

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric 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

STATION BOERNE, TEXAS

LATITUDE 29° 47' N
 LONGITUDE 98° 44' W
 ELEV. (GROUND) 1422 ft.

MEANS AND EXTREMES FOR PERIOD 1941 - 1970

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					
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest Depth	Year		90° and above		32° and below			
																		0° and above	32° and below	0° and below	32° and below		
(a)	30	30	30	30		30		15	30	30		30			15		15	15	15	15			
Jan	60.7	36.5	48.6	90	1943	-4	1949	537	1.76	2.11	1968	0.2	6.0	1944	T	1962	3	0	*	13	0	0	Jan
Feb	63.7	40.0	52.0	89	1954	-1	1951	398	2.49	4.00	1941	0.4	5.0	1966	5	1966	5	0	*	9	0	0	Feb
Mar	70.7	45.2	58.0	96	1946	16	1943	258	1.80	2.02	1964	*	0.5	1965	1	1965	4	*	0	5	0	0	Mar
Apr	78.1	54.5	66.3	99	1963	28	1961+	62	2.88	3.03	1965	0	0	0	0	0	4	1	0	*	0	0	Apr
May	83.6	61.5	72.6	101	1967	34	1954	9	3.84	6.86	1958	0	0	0	0	0	6	4	0	0	0	0	May
Jun	89.7	67.4	78.6	101	1953+	47	1970	*	2.57	4.97	1959	0	0	0	0	0	4	17	0	0	0	0	Jun
Jul	93.2	68.6	80.9	107	1954	56	1968	0	1.56	3.38	1950	0	0	0	0	0	2	27	0	0	0	0	Jul
Aug	94.1	67.8	81.0	107	1962	52	1967	0	2.47	6.09	1946	0	0	0	0	0	3	27	0	0	0	0	Aug
Sep	88.0	63.8	75.9	102	1951	38	1942	2	4.35	4.97	1952	0	0	0	0	0	6	13	0	0	0	0	Sep
Oct	80.0	54.9	67.5	96	1956	20	1957+	63	3.09	3.45	1959	0	0	0	0	0	5	2	0	*	0	0	Oct
Nov	59.7	44.4	57.1	90	1949	18	1959+	255	1.76	2.25	1957	0.1	2.5	1955	1	1957	4	0	0	4	0	0	Nov
Dec	63.4	38.3	50.9	87	1955	11	1950	441	1.82	2.55	1945	T	T	1964	0	0	3	0	*	10	0	0	Dec
Year	77.9	53.6	65.8	107	Aug. 1962+	-4	Jan. 1949	2025	30.39	7.41	Sept. 1952	0.7	6.0	Jan. 1944	5	Feb. 1966	49	91	*	41	0	0	Year

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

T Trace, an amount too small to measure.

* Less than one half.

** Base 65°F

THE CLIMATE OF BOERNE, TEXAS

Boerne, located in the Texas Hill Country, 34 miles northwest of San Antonio, was established in 1851 by German settlers, and named by Ludwig Boerne, German poet and historian, then a political refugee in Texas. The Old Kendall Inn, built in 1859, served as a gathering place for frontier lawmen, army officers, cattle drivers and celebrities of that era. It is now a popular tourist attraction. Also in Boerne, stands the small native stone building which served as headquarters for Robert E. Lee during his frontier military service in Texas. Of interest to speleologists, geologists and tourists alike, are Cascade Caverns and Century Caverns, located five miles southeast, and 11 miles northeast of Boerne, respectively.

Boerne is the county seat, commercial and recreational center of Kendall County. Most businesses are agriculturally oriented, but with some income from tourists and hunters. White-tailed deer, turkey, native and migratory game birds abound. Agricultural income in Kendall County is derived chiefly from sheep, cattle and goat ranching: some fence post sales: and hunting leases. The county consists of picturesque hills and plateaus, with many spring-fed streams, caves, and scenic drives. Elevations range from 1,100 to 2,000 feet m.s.l.

