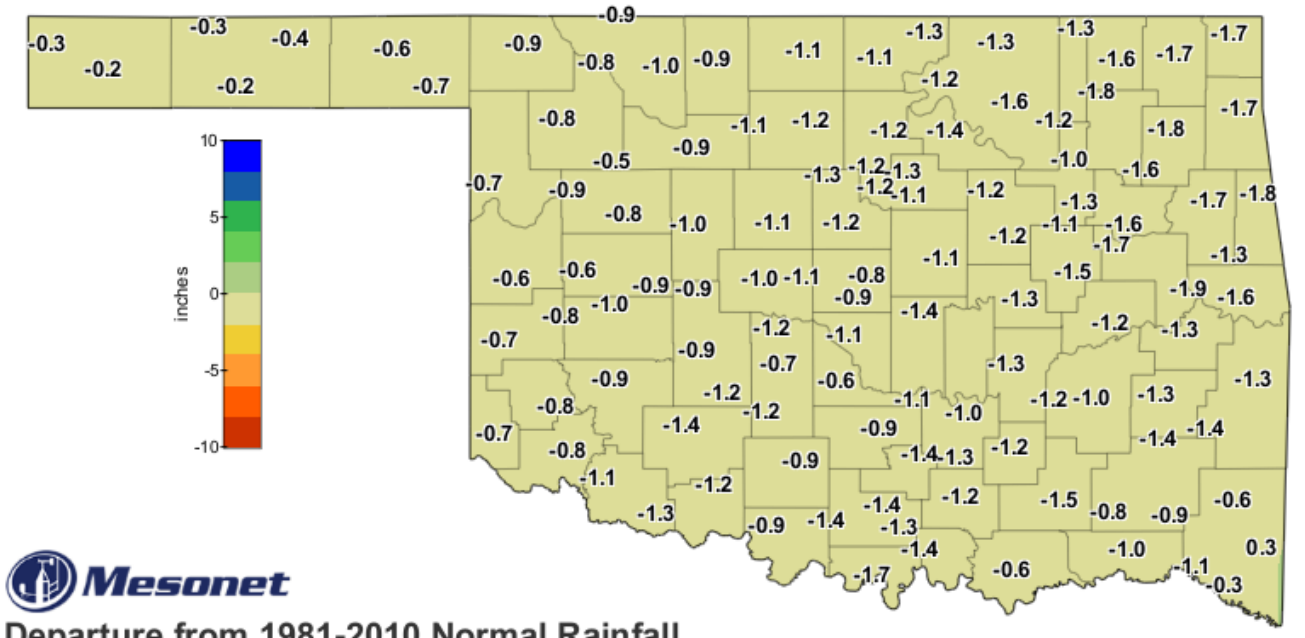
FEBRUARY 2021 DEPARTURE FROM NORMAL PRECIPITATION



Mesonet

Departure from 1981-2010 Normal Rainfall
