U. S. DEPARTMENT OF COMMERCE
Environmental Science Services Administration
in cooperation with
Cotton Economic Research and
Bureau of Business Research of
The University of Texas at Austin

CLIMATOGRAPHY OF THE UNITED STATES NO. 20-41

CLIMATOLOGICAL SUMMARY

LATITUDE 32° 35' N
LONGITUDE 96° 19' W
ELEV. (GROUND) 448 ft.

STATION KAUFMAN, TEXAS

MEANS AND EXTREMES FOR PERIOD 1937-1966

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet: Mean	Maximum monthly	Year	Greatest Depth	Year	Mean number of days: Precip. .10 inch or more	Temperatures: Max. 90° and above	Max. 32° and below	Min. 32° and below	Min. 0° and below	Month
(a)	30	30	30	30		30		11	30	30		30	30		11		11	11	11	11	11	
Jan	54.3	32.8	43.6	84	1952	-3	1940	738	2.63	1.69	1965	1.6	8.0	1948	7	1964	4	0	2	18	0	Jan
Feb	58.9	36.9	47.9	87	1959	-1	1949	504	3.02	2.72	1938	0.6	4.0	1940	3	1966+	5	0	1	12	0	Feb
Mar	66.7	42.4	54.6	92	1946	11	1943	363	2.78	4.05	1945	0.2	2.2	1962	0		4	*	*	6	0	Mar
Apr	75.9	52.6	64.3	100	1963	30	1940	100	4.99	4.98	1964	T	T	1938	0		7	*	0	*	0	Apr
May	83.2	61.3	72.3	100	1956	37	1954	11	4.63	3.22	1952	0	0		0		6	6	0	0	0	May
Jun	91.0	69.2	80.1	104	1953+	52	1964	1	3.79	6.00	1943	0	0		0		5	21	0	0	0	Jun
Jul	96.1	72.5	84.3	110	1964	59	1940	0	2.75	12.75	1962	0	0		0		3	29	0	0	0	Jul
Aug	97.1	71.9	84.5	112	1964	57	1966	*	2.11	2.60	1966	0	0		0		3	28	0	0	0	Aug
Sep	90.4	65.4	77.9	109	1963	38	1942	1	2.81	3.75	1957	0	0		0		4	18	0	0	0	Sep
Oct	80.7	54.5	67.6	102	1938	29	1952	64	2.90	4.94	1957	0	0		0		4	4	0	*	0	Oct
Nov	66.9	42.2	54.6	90	1955	14	1950	295	3.29	4.25	1946	0.3	8.0	1937	0		5	0	0	4	0	Nov
Dec	57.7	35.7	46.7	88	1955	8	1963	578	2.97	2.54	1937	0.1	1.0	1946	3	1963	5	0	1	13	0	Dec
Year	76.6	53.1	64.9	112	Aug. 1964	-3	Jan. 1940	2655	38.67	12.75	July 1962	2.8	8.0	Jan. 1948+	7	Jan. 1964	55	106	4	53	0	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

THE CLIMATE OF KAUFMAN, TEXAS

Kaufman is the county seat and geographical center of Kaufman County, located in North Central Texas, approximately 33 miles east-southeast of Dallas. Industries include steel products, pumps, and fertilizers. Kaufman County is mostly level Blackland prairie drained by Cedar Creek and the Trinity River. Minerals produced include oil, gas, and stone. Beef cattle and cotton are the leading farm products. Sorghums, wheat, alfalfa, and poultry are produced also. Cedar Creek Lake is a recreational attraction. Many Kaufman County residents work in Dallas County, and the county is included in the Dallas Standard Metropolitan Statistical Area.

The climate of Kaufman is humid subtropical with hot summers. The Gulf of Mexico plays a dominant role in the climate of the area during the spring, summer, and fall months, while modified polar and arctic air masses contribute significantly to the winter climate. The range in temperature from winter to summer is considerable and air mass changes occur frequently during the cool season of the year. Rainfall is adequate for most water needs, averaging 38.67 inches annually. Prevailing winds vary from south to southeast throughout the year, although northerly winds are frequent during the winter months.

Winter temperatures are mild with only about four days each year, on an average, when the daily maximum fails to rise above freezing. Arctic or unusually cold polar air masses plunging rapidly southward out of Canada bring sharp drops in temperature, but ordinarily, cold spells are of short duration. Cloudiness is more prevalent in winter, but the area continues to receive about 50 percent of the total possible sunshine during this season. Winds accompanying a vigorous cold front may be strong northerly, but these decrease rapidly after the frontal passage. The lowest ever recorded at Kaufman (since 1900) was -3°F, and occurred in January 1940.

