

**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**

STATION GLADEWATER, TEXAS

LATITUDE 32° 31'N  
 LONGITUDE 94° 57'W  
 ELEV. (GROUND) 325 ft.

MEANS AND EXTREMES FOR PERIOD 1953-1966

| Month | Temperature (°F) |               |         |                |           |               |           |      | **<br>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 | 32° and below | 0° and below |       |
|       |                  |               |         |                |           |               |           |      |                        |                               |                |      |                 |           |                |            |                          |               |               |               |              |       |
| (a)   | 14               | 14            | 14      | 14             |           | 14            |           | 11   | 14                     | 14                            |                | 14   | 14              |           | 11             |            | 11                       | 11            | 11            | 11            |              |       |
| Jan   | 55.8             | 32.5          | 44.2    | 81             | 1957      | 5             | 1962      | 673  | 2.92                   | 1.55                          | 1966           | 0.3  | 3.0             | 1962      | 3              | 1964       | 5                        | 0             | 1             | 17            | 0            | Jan   |
| Feb   | 60.6             | 37.0          | 48.8    | 84             | 1957      | 17            | 1963+     | 467  | 3.67                   | 2.16                          | 1957           | 0.5  | 3.4             | 1966      | 3              | 1963       | 6                        | 0             | *             | 11            | 0            | Feb   |
| Mar   | 67.1             | 42.8          | 55.0    | 89             | 1955      | 20            | 1965      | 353  | 3.17                   | 4.07                          | 1955           | 0.2  | 3.0             | 1965      | 0              |            | 5                        | 0             | 0             | 5             | 0            | Mar   |
| Apr   | 76.8             | 53.6          | 65.2    | 92             | 1963      | 33            | 1964+     | 97   | 6.75                   | 9.65                          | 1966           | 0    | 0               | 0         | 0              |            | 7                        | *             | 0             | 0             | 0            | Apr   |
| May   | 83.7             | 62.5          | 73.1    | 98             | 1965+     | 38            | 1954      | 11   | 4.67                   | 3.63                          | 1956           | 0    | 0               | 0         | 0              |            | 5                        | 6             | 0             | 0             | 0            | May   |
| Jun   | 90.0             | 68.8          | 79.4    | 102            | 1953      | 53            | 1956+     | 1    | 3.48                   | 2.45                          | 1957           | 0    | 0               | 0         | 0              |            | 5                        | 19            | 0             | 0             | 0            | Jun   |
| Jul   | 94.3             | 72.6          | 83.5    | 108            | 1954      | 61            | 1953      | 0    | 2.99                   | 2.96                          | 1955           | 0    | 0               | 0         | 0              |            | 4                        | 28            | 0             | 0             | 0            | Jul   |
| Aug   | 93.6             | 71.1          | 82.4    | 106            | 1962+     | 52            | 1956      | 0    | 2.73                   | 3.78                          | 1958           | 0    | 0               | 0         | 0              |            | 4                        | 25            | 0             | 0             | 0            | Aug   |
| Sep   | 88.0             | 65.4          | 76.7    | 102            | 1956      | 44            | 1956      | 2    | 3.63                   | 3.25                          | 1957           | 0    | 0               | 0         | 0              |            | 5                        | 14            | 0             | 0             | 0            | Sep   |
| Oct   | 78.9             | 53.0          | 66.0    | 96             | 1953      | 31            | 1957      | 82   | 3.19                   | 2.75                          | 1957           | 0    | 0               | 0         | 0              |            | 3                        | 2             | 0             | *             | 0            | Oct   |
| Nov   | 67.3             | 42.2          | 54.8    | 89             | 1957      | 20            | 1959      | 296  | 3.14                   | 3.05                          | 1957           | 0    | 0               | 0         | 0              |            | 5                        | 0             | 0             | 5             | 0            | Nov   |
| Dec   | 58.7             | 35.0          | 46.9    | 85             | 1955      | 6             | 1963      | 558  | 3.57                   | 4.50                          | 1960           | 0.2  | 2.8             | 1963      | 1              | 1963       | 6                        | 0             | *             | 14            | 0            | Dec   |
| Year  | 76.2             | 53.0          | 64.6    | 108            | July 1954 | 5             | Jan. 1962 | 2540 | 43.91                  | 9.65                          | Apr. 1966      | 1.2  | 3.4             | Feb. 1966 | 3              | Jan. 1964+ | 60                       | 94            | 1             | 52            | 0            | Year  |

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

† Trace, an amount too small to measure.

\* Less than one half.

\*\* Base 65°F

THE CLIMATE OF GLADEWATER, TEXAS

Gladewater is located at the intersection of U.S. Highways 80 and 271, in the northwest corner of Gregg County, and in the heart of the famed East Texas Oil Field. Gladewater originally was called St. Clair. When, in 1872, the community moved to the Texas and Pacific Railroad a few miles west of Glade Creek, it became Gladewater. The city is a commercial center, serving an oil producing and farming area. Gladewater industries include oil, furniture, machines, tools, clothing, timber, and railway-bus operations. Gregg County is populous, hilly, 47 percent timbered, and is Texas' leading oil producing county. Most important soils are alluvial, clay, and sandy types.

