

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU  
 IN COOPERATION WITH CUSHING CHAMBER OF COMMERCE  
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 34

LATITUDE 35° 39'  
 LONGITUDE 96° 46'  
 ELEV. (GROUND) 965 feet

CLIMATOLOGICAL SUMMARY

STATION CUSHING, OKLAHOMA

MEANS AND EXTREMES FOR PERIOD 1938-1958

Month	Temperature (°F)									** Mean degree days	Precipitation Totals (Inches)						Mean number of days					Month		
	Means			Extremes			Mean	Greatest daily	Year		Snow, Sleet			Precip. .10 inch or more	Temperatures		18° and above	18° and below	18° and below	18° and below				
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest					Year	Mean	Maximum monthly		Year	Greatest daily					Year		Max.	Min.
	(a)	(a)	(a)	(a)	(a)	(a)					(a)	(a)	(a)		(a)	(a)					(a)		(a)	(a)
Jan.	49.1	25.4	37.3	81	1950	-11	1947	860	1.30	2.37	1949	3.9	14.3	1949	9.0	1953	3	0	4	23	*	Jan.		
Feb.	54.4	30.2	42.3	83	1956	3	1955†	640	1.61	1.40	1940	1.3	6.0	1945	3.2	1942	4	0	1	16	0	Feb.		
Mar.	61.4	36.5	49.0	92	1955	-2	1948	510	2.15	3.39	1938	1.3	13.5	1948	6.5	1948	5	*	*	*	*	Mar.		
Apr.	72.7	49.1	60.9	101	1955	23	1957	170	3.48	2.05	1942	0.2	3.0	1938	2.0	1938	7	1	*	1	0	Apr.		
May	79.9	58.8	69.4	100	1953	32	1954	30	5.62	4.70	1943	0					8	4	0	*	0	May		
June	89.4	67.2	78.3	108	1953	45	1955	0	5.14	4.65	1948	0					6	17	0	0	0	June		
July	94.6	71.3	83.0	117	1954	55	1953	0	3.70	4.12	1953	0					4	24	0	0	0	July		
Aug.	95.8	69.9	82.9	112	1956†	51	1949	0	2.78	5.50	1942	0					5	25	0	0	0	Aug.		
Sept.	87.7	60.8	74.3	110	1947	35	1942	10	3.67	4.10	1945	0					4	14	0	0	0	Sept.		
Oct.	76.3	50.8	63.6	99	1953	24	1957	150	2.90	4.63	1941	0					4	3	0	1	0	Oct.		
Nov.	61.7	37.5	49.6	85	1950	10	1950	460	1.69	2.77	1940	0.1	1.0	1952	1.0	1952	3	0	*	11	0	Nov.		
Dec.	51.8	28.8	40.3	82	1948	2	1950	770	1.22	1.75	1944	1.2	11.0	1954	11.0	1954	2	0	1	21	0	Dec.		
Year	72.9	48.9	60.9	117	1954	-11	1947	3600	35.26	5.50	1942	8.0	14.3	1949	11.0	1954	55	88	6	85	*	Year		

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

† Trace, an amount too small to measure.

\* Less than one half.

\*\* Base 65°F computed from mean monthly temperatures rather than the actual degree-day averages.

CLIMATE OF CUSHING, OKLAHOMA

Cushing is located in southeastern Payne County about 65 miles northeast of the center and Capitol City of Oklahoma. The Cimarron River winds its way northeastward just to the northwest of Cushing. The surrounding terrain is gently rolling hills and there are no physical features such as mountains or large bodies of water that influence the climatic conditions of Cushing.

The climate of Cushing is mild and essentially of continental origin, although the warm, moist air currents from the Gulf of Mexico exert some influence. The continental effect on the pressure systems that move across the country produces pronounced daily and seasonal temperature changes and variations in seasonal and annual precipitation. Although numerous and occasionally severe outbreaks of cold Canadian air occur, winters are comparatively short and mild. Conversely the summer season is usually hot and quite long, characteristic of the great southwest. Spring is the season of changeable conditions, greatest intensity of rainfall, and the most frequent occurrence of severe local storms and tornadoes. The fall season has a great number of pleasant, sunny days, cool, brisk nights and longer periods of steady light rain in contrast to the more violent spring and summer showers.