Calendar Month to Date

Feb 1, 2021 through Feb 28, 2021
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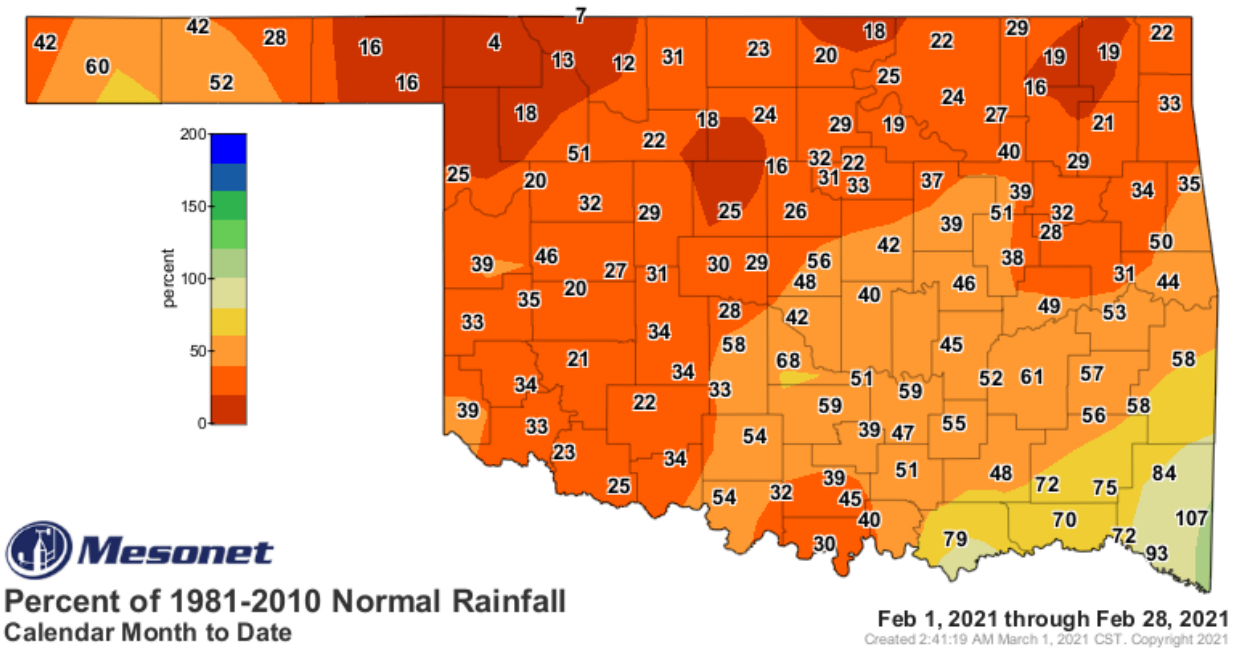