Daytime temperatures are hot in summer, particularly in July and August. Except for an occasional thundershower, there is little variation in the day-to-day weather in summer. Refrigerated air-conditioning is recommended for maximum comfort indoors. The highest temperature ever recorded at Kaufman (since 1900) was 113°F, and occurred in August 1936.

The spring and fall seasons are the most pleasant, temperature-wise; and there is sufficient variation in the weather to make it stimulating.

Precipitation falls mostly as thundershowers. While rainfall is fairly evenly distributed, monthly totals are largest in April and May. High intensity rains of short duration, producing rapid runoff may occur during any season. In July 1962, 12.75 inches fell within a single 24-your period. Slow general rains are more common in winter. The predominately anticyclonic atmospheric circulation over Texas in summer, and the exclusion of cold fronts from the area, result in a relatively dry period in mid-summer. Monthly and seasonal rainfall totals are quite variable. The driest year on record (since 1902) was 1910, with 22.79 inches. The wettest year was 1926, when a total of 58.33 inches fell.

Mean annual snowfall is 2.8 inches; however, mean values are misleading. A few exceptionally heavy snowfalls create a bias in the mathematical mean for long periods of years so that this statistic is usually a poor estimate of expected snowfall. Almost as frequent as snow are the occasional ice storms that cause considerable damage to trees, shrubs, and utility lines, and make travel hazardous for a few hours at a time.

The growing season (freeze free period) at Kaufman averages 248 days. The average date of the last freeze in the spring is March 18, while the average date of the first freeze in the fall is November 21. Low temperatures are very sensitive to variations in topography, air drainage, plant cover, and soil condition; therefore significant departures from these mean values are likely to be found, not only in the surrounding rural area, but within the city limits of Kaufman.

Average annual relative humidity is about 81 percent at 6:00 a.m., 56 percent at noon, and 52 percent at 6:00 p.m., Central Standard Time. Seasonal averages vary only slightly. The area receives about 65 percent of the total possible sunshine annually. Mean annual lake evaporation is estimated at 55 inches.

KAUFMAN, TEXAS

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1937	42.0	48.8	50.7	64.5	74.3	81.2	84.3	86.2	78.3	64.8	52.1	46.7	64.5
1938	47.5	54.0	63.0	62.6	72.2	80.4	83.8	85.6	80.0	75.3	52.2	47.6	67.0
1939	49.2	44.5	58.4	64.6	74.0	80.4	84.8	84.7	82.3	69.7	52.2	49.4	66.2
1940	31.2	45.4	57.4	62.8	69.5	76.4	80.0	80.4	74.2	67.4	50.6	47.0	61.9
1941	46.4	44.8	50.6	64.6	74.4	77.9	84.6	84.4	79.6	71.6	53.4	48.6	65.1
1942	40.6	46.1	54.8	64.2	70.2	79.3	82.8	83.7	74.2	66.5	57.6	48.0	64.0
1943	43.1	50.5	50.0	68.4	73.2	81.2	84.6	87.4	76.0	64.2	54.6	43.4	64.7
1944	44.6	51.2	53.6	62.6	70.6	81.4	85.0	84.4	76.6	67.8	56.7	43.2	64.8
1945	44.0	47.8	60.6	62.6	69.2	79.0	81.1	82.4	77.6	63.4	59.0	42.7	64.1
1946	43.7	50.6	60.0	67.7	69.4	77.6	84.5	84.4	76.5	67.4	56.0	51.5	65.8
1947	43.9	43.3	49.1	63.9	69.8	79.0	82.7	-	78.6	73.3	51.5	47.6	-
1948	37.6	45.8	55.9	68.8	72.0	82.2	85.4	85.5	77.6	66.1	54.7	49.5	65.1
1949	40.6	47.0	54.1	61.9	74.2	80.6	84.7	82.1	76.6	66.6	57.0	50.2	64.7
1950	50.6	51.8	52.5	61.6	72.6	78.9	81.0	82.3	74.7	70.6	52.9	46.8	64.7
1951	45.8	47.2	55.5	63.0	71.0	79.1	85.1	88.6	78.3	68.1	50.4	47.8	65.0
1952	41.2	39.8	40.1	47.2	56.9	69.5	70.2	72.4	62.4	41.3	41.8	34.8	51.5
1953	49.0	47.6	59.8	59.5	71.5	85.2	83.4	83.1	77.6	69.2	52.6	44.2	65.2
1954	45.8	54.1	54.2	69.5	68.5	82.9	89.7	88.7	81.4	68.9	52.9	47.1	67.0
1955	44.9	47.5	56.0	67.0	75.7	78.2	85.2	82.1	79.2	66.5	53.9	46.2	65.2
1956	44.0	47.6	55.8	62.8	76.9	82.2	88.2	87.1	81.0	71.8	52.3	50.5	66.7
1957	42.9	53.8	52.4	61.6	71.9	79.6	86.8	83.7	75.9	62.6	52.3	50.9	64.5
1958	43.7	43.4	49.0	61.8	73.4	81.3	84.1	84.5	78.0	65.5	56.6	42.9	63.7
1959	41.1	47.6	54.1	61.1	74.2	79.4	81.9	82.8	78.9	66.2	49.0	49.4	63.8
1960	43.6	41.4	48.4	66.7	70.0	81.3	84.1	83.5	78.6	69.7	56.6	43.2	63.9
1961	40.7	50.2	59.3	62.1	72.4	76.9	81.6	81.6	77.3	66.7	53.1	45.3	63.9
1962	38.2	55.0	51.9	62.4	74.9	78.7	82.8	84.8	78.0	70.7	54.1	46.8	64.8
1963	36.4	44.8	59.8	68.8	73.3	81.9	85.5	87.6	80.9	73.8	58.4	39.3	65.9
1964	44.0	43.7	54.5	67.5	74.5	80.7	88.2	86.7	78.8	64.4	58.9	46.8	65.7
1965	47.3	45.0	47.6	69.1	72.6	79.4	86.0	84.1	78.7	65.3	62.3	49.0	65.5
1966	41.1	44.8	55.3	64.5	71.5	78.2	84.8	81.1	74.6	64.1	59.8	44.6	63.7

