U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

in cooperation with
Natural Fibers 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° 52' N
LONGITUDE 95° 45' W
ELEV. (GROUND) 463 ft.

STATION EMORY, TEXAS

MEANS AND EXTREMES FOR PERIOD 1952-1971

| Month | Temperature (°F) Means: Daily maximum | Daily minimum | Monthly | Extremes: Record highest | Year | Record lowest | Year | ** Mean heating degree days | Precipitation Totals (Inches): Mean | Greatest daily | Year | Snow, Ice Pellets: 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) | 9 | 9 | 9 | 9 | | 9 | | 9 | 20 | 20 | | 19 | 19 | | | | 16 | 9 | 9 | 9 | 9 | |
| Jan | 55.4 | 31.8 | 43.6 | 79 | 1971+ | 3 | 1963 | 659 | 2.29 | 1.85 | 1957 | T | T | 1959+ | 0 | | 4 | 0 | 1 | 17 | 0 | Jan |
| Feb | 57.0 | 33.4 | 45.2 | 81 | 1969 | 12 | 1965 | 555 | 3.31 | 3.48 | 1959 | 0.3 | 4.5 | 1966 | - | | 6 | 0 | * | 14 | 0 | Feb |
| Mar | 66.0 | 41.5 | 53.8 | 88 | 1971+ | 18 | 1965 | 354 | 2.96 | 2.62 | 1957 | 0 | 0 | | 0 | | 5 | 0 | 0 | 7 | 0 | Mar |
| Apr | 76.1 | 53.2 | 64.7 | 89 | 1971 | 30 | 1964 | 87 | 5.59 | 5.48 | 1958 | 0 | 0 | | 0 | | 6 | 0 | 0 | * | 0 | Apr |
| May | 81.5 | 59.8 | 70.7 | 96 | 1966 | 41 | 1967 | 18 | 5.07 | 5.55 | 1970 | 0 | 0 | | 0 | | 6 | 2 | 0 | 0 | 0 | May |
| Jun | 89.6 | 66.7 | 78.2 | 100 | 1971 | 50 | 1970+ | 2 | 2.71 | 4.70 | 1962 | 0 | 0 | | 0 | | 5 | 17 | 0 | 0 | 0 | Jun |
| Jul | 95.2 | 70.7 | 83.0 | 108 | 1963 | 54 | 1967 | 0 | 2.93 | 4.12 | 1971 | 0 | 0 | | 0 | | 3 | 26 | 0 | 0 | 0 | Jul |
| Aug | 95.1 | 69.0 | 82.1 | 110 | 1964 | 53 | 1967 | 0 | 2.04 | 3.10 | 1962 | 0 | 0 | | 0 | | 2 | 25 | 0 | 0 | 0 | Aug |
| Sep | 88.0 | 62.8 | 75.4 | 104 | 1963 | 38 | 1967 | 7 | 3.62 | 5.58 | 1957 | 0 | 0 | | 0 | | 5 | 14 | 0 | 0 | 0 | Sep |
| Oct | 79.7 | 51.0 | 65.4 | 98 | 1963 | 31 | 1966 | 96 | 4.23 | 5.48 | 1967 | 0 | 0 | | 0 | | 4 | 4 | 0 | * | 0 | Oct |
| Nov | 68.1 | 41.6 | 54.9 | 86 | 1965 | 21 | 1970+ | 314 | 3.27 | 3.32 | 1956 | 0 | 0 | | 0 | | 5 | 0 | 0 | 5 | 0 | Nov |
| Dec | 57.5 | 34.7 | 46.1 | 83 | 1966 | 12 | 1962 | 580 | 3.57 | 4.04 | 1971 | 0.2 | 4.5 | 1963 | 5 | 1963 | 6 | 0 | * | 14 | 0 | Dec |
| Year | 75.8 | 51.4 | 63.6 | 110 | Aug. 1964 | 3 | Jan. 1963 | 2672 | 41.59 | 5.58 | Sept. 1957 | 0.5 | 4.5 | Feb. 1966 | 5 | - | 57 | 88 | 1 | 57 | 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 EMORY, TEXAS

Emory, located in East Texas about 70 miles east of Dallas, is the seat of Rains County, a commercial center for a crop and livestock producing area, and the eastern gateway to Lake Tawakoni. Highways across and around Lake Tawakoni offer scenic vistas of woods and water, while the 36,700-acre reservoir, one of the larger lakes entirely within Texas, provides some of the state's best fishing in countless coves and inlets, and in more than five square miles of submerged timber. Hosts of marinas, camps and parks along its 200-mile wooded shoreline, equipped with boat ramps, a weather reporting station and designated water ski areas, make Lake Tawakoni a prime recreational area.

Rains County, named for Republic of Texas leader, Emory Rains, was organized in 1870. The county, partly blackland, also has sandy and sandy loam soils. About 80 percent of agricultural income is from beef cattle, dairying and poultry; the remainder is from sweet potatoes, watermelons, hay, cotton, stocker calves and swine. Oil, agribusiness and tourism form the economic base of Rains County.