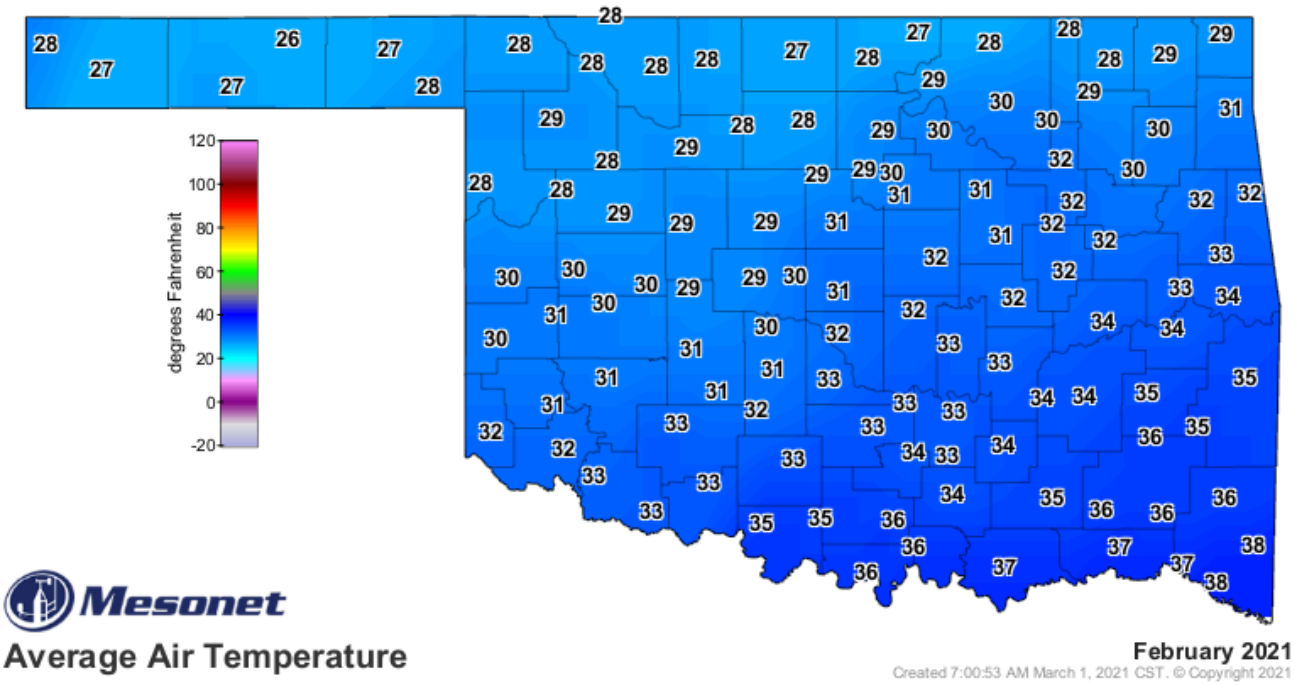
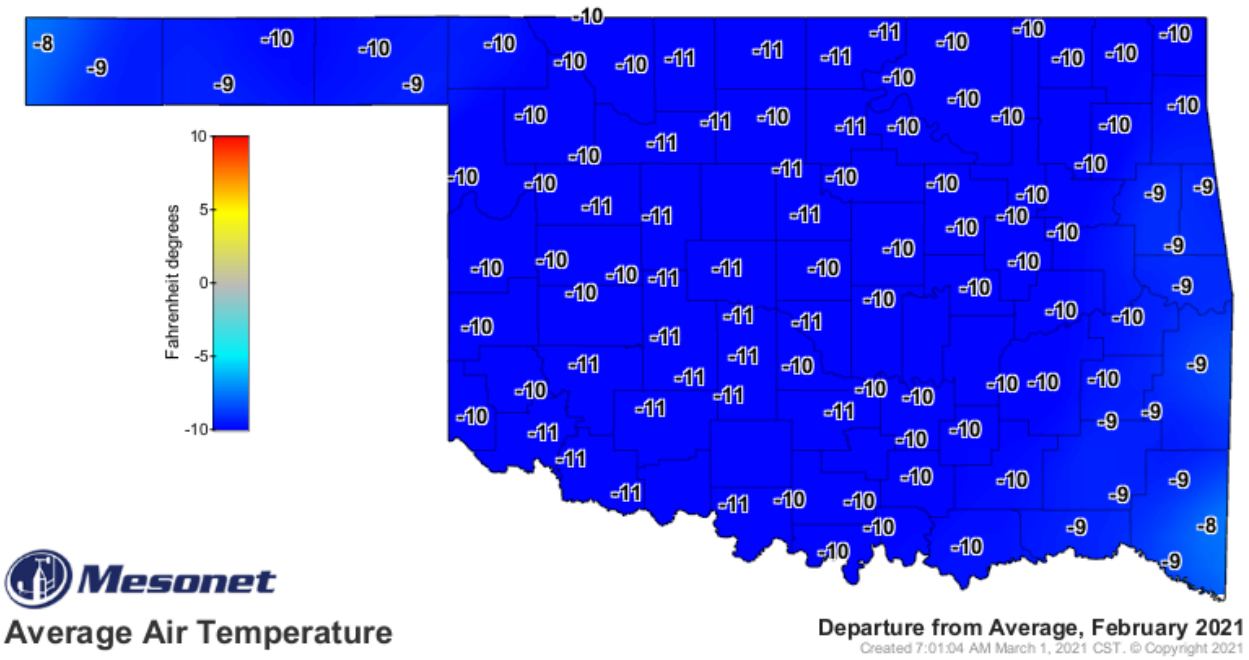
FEBRUARY 2021 PERCENT OF NORMAL PRECIPITATION