Temperatures recorded in Cushing indicate that daily maximum readings in July and August should average near 95° and near 51° during the winter months. Daily minimum readings for the same months should average around 70° and 29°, respectively. The long summer season is evidenced by the fact that 90° or higher temperatures have occurred as early as March and as late as October. Temperatures of 100° or higher were recorded on an average of 22 days per year. The greatest number of days in any one year with 100° or higher temperatures was 76 in 1954 and the greatest number of consecutive days with 100° was 28 in July, 1954 and also in August and September, 1954. The apparent discomfort of these high temperatures are greatly modified by good prevailing southerly breezes and low humidities. Periods of exceptionally low temperatures in winter are few as indicated by the fact that below zero temperatures have been recorded on only 9 days during the period summarized and on the average there are only 6 days per year when the temperature doesn't get above freezing.

Rainfall is ample for most agricultural pursuits and is distributed favorably throughout the year for the development of all vegetation. The greatest amount of rainfall is recorded in the spring and fall when growing crops and pastures gain maximum benefit. Periods of dry weather occur from time to time in varying intensities associated with the droughts of the Southwestern Great Plains.

Snowfall in Cushing is not considered a major source of moisture nor is it a frequent operational hazard as it seldom remains on the ground very long. Occasional freezing rain and sleet storms produce some of the more lasting snow covers.

Relative humidity and wind data, although not observed in Cushing, can be favorably interpolated from Oklahoma City and Tulsa data. Summer relative humidity readings should average near 50% in the afternoon and near 60% at night. Winter readings should average near 60% during the day and near 75% at night. The prevailing wind direction is southerly, however, during much of the winter season it is northerly. The mean hourly wind speed should range near 12 miles per hour.

The average freeze free season in Cushing is 211 days. The average date of the last freeze in the spring is April 3 and the average date of the first freeze in the fall is October 31. The latest freeze of 32°F. or less in the spring was 32° on May 3, 1954. The earliest freeze of 32°F. or less in the fall was 29° on October 7, 1952.

Payne County reported 24 tornadoes and funnels aloft during the past 83 years. Of these, only one struck the City of Cushing on May 26, 1955 and resulted in only minor damage with no loss of life or injuries. Several tornadoes or funnels aloft passed near Cushing, but none of these resulted in major deaths, injuries or property damage.

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AVERAGE TEMPERATURE (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1941	- -	- -	- -	- -	73.5	77.0	83.4	82.8	74.4	63.9	50.8	43.8	- -
1942	36.9	39.3	49.5	62.1	66.6	75.5	80.8	78.9	69.9	62.4	51.0	39.6	59.4
1943	35.5	44.2	43.3	63.6	65.8	80.6	85.6	86.8	71.5	58.6	47.8	34.5	59.8
1944	37.7	41.8	46.2	56.8	69.0	79.2	81.4	82.7	72.2	64.0	50.2	35.3	59.7
1945	37.4	38.8	54.6	57.2	65.8	74.0	79.2	81.3	72.8	61.1	51.4	33.2	58.9
1946	37.1	46.6	56.0	64.4	65.4	77.6	86.3	83.9	72.4	66.0	48.8	44.4	62.4
1947	37.5	36.2	44.7	59.2	66.8	77.5	80.4	85.9	77.5	70.5	46.2	41.6	60.3
1948	31.9	38.0	43.5	69.4	70.6	80.1	81.9	79.9	75.2	60.2	47.4	41.4	59.9
1949	29.5	38.9	48.6	60.3	73.3	77.3	81.6	78.6	68.2	61.8	53.2	42.8	59.5
1950	36.4	44.0	- -	- -	76.4	- -	77.1	77.0	71.6	68.8	49.3	40.4	- -
1951	40.1	44.8	49.9	58.2	69.5	75.7	- -	86.2	74.7	63.7	44.2	41.3	- -
1952	46.0	47.9	48.2	57.9	69.3	83.6	82.6	84.5	75.9	60.5	48.5	39.0	62.0
1953	42.7	45.8	57.6	58.6	70.2	86.3	80.9	79.4	77.6	65.4	51.1	40.9	63.0
1954	37.9	52.7	48.7	66.7	64.9	80.2	91.0	88.0	80.5	65.4	52.6	41.2	64.2
1955	38.3	40.0	50.3	65.3	69.9	73.6	85.6	82.5	77.3	62.5	47.4	38.2	60.9
1956	35.5	41.5	54.5	60.4	74.2	79.8	86.0	88.3	80.1	67.8	49.0	43.4	63.4
1957	32.5	45.4	46.6	57.0	66.7	74.9	85.0	82.1	71.0	57.7	46.7	44.9	59.2
1958	38.8	34.1	41.0	58.0	70.7	78.5	81.4						

