

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
 Revised May 1968

STATION HEREFORD, TEXAS

LATITUDE 34° 48' N
 LONGITUDE 102° 28' W
 ELEV. (GROUND) 3840 ft.

MEANS AND EXTREMES FOR PERIOD 1938-1967

| 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 | | Precip. 90° and above | 32° and below | Max. | | | Min. | |
| | | | | | | | | | | | | | | | | | | | | 0° and below | 32° and below | | | |
| (a) | 28 | 28 | 28 | 28 | | 28 | | 12 | 29 | 29 | | 29 | 29 | | 12 | | 12 | 12 | 12 | 12 | | | | |
| Jan | 51.1 | 21.3 | 36.2 | 82 | 1950 | -15 | 1963 | 916 | 0.52 | 2.17 | 1939 | 1.4 | 8.5 | 1960 | 4 | 1966 | 1 | 0 | 3 | 29 | 1 | Jan | | |
| Feb | 54.6 | 25.3 | 40.0 | 83 | 1962 | -17 | 1951 | 743 | 0.55 | 1.12 | 1956 | 2.9 | 26.5 | 1956 | 18 | 1964 | 2 | 0 | 3 | 23 | * | Feb | | |
| Mar | 62.4 | 30.2 | 46.3 | 92 | 1946 | 2 | 1960+ | 611 | 0.53 | 1.18 | 1957 | 0.1 | 3.0 | 1958 | T | 1967+ | 2 | 0 | 1 | 19 | 0 | Mar | | |
| Apr | 71.7 | 40.3 | 56.0 | 96 | 1965 | 14 | 1940 | 276 | 1.11 | 1.73 | 1949 | 0.4 | 4.5 | 1938 | 0 | | 2 | 1 | * | 4 | 0 | Apr | | |
| May | 80.0 | 50.1 | 65.1 | 100 | 1939 | 28 | 1967+ | 81 | 2.49 | 3.70 | 1947 | 0 | 0 | 0 | 0 | | 3 | 7 | 0 | 1 | 0 | May | | |
| Jun | 88.5 | 59.7 | 74.1 | 105 | 1953 | 40 | 1946 | 10 | 2.90 | 3.24 | 1954 | 0 | 0 | 0 | 0 | | 6 | 14 | 0 | 0 | 0 | Jun | | |
| Jul | 91.6 | 63.7 | 77.7 | 107 | 1940 | 51 | 1961 | 1 | 2.62 | 5.30 | 1950 | 0 | 0 | 0 | 0 | | 5 | 21 | 0 | 0 | 0 | Jul | | |
| Aug | 90.2 | 62.1 | 76.2 | 105 | 1944+ | 48 | 1941+ | 3 | 2.22 | 3.50 | 1945 | 0 | 0 | 0 | 0 | | 4 | 17 | 0 | 0 | 0 | Aug | | |
| Sep | 83.8 | 54.6 | 69.2 | 102 | 1945+ | 33 | 1945 | 38 | 1.57 | 2.75 | 1941 | 0 | 0 | 0 | 0 | | 3 | 6 | 0 | 0 | 0 | Sep | | |
| Oct | 74.7 | 43.5 | 59.1 | 93 | 1965+ | 23 | 1966 | 218 | 1.87 | 3.57 | 1941 | 0.1 | 3.5 | 1941 | 0 | | 3 | 1 | 0 | 2 | 0 | Oct | | |
| Nov | 61.3 | 30.2 | 45.8 | 84 | 1952+ | 0 | 1952 | 511 | 0.57 | 3.25 | 1940 | 0.7 | 5.5 | 1962 | 1 | 1967 | 1 | 0 | 1 | 17 | 0 | Nov | | |
| Dec | 53.0 | 24.1 | 38.6 | 80 | 1939 | -8 | 1951+ | 830 | 0.64 | 3.10 | 1943 | 1.6 | 9.5 | 1943 | 2 | 1967 | 1 | 0 | 3 | 28 | * | Dec | | |
| Year | 71.9 | 42.1 | 57.0 | 107 | July 1940 | -17 | Feb. 1951 | 4238 | 17.59 | 5.30 | July 1950 | 7.2 | 26.5 | Feb. 1956 | 18 | Feb. 1964 | 33 | 67 | 11 | 123 | 1 | 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 HEREFORD, TEXAS