Boerne has a warm-temperate, subtropical climate, characterized by dry winters and humid summers. Mean total annual rainfall is 30.39 inches. The rainfall pattern is typical of the Edwards Plateau with a double maxima--the first one in May, the second in September. The September maxima is slightly the larger. In an average year, 68 percent of the rainfall occurs during the warm season, April through October. Most warm season rainfall is a result of thunderstorm activity, and large variations in amounts occur from year-to-year. Total annual precipitation has ranged from 62.47 inches in 1919 to 10.29 inches in 1954. In exceptionally wet years, a significant proportion of the rainfall results from excessive downpours that may be lost to the soil due to rapid runoff. Thunderstorms occur on about 36 days each year. Drought periods are not uncommon.

Boerne receives an estimated 53 percent of the total possible sunshine in winter, 59 percent in spring, 75 percent in summer and 65 percent in fall. At noon, c.s.t., the mean relative humidity is estimated at 58 percent in January, 57 percent in April, 47 percent in July and 53 percent in October. The prevailing winds at Boerne are southeasterly, March through September, and northerly, October through January. February's winds are northeasterly. In an average year, free water (lake) evaporation exceeds precipitation by 30 inches.

Periods of cold weather are short as polar air masses that frequent the area in winter are soon moderated by sunshine and warming southerly winds. Warm daytime temperatures prevail for a long period in summer, but these are broken occasionally by thunder-showers, which occur three or four times each month (in summer). Rapid cooling occurs after nightfall. The highest temperature of record at Boerne is 112°F, and occurred August 23, 1925. Evaporative-type home air conditioners operate efficiently about 90 percent of the time. Automotive air conditioning is recommended for travel.

Rapid temperature changes occur in winter and early spring. Frequent "northers" are effective in closing off the supply of moisture from the Gulf of Mexico from about November through March, so that this is a relatively dry period. Usually, precipitation falls in the form of light rain or drizzle. Significant snowfall is rare, and the mean (or average) is not representative of expected monthly snowfall, as it is influenced disproportionately by a few heavy amounts that may not occur again for 10 to 20 years. The lowest temperature of record at Boerne is -4°F, and occurred January 31, 1949.

The spring and fall seasons are the most pleasant at Boerne: temperatures are more moderate than in either winter or summer.

The mean length of the warm season (freeze free period) is 231 days. The mean dates of the last occurrence of 32°F or below in the spring, and the first occurrence of 32°F or below in the fall, are March 25 and November 11, respectively.

