

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

LATITUDE 36° 21' N
 LONGITUDE 102° 05' W
 ELEV. (GROUND) 3699 ft.

CLIMATOLOGICAL SUMMARY

STATION STRATFORD, TEXAS

MEANS AND EXTREMES FOR PERIOD 1952 - 1968

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		90° and above	32° and below		32° and below	0° and below	
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest Depth		Year	Max.						Min.
(a)	17	17	17	17	1953	-19	1959	13	17	17	1968	1.0	6.0	1959	8	1966	13	13	13	13	13	Jan		
Jan	49.6	17.9	33.8	80	1953	-19	1959	1009	0.23	0.51	1968	1.0	6.0	1959	8	1966	1	*	5	30	3	Feb		
Feb	51.6	21.4	36.5	85	1962	-1	1955	843	0.36	0.60	1964+	2.5	10.0	1964	10	1964	1	0	2	27	*	Mar		
Mar	58.9	26.8	42.9	90	1963	4	1967+	691	0.77	1.64	1961	2.9	14.0	1958	5	1965	2	*	3	23	0	Apr		
Apr	70.2	37.7	54.0	97	1965	18	1964+	348	1.06	2.00	1955	0.1	1.3	1957	1	1957	2	1	*	6	0	May		
May	79.4	48.0	63.7	102	1953	26	1954	120	2.39	3.00	1968	0	0	0	0	0	5	7	0	1	0	Jun		
Jun	89.2	59.1	74.2	108	1953	43	1955	10	2.34	1.72	1966	0	0	0	0	0	6	14	0	0	0	Jul		
Jul	92.8	63.3	78.1	105	1966+	51	1952	0	3.42	2.90	1963	0	0	0	0	0	6	21	0	0	0	Aug		
Aug	91.4	65.3	78.4	105	1959	49	1967+	3	2.49	2.40	1952	0	0	0	0	0	4	19	0	0	0	Sep		
Sep	83.7	53.1	68.4	100	1964+	34	1961	55	1.44	2.12	1960	0	0	0	0	0	3	8	0	0	0	Oct		
Oct	74.1	41.1	57.6	94	1967+	24	1960+	243	1.13	1.88	1960	0	0	0	0	0	2	2	0	3	0	Nov		
Nov	58.9	28.0	43.5	83	1952	-4	1958	646	0.55	1.03	1961	1.3	6.0	1957	3	1962	1	0	1	20	*	Dec		
Dec	51.0	20.4	35.7	77	1965	-10	1961	892	0.37	1.00	1959	2.2	10.0	1960	5	1966	1	0	4	29	*	Year		
Year	70.9	40.2	55.6	108	Jun. 1953	-19	Jan. 1959	4860	16.55	3.00	May 1968	10.0	14.0	Mar. 1958	10	Feb. 1964	34	72	15	139	3	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 STRATFORD, TEXAS

Stratford is located in the northern Texas Panhandle, 82 miles north of Amarillo via U.S. Highway 287, and less than 300 highway miles southeast of Colorado Springs, Colorado. Stratford is the county seat and marketing center for Sherman County. It is a center for agribusinesses, principally feedlot operations, irrigation equipment, and farm production. Sherman County is largely agricultural with production of wheat, sorghums, and cattle. Corn production is increasing. More than 250,000 acres are irrigated. Feedlot operations are large, and increasing. Gas and oil are produced in Sherman County also. The terrain is level, broken by creeks and playas. Soils are sandy to dark loam types. The county lies over the Ogallala aquifer which provides water for municipal and irrigation uses. Elevations in Sherman County range from 3,300 to 3,800 feet above sea level.

Stratford lies in a cool-temperate climatic zone. It has a dry steppe type of climate with mild winters. Mean total annual precipitation is 16.55 inches with four-fifths of this amount falling during the warm season, May through October. Rains occur most frequently as the result of thunderstorms with monthly and annual amounts extremely variable. Annual extremes since 1929 range from 30.67 inches in 1941 to only 8.68 inches in 1956. The prevailing winds are southwesterly November through April and southerly May through October. Mean annual relative humidity is estimated at 72 percent at 6:00 a.m., 42 percent at noon, and 41 percent at 6:00 p.m., Central Standard Time. The Stratford area receives approximately 74 percent of the total possible sunshine annually. Seasonal variations in both relative humidity and sunshine are small. Mean annual lake evaporation is estimated at 62 inches. Meteorological conditions most often observed in the Stratford area favor the rapid transport and dilution of any pollutants that may be emitted into it. The probability of occurrence of episodes of high air pollution potential is among the lowest in Texas.