The climate of Emory is humid subtropical with hot summers. It is a continental type climate characterized by extreme variations in temperature. Tropical Maritime air masses predominate from late spring through early fall, while polar air masses frequent the area in late fall, winter and early spring. Temperature extremes within the 10-year period 1962-1971 have ranged from 3°F in January 1963 to 110°F in August 1964. Rainfall is rather abundant, averaging 41.59 inches annually. Although rainfall is fairly evenly distributed throughout the year, April and May are the wettest months; August is the driest. Prevailing winds are southerly through the year. Emory received about 65 percent of the total possible sunshine in an average year. Seasonally, this varies from about 53 percent in winter to 74 percent in summer. Mean relative humidity, at noon, c.s.t., is estimated at 62 percent in both January and April, 53 percent in July and 52 percent in October.

Winter temperatures are mild with minima dipping to 32°F or below on only about one night in two during the winter season. Cold Polar Canadian air masses, plunging southward across the Great Plains, bring sharp drops in temperature, and are accompanied occasionally by strong, gusty, northerly winds. Ordinarily, cold spells are brief, and followed by a rapid warming trend. Winter precipitation usually falls as slow, steady rain, and is not as intense, as the showery type characteristic of spring and early fall. Snowfall is not significant. Rare, heavy snows bias the snowfall data with the result that the arithmetic mean is a poor estimate of expected snowfall.

Summer daytime temperatures are often hot, particularly in July and August. Refrigerated-type air conditioning is recommended for maximum comfort indoors, and except for an occasional thundershower, there is little variation in the day-to-day weather.

Spring and fall are very pleasant seasons at Emory. Cloudiness and showers are more frequent in the spring than in the fall. Average wind speeds are stronger in the spring also. The fall season is characterized by long periods of mild sunny days and clear cool nights.

The warm season (freeze free period) at Emory is 242 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 21 and November 18, respectively. In an average year, free water (lake evaporation) exceeds precipitation by nine inches.

EMORY, TEXAS
Average Temperature (°F)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1962 | - | - | 56.0 | 63.2 | 74.6 | 77.6 | 81.9 | 82.9 | 75.3 | 71.4 | 54.7 | 46.8 | - |
| 1963 | 40.0 | - | 60.7 | - | - | - | 86.4 | 84.9 | 77.6 | 71.0 | 57.9 | 40.3 | - |
| 1964 | 45.2 | 44.0 | 55.8 | 65.7 | - | 77.9 | 85.1 | 83.7 | 76.7 | 60.6 | 56.4 | 44.7 | - |
| 1965 | 44.6 | 44.3 | 46.9 | 66.5 | 71.4 | - | - | - | 76.6 | 63.2 | 59.1 | - | - |
| 1966 | - | - | 54.2 | - | 70.2 | 76.6 | 83.3 | 79.5 | 73.7 | 62.4 | 59.1 | 44.3 | - |
| 1967 | 45.7 | 45.0 | 60.9 | 68.4 | 69.1 | 79.5 | 80.2 | 80.8 | 71.6 | 63.8 | 53.9 | 45.3 | 63.7 |
| 1968 | 42.6 | 43.1 | 53.3 | 63.6 | 70.2 | 77.6 | 79.3 | 81.2 | 71.6 | 64.3 | 50.3 | 45.5 | 61.9 |
| 1969 | 45.7 | 46.9 | 47.5 | 63.7 | 70.6 | 78.2 | 86.4 | 83.4 | 76.8 | 65.8 | 51.8 | 46.6 | 63.6 |
| 1970 | 38.5 | 45.7 | 50.1 | 64.9 | 70.2 | 77.1 | 81.2 | 83.8 | 77.4 | 62.9 | 51.4 | 51.3 | 62.9 |
| 1971 | 46.5 | 47.4 | 52.6 | 62.0 | 68.2 | 80.7 | 82.7 | 78.5 | 76.5 | 68.1 | 54.3 | 51.0 | 64.0 |

STATION HISTORY

Rainfall observations began at Emory on February 16, 1944; however, records are rather incomplete prior to April 1952. The station was located 0.6 mile northwest of the post office April 15, 1952 to November 23, 1953, and 0.6 mile east of the post office, November 24, 1953 to June 30, 1960. On July 1, 1960, it was relocated to a site northeast of the post office, but still within the city limits. On March 1, 1962, the station was upgraded to a complete climatological substation, and temperature measuring equipment added. On June 28, 1963, the station was relocated to a site 0.6 mile north-northeast of the post office, then on March 27, 1964, moved to the 3-J Ranch, 2.8 miles east-southeast of the Emory Post Office. The station remained at this location until February 18, 1966 when it was moved back to Emory and located 0.4 mile north-northeast of the post office. From April 19, 1966 to May 9, 1966 the station was moved to a new site, 1.4 miles north of the post office, then on October 15, 1968, to its present location 0.5 mile southeast of the post office. Station equipment consists of a cotton region shelter, maximum and minimum thermometers, and a standard eight-inch, non-recording rain gage. Daily temperature and precipitation data are published monthly in Climatological Data-Texas. Station index number: 41-2902-04.