The climate of Gladewater is humid subtropical, with warm summers. Rainfall averages 43.91 inches annually, rather evenly distributed throughout the year. Prevailing winds are from the south-southeast. The Gulf of Mexico source region 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.

Winter temperatures are mild with less than two days during the entire season, on an average, when the daily maximum fails to rise above freezing. Minimum temperatures are freezing or below about one night in two during the winter months. Sudden changes in temperature and moisture do occur in winter as cold, dry polar air replaces the warm moist tropical air from the Gulf, and vice versa. Ordinarily, cold spells are of short duration. In a typical sequence, the weather turns cold one day, reaches the lowest temperature on the second night, then warms up again on the third day. 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 temperature on record at Gladewater (since 1953) is 5°F, which occurred on January 12, and on earlier dates during the same month, in 1962.

Daytime temperatures are quite warm in summer, particularly in July and August. Summer minimum temperatures average 71° to 73°F during the warmest months. Refrigerated air-conditioning is recommended for maximum comfort indoors. The record maximum

temperature at Gladewater (since 1953) is 108°F, which occurred on July 26, 1954.

The spring and fall seasons are the most delightful. Temperatures are neither too hot nor too cold, and there are sufficient changes to make the weather interesting.

Precipitation falls mostly as thundershowers, resulting from the interaction of cold fronts from the north with the warm moist tropical air moving northward from the Gulf of Mexico. Rainfall amounts are heaviest in April and May. Slow, general rains are more common in winter. While they are least likely to occur in winter, high intensity rains of short duration, producing rapid runoff, may occur during any month of the year.

Snowfall averages a little more than one inch a year; however, average values are misleading. One snow of three or four inches may be followed by several years with no measurable amounts. Usually, snow melts almost as rapidly as it falls, and is an unimportant source of moisture. More troublesome than snowfall are the occasional ice storms which do considerable damage to trees, shrubs, and utility lines, as well as make travel difficult for a few hours at a time. These occur during brief periods in winter.

The growing season (freeze free period) at Gladewater averages 247 days. The average date of the last freeze in the spring is March 14, while the average date of the first freeze in the fall is November 16.

Average annual relative humidity is about 84 percent at 6:00 a.m. and 57 percent at both noon and 6:00 p.m. Central Standard Time. Seasonal averages vary only slightly. The area receives about 67 percent of the total possible sunshine annually. Mean annual lake evaporation is estimated at 51 inches. Violent wind or hailstorms may accompany the thunderstorms of late spring and early summer, but these are infrequent.

In summary, the climate of Gladewater is subtropical with mild winters and is favorable for outdoor work or recreation the year-round.

GLADEWATER, TEXAS  
Average Temperature (°F)

| Year | Jan. | Feb. | Mar. | Apr. | May  | June | July | Aug. | Sept. | Oct. | Nov. | Dec. | Ann'l |
|------|------|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1953 | 49.1 | 53.5 | 60.7 | 65.7 | 74.1 | 84.8 | 80.9 | -    | 79.1  | 67.2 | 49.9 | 44.2 | -     |
| 1954 | 46.9 | 48.3 | 54.9 | 58.4 | 67.5 | 77.5 | 86.8 | 85.9 | 78.3  | 67.7 | 52.4 | 48.1 | -     |
| 1955 | 46.3 | 51.7 | 62.4 | 68.5 | 74.9 | 83.0 | 81.4 | 81.4 | 76.2  | 64.3 | 53.2 | 47.7 | 65.5  |
| 1956 | 45.1 | 51.7 | 56.2 | 62.8 | 76.5 | 79.9 | 85.2 | 83.7 | 76.2  | 68.3 | 53.1 | 52.2 | 65.9  |
| 1957 | 45.7 | 57.0 | 62.9 | 69.4 | 73.8 | 79.2 | 84.3 | 81.9 | 74.3  | 62.4 | 53.6 | 44.4 | 63.8  |
| 1958 | 44.1 | 44.2 | 51.5 | 62.2 | 73.1 | 80.1 | 83.1 | 82.1 | 77.4  | 65.2 | 49.8 | 44.4 | 64.2  |
| 1959 | 43.4 | 49.3 | 54.8 | 62.2 | 75.4 | 79.3 | 81.8 | 82.1 | 77.5  | 68.5 | 56.5 | 44.0 | 63.6  |
| 1960 | 44.8 | 42.4 | 47.7 | 59.2 | 70.7 | 80.1 | 82.6 | 82.0 | 77.0  | 65.1 | 53.2 | 45.5 | 63.4  |
| 1961 | 41.0 | 51.4 | 59.2 | 62.1 | 71.2 | 75.5 | 80.9 | 79.1 | 76.0  | 69.7 | 55.6 | 46.4 | 64.8  |
| 1962 | 39.9 | 55.7 | 51.9 | 62.3 | 75.0 | 81.0 | 83.9 | 85.4 | 77.9  | 71.2 | 55.5 | 38.1 | 64.9  |
| 1963 | 37.4 | 45.1 | 59.1 | 68.1 | 73.5 | 78.2 | 84.7 | 82.9 | 76.2  | 62.7 | 58.7 | 48.5 | 65.2  |
| 1964 | 44.8 | 44.4 | 54.6 | 68.2 | 73.8 | 78.7 | 83.8 | 81.6 | 76.9  | 64.3 | 61.0 | 49.4 | 65.2  |
| 1965 | 48.7 | 46.7 | 48.9 | 69.5 | 73.3 | 78.7 | 83.8 | 81.6 | 76.9  | 64.3 | 61.0 | 49.4 | 65.2  |
| 1966 | 41.0 | 44.9 | 55.2 | 64.7 | 70.8 | 77.9 | 83.7 | 79.4 | 72.8  | 61.4 | 59.2 | 45.7 | 63.1  |