Hereford, county seat of Deaf Smith County, is a market, shipping and processing center for a large High Plains area. Industries include a sugar refinery, lettuce smoking products plant, packing sheds, a large printing plant, fertilizer plants, grain elevators, and feed products. A county hospital, nursing homes, and a vocational school are located in Hereford. Because of fluorine and iodides in the municipal water supply (and the absence of dental decay), Hereford is often called the "Town Without a Toothache." Hereford is the center of an irrigated farm district. Grain sorghums, wheat and sugar beets are principal crops raised in this area. More than 70,000 head of cattle are in feed lots within a 25-mile radius of Hereford. Deaf Smith County is a high, level plain in the eastern and central parts, dropping over the northwest-facing Cap Rock Escarpment in the western part. Tierra Blanca Creek runs across the southern portion of the county while Palo Duro and North Palo Duro Creeks drain the northeast part. Soils are deep chocolate and sandy loam types.

Located within the cool-temperate climatic zone, Hereford has a dry steppe climate with mild winters. Mean annual total precipitation is 17.59 inches. The climate is continental, characterized by a wide annual range in temperature. Prevailing winds are south to southwesterly throughout the year although northerly winds are frequent in the colder months. Occasionally, strong winds from southwest through north will result in blowing dust. The strongest sustained winds occur with greatest frequency in March and April.

Precipitation occurs most frequently in the form of thundershowers. Monthly and annual totals are extremely variable. Seventy-eight percent of the mean annual precipitation falls within the six-month period, May through October. Monthly rainfall totals increase significantly during the colder season as frequent "northerners" cut off the supply of moisture from the Gulf of Mexico. During the five-year drought period, 1952-1956, the average annual rainfall was 11.77 inches. In the five-year period 1958-1962, the rainfall averaged 21.23 inches, almost twice as much.

Temperatures, like rainfall, show extreme variability, especially during the colder six months of the year, November through April. Cold fronts from the northern Great Plains sweep across the level Panhandle plains at speeds up to 40 miles per hour. Temperature drops of 50 to 60 degrees within a 12-hour period have occurred, following the passage of these fast moving "northerners." In spite of occasional low temperatures, winters at Hereford are actually mild when compared to those of the northern Great Plains. Cold spells rarely last longer than two or three days before southwesterly winds from off the high New Mexican plateaus cause rapid warming. The dry air, high elevation, and usually clear skies are ideal for insolation; consequently, there is a large daily range between maximum and minimum temperatures.

Mean annual snowfall is 7.2 inches, but seasonal amounts vary over a wide range. A few exceptionally heavy snows create a bias in the data and make the arithmetic mean a poor estimate of expected snowfall. During the blizzard of February 1-5, 1956, snow fell to a depth of 26.5 inches at Hereford. An even snow cover is very unusual since strong winds most often accompany snowfalls.

While mid-afternoon temperatures are sometimes hot in summer, the high altitude and low humidity result in exceptionally pleasant weather during this season. Temperatures drop rapidly after sunset, and mid-summer minima are in the low sixties.

The mean length of the growing season (freeze free period) at Hereford is 195 days. The mean date of the last occurrence of 32°F in the spring is April 16, while the mean date of the first occurrence of 32°F in the fall is October 28. Mean annual relative humidity is 70 percent at 6:00 a.m., and 38 to 40 percent, both at noon and at 6:00 p.m., Central Standard Time. Mean annual lake evaporation is 67 inches. The area receives about 74 percent of the total possible sunshine annually.