Climatologist for Texas
National Weather Service
3600 Manor Road, Austin, Texas 78723
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EMORY, TEXAS
Total Precipitation (Inches)

| Year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1952 | 1.86 | 3.03 | 3.19 | 9.91 | 7.31 | 0.53 | 4.57 | 0 | 0.54 | 0.10 | 7.87 | 6.53 | 45.44 |
| 1953 | 1.90 | 1.80 | 2.81 | 9.04 | 6.18 | 0.60 | 7.00 | 2.41 | 2.81 | 1.99 | 2.84 | 4.84 | 44.22 |
| 1954 | 4.44 | 2.03 | 1.26 | 3.63 | 4.31 | 1.15 | 0.69 | 0.10 | 1.51 | 10.35 | 2.63 | 2.04 | 34.14 |
| 1955 | 1.05 | 2.74 | 2.27 | 3.76 | 1.73 | 4.76 | 1.44 | 9.76 | 0.36 | 0.67 | 0.44 | 1.33 | 30.31 |
| 1956 | 2.25 | 4.84 | 0.88 | 1.40 | 3.83 | 0.52 | 1.11 | 1.78 | 0.08 | 0.87 | 5.74 | 1.84 | 25.14 |
| 1957 | 3.70 | 2.37 | 5.26 | 13.71 | 6.34 | 3.31 | 0.38 | 1.29 | 6.39 | 7.15 | 5.27 | 2.51 | 57.68 |
| 1958 | 2.94 | 0.91 | 4.33 | 8.35 | 3.36 | 3.88 | 3.28 | 2.06 | 5.96 | 1.79 | 4.52 | 1.39 | 42.77 |
| 1959 | 0.16 | 5.29 | 2.57 | 5.95 | 2.40 | 3.27 | 5.02 | 1.00 | 2.41 | 11.72 | 0.88 | 5.66 | 46.33 |
| 1960 | 4.87 | 3.17 | 1.33 | 2.62 | 2.59 | 6.46 | 2.83 | 3.26 | 4.32 | 3.58 | 3.50 | 6.15 | 44.68 |
| 1961 | 2.99 | 3.30 | 6.60 | 2.59 | 2.78 | 5.42 | 3.22 | 1.57 | 2.97 | 1.72 | 4.32 | 3.40 | 40.88 |
| 1962 | 2.71 | 3.63 | 2.41 | 3.62 | 1.06 | 7.74 | 7.49 | 3.63 | 4.52 | 5.48 | 3.61 | 1.78 | 47.68 |
| 1963 | 0.70 | 0.17 | 1.58 | 5.27 | 1.82 | 1.92 | 4.17 | T | 1.32 | T | 3.99 | 1.89 | 22.83 |
| 1964 | 2.03 | 2.35 | 3.08 | 6.10 | 2.05 | 2.53 | 0.09 | 2.94 | 5.97 | 0 | 3.04 | 0.91 | 31.09 |
| 1965 | 2.30 | 9.36 | 2.51 | 0.96 | 10.48 | 2.35 | 0.33 | 1.42 | 6.98 | 1.75 | 2.45 | 1.69 | 42.58 |
| 1966 | 3.21 | 3.90 | 0.58 | 14.10 | 4.38 | 2.45 | 2.47 | 3.87 | 4.67 | 3.25 | 0.40 | 2.78 | 46.06 |
| 1967 | 1.15 | 1.80 | 2.04 | 4.24 | 7.76 | 0.46 | 4.09 | 1.10 | 6.01 | 10.06 | 2.22 | 4.78 | 45.71 |
| 1968 | 3.54 | 2.66 | 4.26 | 5.92 | 10.85 | 4.34 | 2.77 | 0.34 | 6.27 | 2.40 | 5.37 | 3.35 | 52.07 |
| 1969 | 2.43 | 4.12 | 6.24 | 3.05 | 7.80 | 0.77 | 0.21 | 0.41 | 1.42 | 6.06 | 2.74 | 5.13 | 40.38 |
| 1970 | 1.12 | 5.31 | 4.89 | 4.59 | 9.23 | 0.79 | 0.27 | 1.70 | 4.23 | 6.85 | 1.35 | 1.91 | 42.24 |
| 1971 | 0.48 | 3.38 | 1.03 | 3.02 | 5.15 | 0.95 | 7.24 | 2.16 | 3.63 | 8.76 | 2.24 | 11.56 | 49.60 |

T - Trace

Monthly Temperatures and Precipitation