Winter: Frequent surges of cold Polar Canadian air bring strong northerly winds and rapid drops in temperature. However, cold spells are rather short, rarely lasting longer than 48 hours before

sunshine and southwesterly winds bring rapid warming. Freezes occur almost every night, but days are usually sunny, and daily maxima average 50.7°F. The lowest temperature of record at Stratford is -20°F and occurred on February 7, and on several other days in February 1933. Winter is a dry season. Precipitation most often falls in the form of light snow. Heavy snows are rare, but bias the snowfall statistics so that the arithmetic mean is not a good estimate of expected snowfall.

Spring: is a season of frequent weather changes. Warm and cold spells follow each other in rapid succession throughout March and April. These are the windiest months of the year. Infrequently, strong, persistent southwesterly to northwesterly winds may produce dust storms in the area. Thunderstorm activity which rarely occurs in winter increases in late spring.

Summer is one of the most pleasant seasons on the High Plains. While afternoon temperatures are sometimes hot, nights are pleasantly cool. Summer minima average 62.6°F. Evaporative-type home air conditioners operate efficiently in this relatively dry climate. The highest temperature of record at Stratford is 108°F and occurred June 15 and 24, 1953. Thunderstorms occur every three to four days in an average season, and fifty percent of the mean total annual precipitation falls during this three-month period. A few late spring and early summer thunderstorms may be accompanied by damaging winds and hail.

Fall weather is most pleasant. There is a greater variety than in summer as cold fronts again push southward into Texas. Rainfall decreases progressively from September through November. Mild, sunny days and crisp cool nights characterize the fall season.

The warm season (freeze free period) at Stratford averages 182 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 April 23 and October 22, respectively.

STRAITFORD, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1952	0.08	1.03	1.44	3.42	1.20	1.07	1.57	4.63	0.23	0	0.87	0.51	16.05
1953	0.22	0.25	0.76	0.23	1.02	1.05	3.49	4.31	0.63	1.46	1.12	0.55	15.00
1954	0.29	0.20	0.30	0.53	2.19	0.88	1.92	2.05	1.00	1.29	0	0	10.65
1955	0	0.07	0	2.88	5.60	1.08	0.57	1.25	1.20	0	0.14	0	12.79
1956	0	0.14	0	0.05	1.98	1.35	2.65	2.06	0	0.45	0	0	8.68
1957	0.41	0.14	3.47	2.74	3.11	2.15	2.94	2.32	0	2.59	0.71	0	20.38
1958	0.36	0.31	1.58	2.47	3.46	1.48	7.19	0.41	0.98	0.09	0.71	0.52	19.56
1959	0.41	0.12	0.57	0.42	2.61	2.38	1.36	4.31	1.18	2.70	0.15	1.78	17.99
1960	0.81	0.62	0.06	0.64	0.53	2.84	4.59	1.52	8.07	5.19	1.46	0.25	25.60
1961	0.10	0.39	3.28	0.41	2.88	2.01	2.94	5.29	1.26	1.85	1.85	0.25	22.12
1962	0.35	0.09	0.61	1.94	0.59	3.92	4.81	0.71	1.95	0.24	0.60	0.10	15.91
1963	T	0.59	0.07	0.11	2.58	3.39	4.98	1.43	0.90	0.08	0.22	0.24	14.59
1964	T	0.68	0	0.13	1.12	0.99	2.01	0.99	1.40	0.06	2.03	0.34	9.73
1965	T	0.25	0.68	0.14	3.84	6.26	2.76	5.28	1.30	1.94	0	0.81	23.26
1966	0.26	0.99	T	0	0.19	3.16	6.26	3.45	2.72	0.19	0.02	0.25	17.49
1967	T	0.21	T	0.69	2.06	3.47	4.17	1.23	1.25	0.06	0.06	0.20	13.40
1968	0.60	0.11	0.25	1.19	5.63	2.27	3.87	1.07	0.42	1.00	1.20	0.05	17.66

T - Trace

STRAITFORD, TEXAS

Average Temperature (°F)