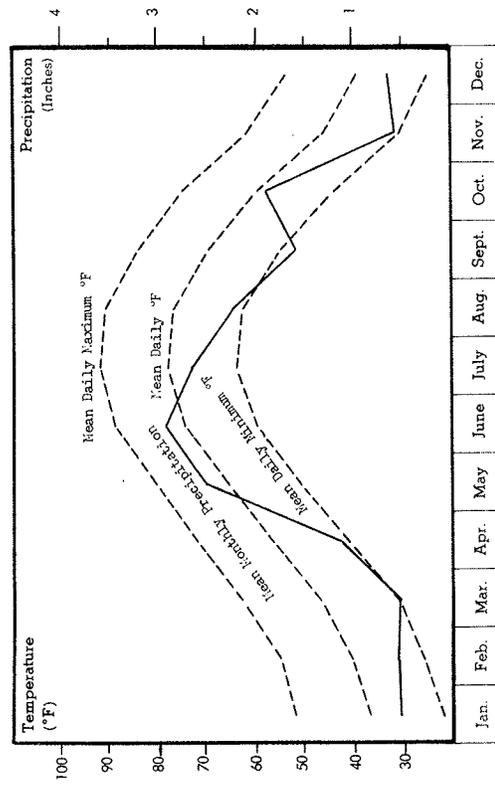
HEREFORD, TEXAS

Total Precipitation (Inches)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|------|------|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| 1938 | 0.21 | 1.85 | 0.31 | 0.76 | 3.59 | 3.24 | 3.43 | 0.11 | 2.25 | 5.62 | 0 | 0 | 21.37 |
| 1939 | 2.28 | 1.73 | 0.20 | 1.73 | 2.09 | 2.40 | 0.21 | 4.05 | 1.74 | 1.10 | 0 | 1.45 | 16.84 |
| 1940 | 0.38 | 0.44 | 0.69 | 1.01 | 3.03 | 0.96 | 0.17 | 1.07 | 0.56 | T | 4.01 | 0.18 | 11.90 |
| 1941 | 0.03 | 0.28 | 2.12 | 1.73 | 8.05 | 4.24 | 4.30 | 1.52 | 3.93 | 11.77 | 0 | 0.77 | 38.95 |
| 1942 | 0.15 | 0.03 | T | T | T | 1.61 | 3.82 | 0.58 | 1.55 | 0.11 | 0.40 | 3.35 | - |
| 1943 | 0.54 | 0.60 | 0.31 | 1.55 | 2.44 | 2.98 | 3.00 | 2.53 | 1.93 | 0.85 | 0.32 | 0.88 | 17.62 |
| 1944 | 0.54 | 0.06 | 0.31 | 1.07 | 0.13 | 0.58 | 1.16 | 2.53 | 2.06 | 0.68 | 0 | 0 | 12.26 |
| 1945 | 1.25 | T | 0.11 | 1.17 | 0.55 | 0.72 | 1.53 | 2.84 | 2.25 | 5.10 | 0.03 | 0.27 | 15.88 |
| 1946 | 0.22 | 0.48 | 0.43 | 1.56 | 1.69 | 0.87 | 0.55 | 2.84 | 0.21 | 0.07 | 0.43 | 1.15 | - |
| 1947 | 0.54 | 1.48 | 0.21 | 0.28 | 8.82 | 1.15 | 0.76 | 3.77 | 2.71 | 0.86 | 1.28 | 0.02 | 17.97 |
| 1948 | 0.34 | 0.61 | 0.16 | 2.33 | 8.82 | 1.15 | 3.04 | 2.05 | 1.61 | 1.32 | 0.02 | 0.47 | 24.19 |
| 1949 | 2.15 | 0.63 | 0.16 | 0.59 | 5.02 | 3.00 | 8.60 | 3.31 | 4.79 | 1.54 | T | 0.43 | 21.79 |
| 1950 | 0.60 | 0.88 | 0.35 | 0.59 | 5.35 | 3.31 | 2.04 | 0.59 | 1.26 | 1.64 | 0.32 | 0.43 | 16.87 |