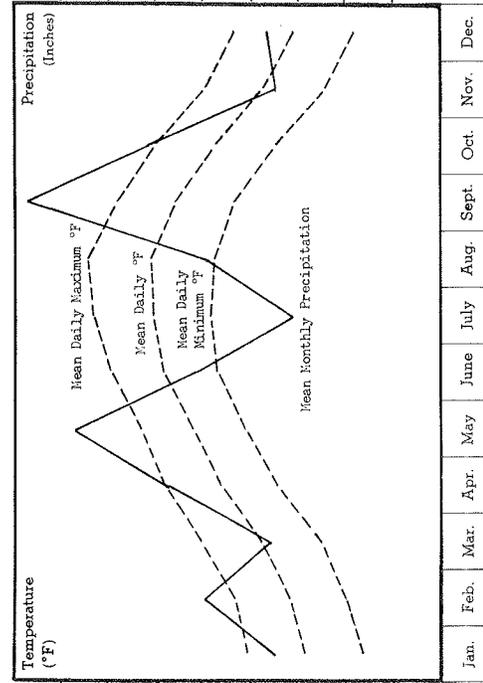
BOERNE, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1941	1.81	5.43	4.71	5.76	4.51	3.03	1.61	0.55	5.60	7.02	0.65	0.87	41.60
1942	0.41	1.17	0.67	3.53	3.79	1.77	3.66	3.51	4.76	3.65	1.98	1.75	31.12
1943	0.66	0.97	1.71	1.57	2.56	3.57	3.16	3.05	4.29	3.76	1.94	2.54	36.33
1944	3.57	3.75	3.70	1.08	1.86	1.88	4.87	2.85	2.25	1.37	3.51	3.56	44.96
1945	3.55	2.54	1.96	1.10	1.00	2.45	4.83	2.95	3.61	3.31	1.30	2.61	31.30
1946	3.02	2.35	1.53	3.94	3.59	3.14	4.60	6.73	9.45	4.22	2.29	2.61	42.62
1947	4.85	3.37	1.51	5.11	5.51	6.31	1.28	2.49	6.15	1.33	1.31	1.19	44.89
1948	4.44	3.06	1.49	1.98	1.26	3.47	1.81	0.87	3.56	2.63	1.34	0.78	23.77
1949	0.76	2.69	0.24	7.22	3.83	3.95	3.77	5.24	2.08	3.22	0	2.89	41.15
1950	0.20	3.72	2.69	2.48	4.10	2.88	4.10	3.88	3.29	2.43	0	0	24.94
1951	0.20	1.71	2.98	3.64	7.14	1.60	0.60	0.31	1.44	2.08	1.26	0.25	31.54
1952	0.53	1.59	1.18	1.47	1.60	0.96	0.62	0	13.63	2.08	0.72	3.40	37.54
1953	0.73	0.89	0.08	1.07	1.60	0.72	0.77	4.52	3.97	3.95	3.49	1.23	21.42
1954	0.87	2.71	0.45	0.14	1.47	1.47	0.25	0.66	0.57	2.72	1.94	0.35	16.20
1955	1.07	1.33	0.13	0.23	0.67	1.37	0.37	4.09	0.70	0.19	1.56	1.08	12.95
1956	1.07	3.46	4.06	9.33	9.22	3.12	0	1.98	2.04	1.11	1.68	1.08	54.95
1957	0.51	2.92	2.89	1.17	7.24	3.40	0	0.68	8.90	7.20	4.61	1.44	46.94
1958	1.68	1.68	0.30	2.76	2.02	9.44	1.39	1.76	10.37	6.63	0.33	3.52	35.94
1959	0.75	4.44	2.53	0.86	1.45	3.24	3.80	4.57	0.74	6.70	1.16	1.52	29.15
1960	1.01	1.47	0.39	0.66	0.12	6.82	3.92	1.06	3.42	2.06	2.82	1.52	29.26
1961	1.26	4.00	4.44	4.71	1.42	1.92	0.76	4.56	5.11	4.51	3.70	1.33	45.26
1962	0.61	0.63	1.47	4.71	1.62	1.92	0.33	2.77	1.29	1.67	3.38	0.92	33.97
1963	0.22	2.23	0.13	3.80	1.17	2.25	0.37	1.40	6.61	1.35	1.77	1.15	27.95
1964	4.19	2.34	3.12	0.87	2.38	0.04	0.04	1.03	3.62	4.63	1.03	1.34	42.41
1965	1.07	6.47	2.04	5.56	10.25	2.28	0.04	1.03	5.99	0.21	0	0.23	29.05
1966	1.82	2.12	0.83	4.56	5.17	1.02	1.16	5.91	3.00	2.68	3.38	1.78	26.75
1967	0.15	1.99	0.94	1.54	3.24	0.04	0.58	3.43	8.00	0.94	2.78	2.69	39.14
1968	6.50	1.89	2.64	4.59	3.59	3.57	2.02	4.14	4.08	0.94	2.18	3.39	36.07
1969	0.78	3.92	2.21	4.45	2.82	2.73	1.28	4.14	2.97	1.74	0.02	0.18	27.79
1970	1.32	3.78	2.66	1.33	8.04	1.14	0.44	0.11	6.53	1.74	0.02	0.18	27.79