KAUFMAN, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1937	2.63	1.02	5.04	1.35	1.48	2.37	2.01	1.14	0.87	3.18	3.94	8.05	33.08
1938	4.66	4.66	4.00	5.27	1.90	3.77	1.52	0.99	0.05	0.22	2.55	1.75	31.34
1939	3.37	5.09	2.34	2.21	4.29	4.26	2.46	2.61	0.35	0.88	5.06	1.84	34.76
1940	1.08	2.34	1.08	6.55	4.26	5.15	3.21	1.89	1.32	2.57	8.23	4.22	41.90
1941	1.19	2.64	3.10	3.19	5.55	11.39	3.58	2.11	1.59	5.12	1.79	3.19	44.44
1942	1.87	1.25	1.90	13.66	5.77	4.74	0	1.83	3.19	4.39	3.96	3.80	46.36
1943	0.85	1.73	4.33	1.35	6.42	10.14	1.26	0.05	5.00	2.56	0.04	3.16	36.89
1944	3.25	3.66	2.73	4.47	9.84	1.93	1.22	3.70	0.92	1.63	6.09	6.23	45.67
1945	2.41	6.31	12.54	3.29	1.72	5.86	8.93	2.93	2.02	4.73	2.33	2.10	55.17
1946	4.71	4.50	2.66	2.00	8.90	1.67	1.24	2.26	1.00	2.20	9.87	1.78	42.79
1947	2.66	0.72	2.46	6.46	3.30	6.86	0	4.86	3.52	2.15	3.94	6.90	43.83
1948	3.45	1.95	-	3.60	-	1.48	2.97	0.66	1.48	1.63	2.60	1.42	-
1949	5.56	2.99	2.88	4.23	3.39	2.09	2.67	0.89	1.74	6.32	0.57	1.66	34.99
1950	4.68	6.88	0.61	4.93	6.74	4.47	6.15	3.31	3.24	0.98	1.15	0.13	43.27
1951	2.24	3.36	1.48	2.16	5.14	8.04	1.41	0.68	2.86	7.02	1.17	0.69	36.25
1952	0.89	2.79	2.87	7.93	7.51	0.76	1.66	0.20	0.45	0.34	6.92	4.84	37.16
1953	1.06	1.49	2.84	6.01	5.48	0.49	1.27	2.32	1.18	3.04	2.19	4.47	31.84
1954	3.67	1.71	0.67	0.89	4.48	2.17	0.17	0.94	2.68	7.08	2.81	0.98	28.25
1955	1.47	3.57	2.64	3.63	2.92	2.37	1.91	5.60	2.01	0.68	0.05	1.15	28.00
1956	2.54	4.33	0.35	1.27	3.87	0.88	0.45	0.66	0.02	2.39	4.80	1.74	23.30
1957	3.37	1.90	4.32	14.50	6.24	2.82	0.94	2.57	5.37	7.40	5.71	2.29	57.43
1958	2.31	1.22	3.07	7.41	3.94	2.11	3.36	1.50	6.75	2.56	1.98	1.62	37.83
1959	0.12	4.88	1.54	5.36	6.24	3.87	5.66	1.78	0.80	6.78	0.74	5.51	43.28
1960	4.91	2.99	1.19	3.11	2.93	4.68	2.73	5.63	4.27	2.61	1.18	8.20	44.43
1961	4.03	3.18	3.64	1.17	2.62	6.04	1.56	1.89	3.63	2.12	3.89	2.59	36.36
1962	1.74	2.83	0.85	4.61	2.96	4.51	18.89	0.95	4.98	3.56	3.65	2.45	51.98
1963	0.84	0.12	1.08	7.17	1.88	3.51	1.42	0.41	0.66	0	4.05	1.67	22.81
1964	2.59	2.04	3.05	7.72	2.61	1.32	0.63	1.12	10.53	0.47	3.52	1.05	36.65
1965	2.64	5.45	3.36	1.89	8.84	1.83	0.24	1.75	5.17	1.64	3.61	1.98	38.40
1966	2.25	3.00	2.08	12.20	6.01	1.99	3.04	6.21	6.73	0.87	0.39	1.73	46.50