| 1951 | 0.60 | 0.88 | 0.35 | 0.59 | 5.35 | 3.31 | 2.04 | 0.59 | 1.26 | 1.64 | 0.32 | 0.43 | 16.87 |
| 1952 | 0.40 | 0.60 | 0.77 | 1.19 | 1.26 | 0.93 | 2.61 | 1.37 | 0.38 | 0 | 0.74 | 0.46 | 13.54 |
| 1953 | 0.40 | 0.60 | 0.77 | 1.19 | 1.26 | 0.93 | 2.61 | 1.37 | 0.38 | 0 | 0.74 | 0.46 | 13.54 |
| 1954 | 0.10 | 0.03 | 0.12 | 1.19 | 2.40 | 3.68 | 1.58 | 2.04 | 0.37 | 1.72 | 0.04 | 0.34 | 14.54 |
| 1955 | 0.22 | T | 0.63 | 0.83 | 2.15 | 0.78 | 2.79 | 1.34 | 2.33 | 0 | 0.07 | 6.07 | 13.07 |
| 1956 | 0.03 | 1.70 | T | T | 1.99 | 1.40 | 0.79 | 0.72 | T | 1.08 | 0 | 0 | 7.71 |
| 1957 | 0.15 | 1.05 | 2.34 | 1.33 | 1.60 | 2.72 | 0.42 | 1.21 | 0.25 | 1.76 | 0.85 | 0.02 | 15.70 |
| 1958 | 1.77 | 0.73 | 2.81 | 1.98 | 1.56 | 2.53 | 5.58 | 2.45 | 2.85 | 1.00 | 0.88 | 0.17 | 20.31 |
| 1959 | 0.06 | 0.67 | 0.43 | 1.43 | 2.31 | 3.83 | 1.95 | 3.43 | 1.17 | 1.98 | 0.23 | 1.57 | 21.16 |
| 1960 | 1.54 | 0.80 | 0.40 | 1.59 | 0.68 | 5.63 | 7.92 | 1.68 | 2.11 | 1.13 | 0 | 1.24 | 27.92 |
| 1961 | 0.28 | 0.30 | 2.29 | 0.20 | 0.80 | 1.81 | 2.57 | 2.05 | 1.20 | 0.53 | 0 | 0.28 | 17.16 |
| 1962 | 0.86 | 0.67 | 0.54 | 1.21 | 0.52 | 5.70 | 3.57 | 1.09 | 1.87 | 1.08 | 0.56 | 0.36 | 18.02 |
| 1963 | 0.20 | 1.94 | 0 | 0.29 | 3.36 | 5.17 | 2.30 | 5.83 | 0.86 | 0.68 | 0.89 | 0.34 | 20.93 |
| 1964 | 0.07 | 1.58 | 0.05 | 0.54 | 3.37 | 7.33 | 2.40 | 1.11 | 1.24 | 2.54 | 0 | 0.28 | 11.46 |
| 1965 | 0.34 | 0.28 | 0.2 | 0.34 | 0.75 | 4.31 | 1.42 | 1.11 | 1.24 | 0.04 | 0.38 | 0.02 | 13.88 |
| 1966 | 0.34 | 0.15 | 0.2 | 1.47 | 0.45 | 4.03 | 1.64 | 1.20 | 0.81 | 0.13 | 0.21 | 0.43 | 15.78 |