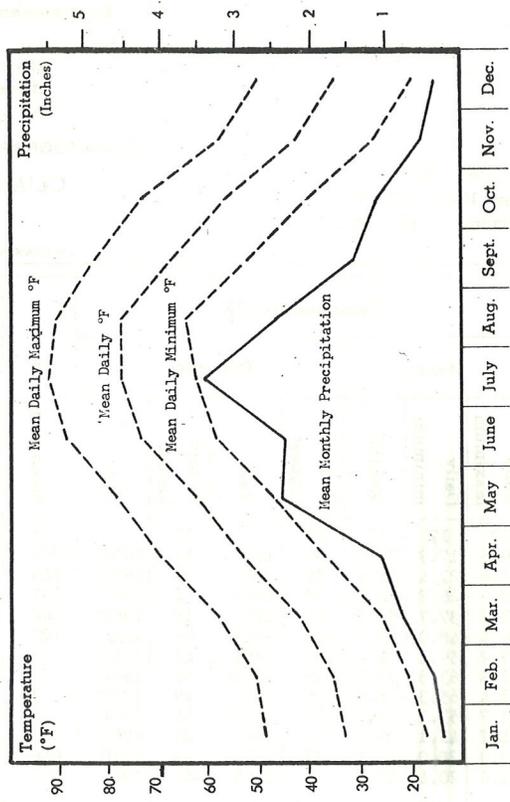
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1952	41.3	41.0	42.4	54.6	64.6	81.1	78.9	80.2	67.5	54.7	33.4	34.5	57.6
1953	43.2	35.7	49.5	53.5	62.4	81.3	80.3	76.1	71.1	59.2	45.0	39.2	58.1
1954	34.8	45.5	41.7	58.2	59.9	77.6	82.1	78.4	74.0	58.4	40.4	37.6	58.1
1955	39.6	33.0	42.7	55.4	63.3	69.9	77.8	76.8	70.6	60.6	39.9	37.6	58.1
1956	34.9	31.3	44.4	54.4	67.3	77.7	78.5	76.8	70.7	60.6	39.9	37.6	58.1
1957	34.9	43.2	43.0	49.3	59.4	71.2	79.7	77.2	64.9	56.9	38.0	40.9	54.2
1958	34.4	36.5	33.1	48.9	65.4	73.2	75.8	77.6	70.0	56.0	42.8	36.2	54.2
1959	38.3	37.4	42.1	50.5	65.7	75.9	76.0	78.0	67.9	52.0	39.1	37.1	57.2
1960	32.1	30.2	42.1	56.5	61.6	73.1	75.9	76.5	67.7	55.7	43.1	33.9	54.0
1961	32.6	35.4	41.4	51.5	63.0	72.1	75.9	74.2	67.7	55.7	38.2	33.5	53.1
1962	28.6	40.4	41.1	53.9	67.7	70.8	77.8	78.1	67.6	59.9	46.7	40.3	56.0
1963	24.8	38.2	40.4	53.7	67.1	73.5	77.8	77.8	67.2	64.9	47.6	30.6	55.3
1964	34.8	30.8	46.4	52.1	67.1	73.4	81.1	77.2	67.9	57.2	45.2	35.0	55.3
1965	38.8	35.6	40.4	55.5	64.0	71.3	77.4	74.3	66.3	57.9	49.1	32.1	54.3
1966	28.9	32.6	47.7	53.3	64.0	73.8	81.2	72.8	67.7	55.0	46.4	32.6	59.4
1967	37.3	37.2	50.3	58.5	60.6	71.8	75.8	73.5	65.0	59.1	43.5	32.6	59.4
1968	34.2	36.1	44.8	51.1	59.7	72.8	75.3	74.6	67.5	58.8	42.4	32.8	54.2

STATION HISTORY

Temperature and precipitation observations began at Stratford in July 1889. The climatological station has been relocated several times, but has remained within 0.6 mile of the Stratford Post Office building throughout the station's history. Horace D. Sneed, the present Cooperative Weather Observer, was appointed on January 21, 1957. The station equipment, consisting of a cotton region shelter, maximum and minimum thermometers, and standard 8-inch rain gage, is located at the observer's residence, 0.6 mile northwest of the post office. Temperature and precipitation data are published monthly in CLIMATOLOGICAL DATA-TEXAS. There are considerable data missing from the records prior to 1952. The station index number is 41-8692-01.

ESSA State Climatologist for Texas
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 3600 Manor Road, Austin, Texas 78723
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Monthly Temperatures and Precipitation



Single copies of this summary are available without charge from the Bureau of Business Research, The University of Texas, Austin, Texas 78712. Quantity rates upon request.