STATION HISTORY

Observations of precipitation were begun in Cushing in September, 1937. The standard rain gage was located 1/4 mile east of the Post Office at the residence of Mr. O. H. Lachenmeyer, who then served as Observer until September, 1940.

In November, 1940, the station was moved 4 blocks north of the Post Office to the City Hall at coordinates 35° 39' Latitude and 96° 46' Longitude with a ground elevation of 965 feet mean sea level, and maximum and minimum thermometers were added to the observing program. Members of the Police Department have served as observers, namely: Ray L. Oliver, November, 1940 to January, 1956; D. J. Fuqua, February, 1956 to August, 1956; and Clyde Sapp has been serving since that time.

TOTAL PRECIPITATION (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1938	1.00	3.63	5.34	2.82	5.26	4.31	6.30	3.45	1.84	0.86	2.10	0.22	37.13
1939	4.06	0.60	1.32	1.60	4.66	5.51	1.03	5.63	0.00	1.26	0.65	1.06	27.38
1940	0.67	3.31	0.49	4.98	2.44	6.30	2.56	3.59	3.77	1.52	5.47	1.13	36.23
1941	1.00	2.28	0.77	4.52	7.60	3.76	5.01	2.49	5.13	16.34	1.83	1.41	52.14
1942	0.36	1.82	0.35	9.44	1.28	16.77	2.40	8.38	6.91	2.96	1.08	2.59	54.34
1943	T	0.78	2.21	1.67	13.23	0.54	0.37	0.94	5.76	6.47	0.10	3.10	35.17
1944	0.88	1.62	2.27	3.41	4.99	2.78	4.17	4.09	3.04	1.90	2.66	2.58	34.39
1945	1.14	1.78	2.61	5.17	0.75	7.21	2.72	1.09	12.90	0.92	0.27	0.20	36.76
1946	3.25	1.92	2.94	1.89	6.03	2.18	T	3.06	1.89	1.08	4.24	1.40	29.88
1947	0.54	0.03	1.23	9.67	5.16	4.81	2.42	0.45	2.35	1.03	1.82	1.22	30.73
1948	0.90	1.87	4.45	1.59	3.80	12.56	10.46	2.86	0.87	0.44	1.82	0.54	42.15
1949	5.97	1.47	1.05	1.80	9.73	4.48	2.76	1.62	4.59	4.13	0.00	1.34	38.94
1950	0.89	2.51	0.76	1.29	6.44	2.59	12.57	2.61	2.66	1.45	0.85	0.10	34.72
1951	1.42	2.49	1.11	1.91	4.58	7.22	4.44	2.59	6.15	4.81	2.75	0.10	39.57
1952	0.52	1.60	3.58	2.68	6.15	1.80	2.77	3.55	0.28	T	2.43	0.78	26.14
1953	0.90	1.64	4.95	3.49	1.68	3.61	9.02	3.53	2.62	3.44	1.13	1.23	37.24
1954	0.68	0.82	0.73	2.84	5.28	0.76	1.82	2.37	1.54	1.21	0.39	2.37	20.81
1955	0.83	1.12	1.75	1.70	9.64	2.49	1.30	2.08	1.47	3.40	0.00	0.07	25.85
1956	0.39	0.77	0.67	2.28	5.34	2.03	0.94	0.32	0.80	3.08	2.15	1.86	20.63
1957	0.69	0.83	2.63	6.37	12.40	8.72	1.16	0.89	8.77	1.72	2.12	1.06	47.36
1958	1.16	0.88	3.85	1.90	1.62	7.56	3.43						