F - Trace

Monthly Temperatures and Precipitation



BOERNE, TEXAS

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1941	52.4	50.0	54.0	64.8	73.4	77.1	81.2	82.9	78.0	74.8	56.2	51.8	66.1
1942	47.7	50.6	59.2	66.0	72.4	80.0	81.1	82.1	73.0	67.0	61.6	54.4	65.9
1943	48.9	57.1	55.9	68.3	74.3	78.0	80.6	81.1	73.5	64.7	54.8	48.7	65.2
1944	48.8	55.1	57.8	64.1	69.3	78.0	81.0	81.0	75.2	65.8	61.6	47.3	65.2
1945	49.2	53.5	64.2	72.0	78.4	79.1	81.0	81.0	77.8	66.0	58.4	50.2	66.6
1946	47.8	53.2	61.0	68.3	73.0	77.1	81.1	81.0	75.6	69.3	58.4	53.0	66.5
1947	46.2	46.8	54.8	62.8	72.1	80.4	80.3	81.6	77.6	69.4	53.8	51.4	65.4
1948	43.8	50.6	58.2	68.8	74.1	80.3	80.3	81.6	74.2	67.6	56.5	53.5	65.8
1949	43.9	55.4	57.7	62.2	73.3	76.9	79.5	78.6	75.8	70.4	58.6	49.5	66.2
1950	55.0	54.9	57.7	63.5	70.7	77.6	82.4	82.4	76.7	70.6	54.4	53.6	65.9
1951	48.0	50.4	59.2	65.1	70.7	77.6	82.4	82.4	76.7	70.6	54.4	53.6	65.9
1952	56.0	56.4	56.8	61.2	69.3	77.5	82.7	82.7	74.7	69.1	55.6	47.0	66.7
1953	54.0	51.9	65.5	73.9	82.7	82.7	83.0	81.0	74.7	69.1	55.6	47.0	66.7
1954	52.2	57.4	57.8	69.8	70.5	79.8	82.9	82.4	77.6	69.1	55.6	47.0	66.7
1955	48.9	51.0	60.2	69.8	70.5	79.8	82.9	82.4	77.6	69.1	55.6	47.0	66.7
1956	48.0	53.0	60.3	66.0	74.8	79.8	80.6	79.5	76.9	66.8	56.3	50.8	65.9
1957	52.6	60.9	59.9	64.3	71.5	78.1	82.6	82.3	74.4	69.3	54.4	53.1	66.5
1958	47.5	47.3	52.9	64.5	71.3	79.6	82.1	81.6	76.9	64.2	58.0	58.2	64.5
1959	47.0	51.4	57.1	62.5	73.8	79.0	81.6	81.2	78.4	67.6	51.7	52.0	65.1
1960	48.9	47.0	53.7	67.1	71.2	79.7	80.9	80.0	75.5	70.2	59.0	47.5	65.5
1961	45.0	53.4	62.2	65.7	75.0	78.1	78.5	78.0	76.6	67.0	54.6	51.5	65.1
1962	44.2	59.9	55.8	66.3	74.6	78.9	83.2	84.1	77.9	72.1	57.3	50.4	67.1
1963	44.1	50.5	62.6	71.7	75.0	80.6	82.5	81.8	77.2	70.9	59.3	43.3	66.6
1964	48.3	46.2	59.0	62.6	71.7	75.0	80.6	82.5	83.2	85.2	60.5	51.0	66.1
1965	53.0	48.7	54.2	69.1	71.9	78.3	80.9	80.8	77.6	64.8	62.6	53.6	66.3
1966	44.2	48.2	57.4	67.6	72.1	77.1	81.7	79.2	75.2	66.1	61.3	50.0	65.0
1967	50.2	51.1	65.0	74.0	73.8	80.1	81.9	78.9	72.3	65.6	57.3	48.0	66.5
1968	47.6	46.7	56.1	66.2	71.6	77.4	79.0	80.2	71.7	67.9	57.3	48.5	63.9
1969	49.3	49.9	51.6	65.2	70.0	78.1	82.7	81.9	75.8	66.3	55.0	51.6	64.8
1970	42.7	50.9	53.0	67.0	68.7	76.3	79.9	80.9	77.4	64.1	53.9	56.0	64.2

STATION HISTORY

Rainfall observations began at Boerne in September 1876. Temperature observations began in July 1922. The station has been relocated several times during its history, but has remained within a distance of 2 1/2 miles of the east office in April 14, 1966; the station was relocated to its present site near the Boerne Utilities Building, 0.1 mile north-northeast of the east office. Station equipment consist of a cotton region shelter, maximum and minimum thermometers, and a standard 8-inch rain gauge. Daily temperature and precipitation data are published monthly in Climatological Data - Texas. Station index number: 41-0902-06.

Climatologist for Texas
National Weather Service
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