FEBRUARY 2021 AVERAGE TEMPERATURE



FEBRUARY 2021 DEPARTURE FROM NORMAL TEMPERATURE

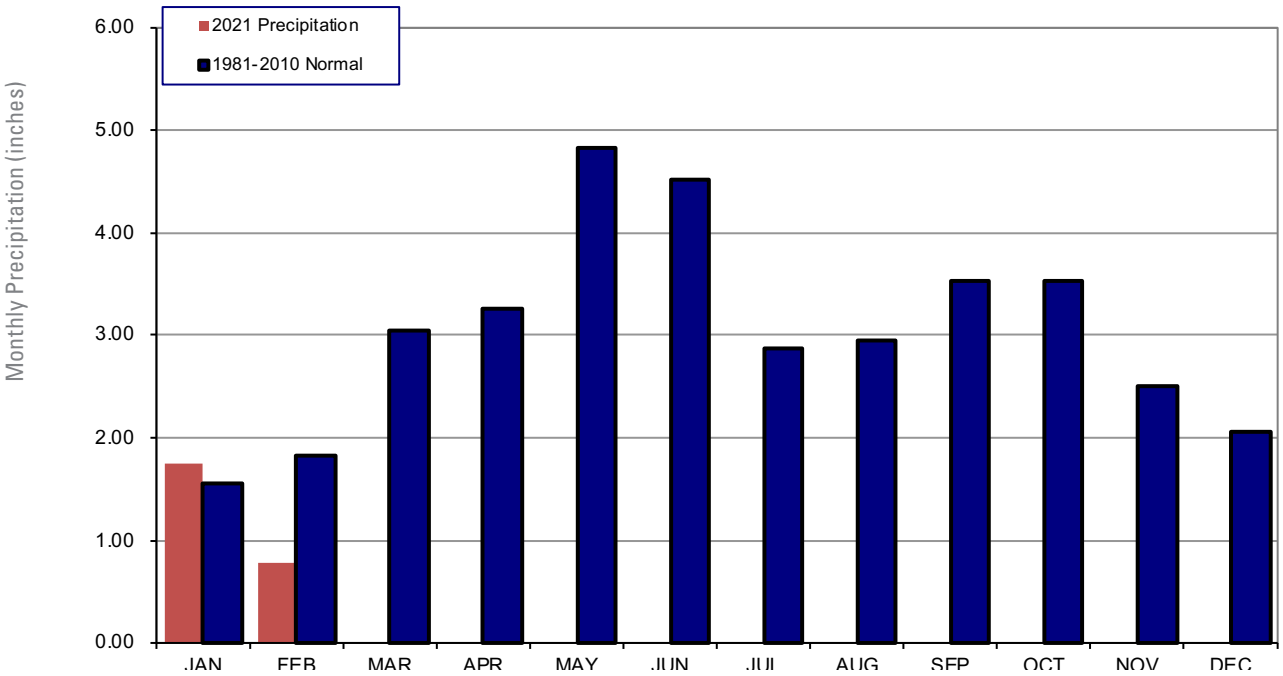


MESONET MONTHLY SUMMARY FOR FEBRUARY 2021

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	28.4	73	23	-14	16	1023	0	.24	.20	19
Beaver	27.6	77	27	-16	15	1049	0	.12	.07	17
Boise City	27.0	77	3	-21	15	1063	0	.25	.14	19
Buffalo	28.2	75	27	-14	16	1032	0	.04	.03	19
Eva	*****	***	***	***	***	****	****	.20	.15	19
NORTH CENTRAL										
Alva	27.7	73	23	-14	16	1044	0	.14	.05	18
Blackwell	27.3	73	23	-18	16	1055	0	.28	.12	19
Breckinridge	28.1	71	23	-16	16	1032	0	.37	.17	20
Cherokee	27.5	72	23	-18	16	1049	0	.43	.25	20
Fairview	29.0	73	23	-13	16	1008	0	.26	.11	18
Freedom	28.2	73	23	-11	15	1029	0	.13	.06	17
Lahoma	28.1	70	23	-13	16	1034	0	.24	.10	20
NORTHEAST										
Bixby	31.3	75	23	-12	16	944	0	.80	.27	20
Burbank	28.6	75	23	-18	16	1020	0	.41	.13	19
Copan	28.1	70	23	-17	16	1033	0	.54	.29	20
Foraker	27.7	73	23	-14	16	1043	0	.37	.18	20
Inola	29.9	74	23	-16	16	982	0	.65	.20	26
Jay	29.9	75	23	-16	16	984	0	.86	.40	20
Miami	28.3	73	23	-16	16	1028	0	.49	.28	20
Nowata	27.7	70	23	-22	16	1044	0	.38	.23	20
WEST CENTRAL										
Bessie	30.5	72	23	-9	16	966	0	.24	.13	20
Butler	30.0	74	23	-13	16	980	0	.50	.39	20
Camargo	28.3	74	23	-18	16	1028	0	.21	.18	19
Cheyenne	30.7	72	23	-9	15	960	0	.39	.31	20
Elk City	30.8	73	23	-8	16	958	0	.41	.19	20
CENTRAL										
Acme	31.5	76	23	-15	16	937	0	.60	.28	20
Bristow	30.5	76	23	-18	16	965	0	.78	.44	20
Lake Carl Blac	28.9	74	23	-20	16	1011	0	.54	.31	20
Chandler	31.3	75	23	-16	16	944	0	.81	.43	20