T - Traces

Monthly Temperatures and Precipitation



HEREFORD, TEXAS

Average Temperature (°F)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|------|------|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1938 | 39.8 | 40.8 | 50.9 | 61.0 | 69.0 | 76.3 | 79.4 | 80.5 | 72.6 | 61.6 | 46.3 | 41.2 | - |
| 1939 | 30.6 | 41.6 | 51.0 | 56.0 | 64.0 | 72.2 | 78.8 | 75.5 | 72.7 | 64.7 | 46.4 | 44.8 | - |
| 1940 | 43.2 | 43.0 | 44.5 | 57.0 | 64.3 | 72.7 | 77.8 | 78.5 | 69.2 | 40.2 | 47.0 | 41.8 | 58.3 |
| 1941 | 38.6 | 40.9 | - | - | - | - | - | - | 66.5 | 57.2 | 44.4 | 36.4 | - |
| 1942 | 36.5 | 41.2 | 45.6 | 57.0 | 65.2 | 74.3 | 77.0 | 76.4 | 69.1 | - | - | - | - |
| 1943 | 33.9 | 42.6 | 51.1 | 60.9 | 69.9 | 74.7 | 80.0 | 78.4 | 72.9 | - | - | - | - |
| 1944 | 32.8 | 37.1 | 42.6 | 52.8 | 61.9 | 73.1 | 77.5 | 76.0 | 69.3 | 63.0 | 41.1 | - | 57.0 |
| 1945 | 35.8 | 38.7 | 46.2 | 53.8 | 62.5 | 72.2 | 77.5 | 75.0 | 68.5 | 57.6 | 46.6 | 38.8 | 57.1 |
| 1946 | 35.8 | 39.7 | 43.2 | 53.5 | 62.1 | 72.1 | 77.5 | 75.0 | 68.1 | 59.4 | 42.3 | 37.3 | 56.0 |
| 1947 | 40.4 | 42.2 | 44.0 | 54.2 | 63.7 | 72.1 | 77.5 | 75.6 | 68.1 | 56.5 | 43.0 | 35.6 | 56.4 |
| 1948 | 44.4 | 49.3 | 51.7 | 64.4 | 70.9 | 74.8 | 78.8 | 76.0 | 71.8 | 59.1 | 48.2 | 37.3 | 58.1 |
| 1949 | 38.5 | 47.5 | 44.9 | 60.4 | 69.9 | 74.8 | 78.8 | 76.0 | 70.9 | 60.3 | 46.8 | 42.3 | 58.6 |
| 1950 | 35.4 | 36.0 | 45.5 | 55.1 | 63.9 | 72.6 | 77.5 | 76.2 | 72.3 | 62.1 | 44.4 | 41.3 | 58.2 |
| 1951 | 36.6 | 45.6 | 46.0 | 51.9 | 61.0 | 72.1 | 77.6 | 76.0 | 66.2 | 56.7 | 42.0 | 38.4 | 56.4 |
| 1952 | 35.8 | 40.8 | 38.8 | 51.7 | 61.5 | 75.9 | 77.7 | 78.0 | 70.2 | 57.3 | 47.4 | 38.4 | 55.7 |
| 1953 | 35.9 | 39.3 | 44.8 | 54.6 | 65.4 | 74.7 | 75.7 | 76.8 | 70.1 | 54.3 | 40.3 | 39.5 | 54.0 |
| 1954 | 31.4 | 33.1 | 42.0 | 58.5 | 69.8 | 74.8 | 72.8 | 74.6 | 68.2 | 57.7 | 45.7 | 34.6 | 54.8 |
| 1955 | 33.9 | 40.4 | 46.8 | 54.4 | 66.0 | 73.3 | 74.1 | 74.2 | 68.4 | 58.6 | 41.3 | 36.8 | 57.3 |
| 1956 | 31.3 | 45.2 | 43.4 | 56.8 | 69.8 | 72.4 | 76.3 | 76.7 | 68.7 | 59.5 | 47.7 | 40.9 | 55.5 |
| 1957 | 31.5 | 40.6 | 48.9 | 60.3 | 67.3 | 72.4 | 78.9 | 76.0 | 71.0 | 64.3 | 48.7 | 38.0 | 57.8 |
| 1958 | 37.1 | 32.2 | 44.3 | 57.1 | 67.1 | 73.3 | 79.7 | 76.4 | 67.6 | 57.6 | 41.7 | 35.5 | 55.5 |
| 1959 | 40.2 | 36.1 | 47.9 | 57.5 | 65.4 | 71.5 | 77.5 | 74.2 | 67.3 | 54.7 | 48.8 | 33.5 | 54.2 |
| 1960 | 29.6 | 35.0 | 47.9 | 54.5 | 63.9 | 72.6 | 80.1 | 72.4 | 67.4 | 54.7 | 48.8 | 33.5 | 54.2 |
| 1961 | 38.9 | 38.7 | 51.5 | 59.2 | 61.4 | 72.0 | 75.3 | 72.4 | 65.7 | 58.2 | 45.3 | 34.1 | 56.0 |

STATION HISTORY

Rainfall and temperature observations began in Hereford in January 1905 and continued through April 1912. No records are available after this date until a station was established three blocks north of the post office on September 11, 1936. Instruments were located on a roof, 28 feet above ground. On August 20, 1942, the equipment was moved to a site on the lawn at the City Hall, three blocks southwest of the post office. The station was moved to the Holly Sugar Corporation Plant, 3.0 miles west-southwest of the Hereford Post Office on November 11, 1964. Station equipment consists of a cotton region shelter, maximum and minimum thermometers, a standard eight-inch non-recording rain gage, and a Fischer-Porter recording rain gage. Temperature and precipitation data are published monthly in CLIMATOLOGICAL BULLETIN-TEXAS. The station index number is 41-4098-01.

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