STATION HISTORY

A Climatological Station was established at Kaufman on January 1, 1900, located on gently rolling, open range land; however, precipitation records are unavailable prior to January 1902. Dr. B. J. Hubbard was appointed Cooperative Observer on June 1, 1904, and the station moved to his residence at 207 South Houston Street, about 800 feet southwest of the post office building. From July 5, 1949 through July 31, 1956, the station was located at the Star Brand Ranch headquarters, 2.1 miles west of the post office, but when Frank V. Hubbard, son of the first observer, retired from work, he moved the station back to the old home place at 207 South Houston Street on August 1, 1956.

The record of the Hubbard family is one of the most remarkable in Texas weather history. The duties of recording the weather at Kaufman has remained with this one family for 64 years. Dr. B. J. Hubbard, who served until his death on March 22, 1922, was followed by his daughter, Miss Bertha Hubbard, who kept records until June 1, 1924. Frank carried on until his death on August 22, 1961. Mrs. Lillian A. Hubbard, his wife, who had been substitute observer for her husband for more than 20 years, assumed the station duties and is currently the Cooperative Observer at Kaufman. Station equipment consists of a cotton region shelter, maximum and minimum thermometers, and a standard eight-inch rain gage. Data are published monthly in CLIMATOLOGICAL DATA-TEXAS, under the North Central Texas division. Station index number, 41-4705-03.

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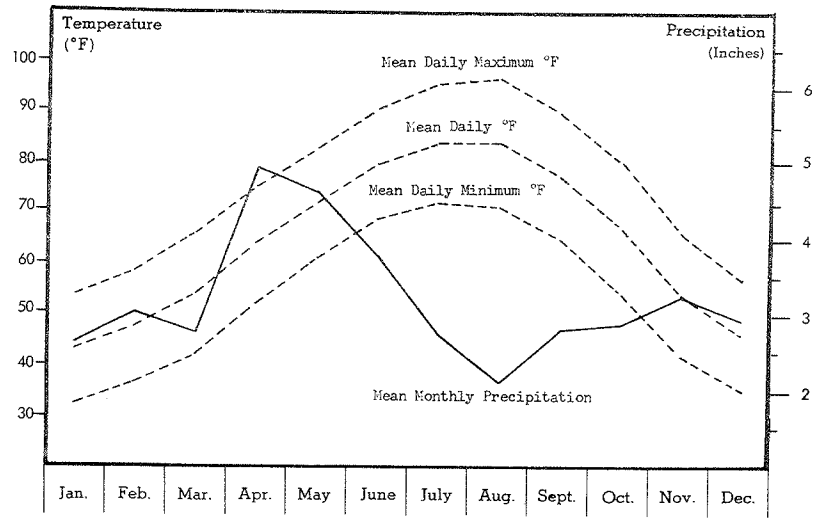
Monthly Temperatures and Precipitation