Chickasha	30.8	73	23	-17	16	957	0	1.00	.46	6
El Reno	29.1	73	23	-16	16	1006	0	.43	.20	19
Guthrie	30.8	73	23	-15	16	958	0	.41	.20	19
Kingfisher	28.9	71	23	-14	16	1012	0	.36	.16	19
Marena	30.3	74	23	-16	16	973	0	.53	.28	19
Minco	30.5	71	23	-11	16	966	0	.45	.17	20
Marshall	28.8	72	23	-16	16	1012	0	.24	.11	19
EAST CENTRAL										
Cookson	32.5	75	23	-12	16	910	0	1.27	.37	20
Eufaula	33.2	75	23	-10	16	889	0	1.19	.31	6
Haskell	31.4	74	23	-10	16	941	0	.68	.18	19
Hectorville	31.9	75	23	-11	16	927	0	1.10	.54	20
Holdenville	32.5	74	23	-12	16	909	0	1.04	.27	19
McAlester	33.0	77	23	-12	16	897	0	1.58	.66	6
Okmulgee	31.3	76	23	-17	16	944	0	.91	.29	19
SOUTHWEST										
Altus	32.4	76	23	-7	16	913	0	.41	.22	20
Apache	31.3	74	23	-12	16	942	0	.62	.24	20
Fort Cobb	30.7	73	23	-11	16	961	0	.48	.17	20
Grandfield	33.5	77	23	-10	16	883	0	.44	.27	20
Hinton	29.7	71	23	-11	16	988	0	.40	.21	20
Hobart	30.6	74	23	-10	16	962	0	.24	.15	20
SOUTH CENTRAL										
Ada	33.0	76	23	-13	16	896	0	1.36	.44	20
Ardmore	35.3	78	23	-8	16	830	0	1.05	.32	20
Burneyville	35.7	80	23	-12	16	820	0	.72	.26	19
Byars	33.0	77	23	-11	16	895	0	1.17	.36	20
Centrahoma	33.9	77	23	-12	16	870	0	1.42	.46	6
Durant	36.5	77	23	-7	16	797	0	2.26	1.21	28
Fittstown	32.8	75	23	-12	16	900	0	1.12	.25	25
Ketchum Ranch	33.0	78	23	-13	16	897	0	1.04	.59	20
SOUTHEAST										
Antlers	35.8	78	23	-7	16	818	0	2.17	.72	28
Broken Bow	37.5	76	23	-9	16	771	0	4.22	1.16	26
Clayton	35.1	77	23	-10	16	837	0	1.75	.62	6
Cloudy	35.7	75	23	-10	16	819	0	2.65	.69	25
Hugo	37.1	76	23	-6	16	780	0	2.37	.77	25
Idabel	37.3	76	23	-5	16	775	0	3.60	1.27	26

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	27.7	80	3	-19	15	1046	0	.23	.17	19
Hooker	27.0	75	27	-17	15	1065	0	.15	.08	19
Kenton	27.9	76	23	-22	15	1040	0	.19	.11	17
Slapout	28.5	78	27	-16	15	1023	0	.13	.12	19
May Ranch	27.8	72	23	-11	15	1040	0	.07	.07	19
Medford	27.2	68	23	-17	16	1058	0	.33	.12	20
Newkirk	27.3	73	23	-16	16	1057	0	.28	.11	17
Red Rock	28.9	73	23	-20	16	1012	0	.47	.27	20
Seiling	28.0	72	23	-20	16	1035	0	.52	.35	20
Woodward	29.0	73	23	-12	15	1008	0	.17	.10	19
Pawnee	29.6	74	23	-17	16	990	0	.33	.12	19
Porter	31.8	74	23	-10	16	931	0	.75	.22	19
Pryor	29.3	71	23	-16	16	999	0	.47	.18	20
Skiatook	30.0	73	23	-10	16	980	0	.45	.23	20
Talala	28.6	69	23	-14	16	1019	0	.33	.16	20
Tulsa	31.3	74	23	-10	16	942	0	.65	.27	20
Vinita	28.4	73	23	-18	16	1025	0	.39	.21	20
Wynona	29.2	74	23	-15	16	1002	0	.50	.26	20
Erick	30.4	76	23	-9	16	969	0	.33	.17	20
Putnam	28.9	71	23	-10	16	1010	0	.37	.30	20
Watonga	29.5	70	23	-9	16	995	0	.39	.32	20
Weatherford	29.9	70	23	-9	16	982	0	.34	.27	20
Norman	31.4	74	23	-12	16	940	0	.80	.29	6
Oilton	29.5	74	23	-20	16	993	0	.71	.49	20
OKC East	31.0	73	23	-15	16	952	0	.82	.45	20
Okemah	31.3	73	23	-16	16	943	0	1.05	.38	20
Perkins	30.4	72	23	-14	16	968	0	.56	.31	20
Seminole	32.3	76	23	-13	16	915	0	1.02	.40	6
Shawnee	31.7	74	23	-13	16	934	0	.91	.34	20
Spencer	31.6	74	23	-16	16	934	0	.99	.58	20
Stillwater	30.0	76	23	-15	16	980	0	.37	.26	19
Washington	32.4	76	23	-15	16	911	0	1.33	.46	20
Yukon	30.3	72	23	-12	16	971	0	.45	.27	20
Sallisaw	33.8	76	23	-10	16	874	0	1.26	.41	6
Stigler	33.0	75	23	-11	16	896	0	1.45	.62	6
Stuart	33.5	76	23	-10	16	881	0	1.31	.37	6
Tahlequah	31.4	74	23	-13	16	940	0	.87	.32	20
Webbers Falls	32.8	74	23	-10	16	903	0	.85	.22	6
Westville	31.5	74	23	-10	16	939	0	.97	.28	19
Hollis	32.2	80	23	-5	16	919	0	.45	.15	20
Mangum	31.5	80	23	-11	16	938	0	.42	.28	20
Medicine Park	32.7	75	23	-7	16	906	0	.39	.19	20
Tipton	32.9	77	23	-8	18	900	0	.33	.15	20
Walters	33.7	79	23	-11	16	876	0	.61	.31	20
Lane	35.2	78	23	-9	16	834	0	1.35	.37	28
Madill	36.0	78	23	-11	16	811	0	.94	.32	20
Newport	35.0	80	23	-10	16	839	0	.89	.24	19
Pauls Valley	33.1	78	23	-12	16	892	0	1.34	.53	20
Ringling	35.1	80	23	-11	16	838	0	.66	.26	20
Sulphur	32.8	78	23	-14	16	900	0	.90	.24	19
Tishomingo	34.0	76	23	-10	16	869	0	1.25	.48	6
Waurika	35.1	81	23	-13	16	838	0	1.07	.54	20
Mt Herman	35.6	74	23	-11	16	823	0	3.23	.84	28
Talihina	34.9	76	23	-14	16	844	0	1.92	.61	6
Valliant	37.0	76	23	-7	16	784	0	2.74	.84	26
Wilburton	33.8	74	23	-13	16	874	0	1.65	.62	6
Wister	34.5	77	23	-14	16	854	0	1.71	.57	6

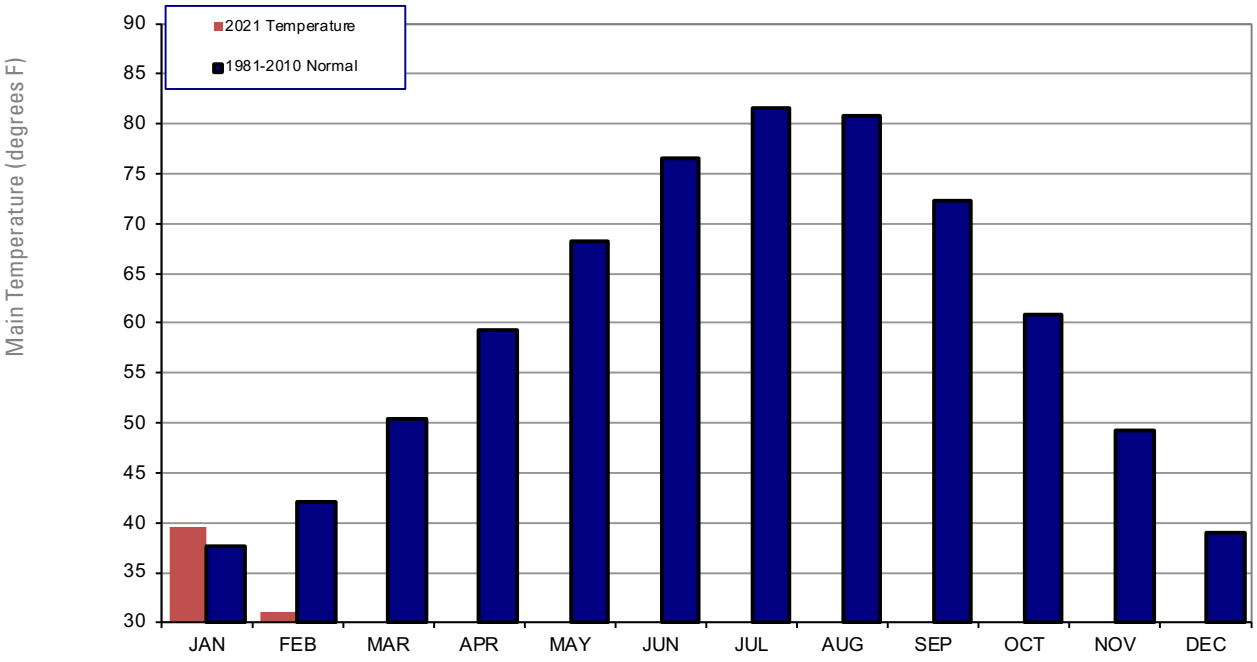
2021 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



February 2021 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Feb-20 (inches)
Panhandle	0.17	-0.46	27th Driest	2.95 (1911)	0.00 (1904)	0.60
North Central	0.28	-1.01	22nd Driest	3.97 (1911)	0.01 (1904)	1.17
Northeast	0.52	-1.53	12th Driest	5.90 (1985)	0.10 (1963)	2.19
West Central	0.35	-0.75	34th Driest	4.04 (2013)	0.00 (1991)	0.94
Central	0.69	-1.12	34th Driest	4.91 (1938)	0.04 (1947)	1.35
East Central	1.11	-1.47	27th Driest	8.92 (1938)	0.10 (1947)	2.93
Southwest	0.44	-0.95	31st Driest	3.68 (1997)	0.01 (1916)	0.88
South Central	1.16	-1.23	37th Driest	7.48 (1938)	0.08 (1996)	2.79
Southeast	2.55	-0.82	54th Driest	10.98 (2018)	0.34 (1895)	3.85
Statewide	0.78	-1.05	27th Driest	4.57 (1938)	0.18 (1996)	1.83

2021 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



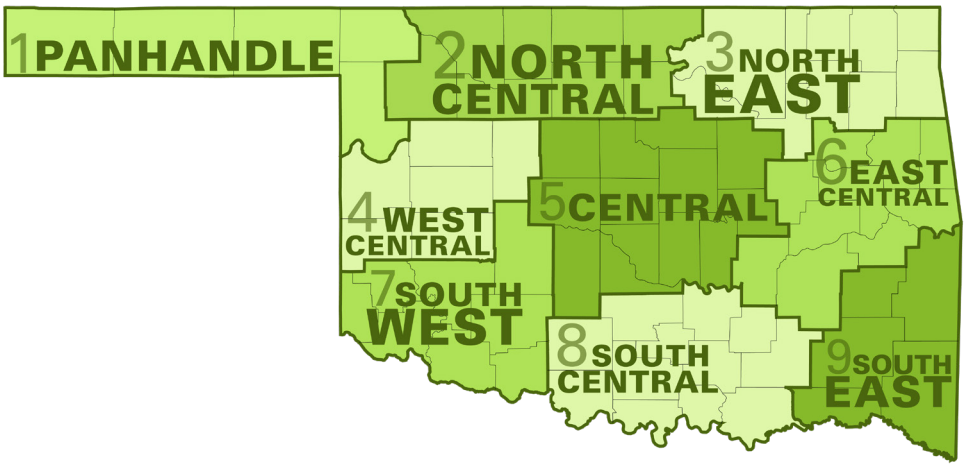
February 2021 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Feb-20 (F)
Panhandle	27.8	-10.6	7th Coolest	47.3 (1954)	23.6 (1899)	36.8
North Central	28.0	-11.6	5th Coolest	49.6 (1930)	25.3 (1978)	39.4
Northeast	29.4	-11.3	6th Coolest	49.4 (1976)	25.4 (1905)	40.7
West Central	29.9	-11.2	6th Coolest	50.9 (1954)	26.2 (1905)	40.6
Central	30.6	-11.8	5th Coolest	51.5 (1954)	27.5 (1905)	42.4
East Central	32.5	-10.7	6th Coolest	52.5 (2017)	29.5 (1905)	43.8
Southwest	31.9	-11.7	6th Coolest	52.4 (1954)	28.0 (1905)	42.5
South Central	34.3	-11.0	6th Coolest	54.3 (1976)	30.3 (1899)	45.0
Southeast	35.9	-8.8	6th Coolest	53.6 (2017)	31.9 (1905)	45.3
Statewide	31.0	-11.1	6th Coolest	50.6 (1954)	27.6 (1905)	41.8

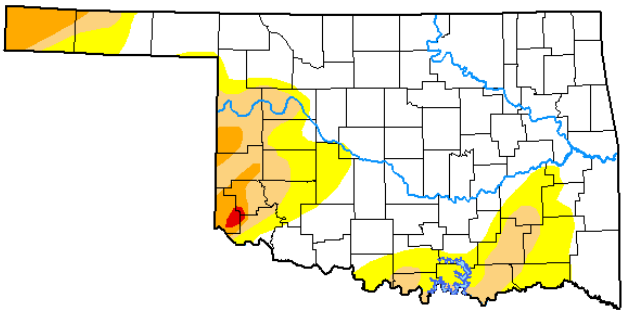
MESONET EXTREMES FOR FEBRUARY 2021

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
North Central	73	23rd	Alva	-20	16th	Seiling	0.52	Seiling	0.35	20th	Seiling
Northeast	75	23rd	Jay	-22	16th	Nowata	0.86	Jay	0.40	20th	Jay
West Central	76	23rd	Erick	-18	16th	Camargo	0.50	Butler	0.39	20th	Butler
Central	76	23rd	Seminole	-20	16th	Lake Carl Blackwell	1.33	Washington	0.58	20th	Spencer
East Central	77	23rd	McAlester	-17	16th	Okmulgee	1.58	McAlester	0.66	6th	McAlester
Southwest	80	23rd	Mangum	-12	16th	Apache	0.62	Apache	0.31	20th	Walters
South Central	81	23rd	Waurika	-14	16th	Sulphur	2.26	Durant	1.21	28th	Durant
Southeast	78	23rd	Antlers	-14	16th	Talihina	4.22	Broken Bow	1.27	26th	Idabel
Statewide	81	23rd	Waurika	-22	16th	Kenton	4.22	Broken Bow	1.27	26th	Idabel
Statewide	108	22nd	Kingfisher	50	1st	Eva	11.80	Fittstown	6.98	2nd	Fittstown

Oklahoma Climate Divisions



U.S. Drought Monitor
Oklahoma



February 23, 2021
(Released Thursday, Feb. 25, 2021)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	69.33	30.67	14.82	4.17	0.23	0.00
Last Week *02-16-2021*	72.70	27.30	11.22	4.17	0.23	0.00
3 Months Ago *11-24-2020*	42.62	57.38	25.13	7.78	1.47	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 *02-25-2020*	86.53	13.47	4.66	0.84	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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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

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