STATION HISTORY

A Rainfall and River Reporting Station was established at Gladewater on May 15, 1944. A standard eight-inch gauge was located 0.7 mile southwest of the Post Office, and a recording rain gauge and non-recording river gauge were located one mile southwest of the Post Office. The standard eight-inch gauge was relocated 0.1 mile northeast of the Post Office on February 26, 1948. With the addition of a cotton region shelter and maximum and minimum thermometers on July 30, 1941, Gladewater became a complete climatological station. The recording rain gauge was removed February 23, 1951. The climatological station is located at the City Hall; the river gauge is located on the U.S. Highway 271 bridge over the Sabine River. Temperature and precipitation data are published monthly in CLIMATOLOGICAL DATA-TEXAS, and river data are published in DAILY RIVER STAGES. Precipitation data prior to 1952, and temperature data prior to 1955, are incomplete. Station index number: 41-3565-04.

Weather Bureau State Climatologist  
Environmental Science Services Administration  
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GLADEWATER, TEXAS  
Total Precipitation (Inches)

| Year | Jan. | Feb. | Mar. | Apr.  | May   | June | July | Aug. | Sept. | Oct. | Nov. | Dec.  | Ann'l |
|------|------|------|------|-------|-------|------|------|------|-------|------|------|-------|-------|
| 1953 | 2.79 | 1.95 | 5.79 | 6.21  | 9.11  | 3.45 | 8.74 | 5.04 | 2.10  | 1.25 | 3.01 | 5.61  | 55.05 |
| 1954 | 2.25 | 2.60 | 0.53 | 1.60  | 7.97  | 1.20 | 0    | 0.20 | 0.91  | 6.68 | 4.25 | 2.39  | 30.38 |
| 1955 | 2.90 | 4.78 | 5.45 | 6.66  | 3.75  | 0.94 | 4.64 | 7.43 | 3.66  | 2.47 | 0.20 | 1.48  | 44.34 |
| 1956 | 2.83 | 4.20 | 1.31 | 1.51  | 4.98  | 0.93 | 6.88 | 2.33 | 0.26  | 3.68 | 3.64 | 0.71  | 33.26 |
| 1957 | 2.23 | 4.24 | 3.81 | 14.32 | 5.04  | 8.22 | 1.56 | 0.99 | 6.07  | 7.90 | 8.07 | 2.00  | 64.45 |
| 1958 | 3.63 | 1.55 | 1.72 | 9.50  | 3.40  | 4.30 | 1.30 | 6.58 | 7.63  | 3.20 | 3.22 | 0.64  | 46.67 |
| 1959 | 0.78 | 3.92 | 2.66 | 7.01  | 5.22  | 4.39 | 5.14 | 1.20 | 3.01  | 5.85 | 1.57 | 5.53  | 46.28 |
| 1960 | 3.70 | 4.37 | 2.36 | 1.28  | 1.87  | 5.80 | 2.30 | 1.36 | 6.92  | 2.72 | 3.58 | 11.68 | 47.94 |
| 1961 | 4.03 | 5.81 | 7.53 | 1.01  | 2.33  | 6.66 | 6.02 | 3.12 | 3.97  | 2.10 | 3.80 | 5.45  | 51.63 |
| 1962 | 4.86 | 2.99 | 2.20 | 4.57  | 1.38  | 6.27 | 1.22 | 0.57 | 1.96  | 4.98 | 4.99 | 1.23  | 37.22 |
| 1963 | 1.39 | 1.71 | 1.81 | 8.68  | 2.58  | 0.85 | 1.77 | 0.48 | 2.79  | T    | 2.34 | 2.79  | 27.19 |
| 1964 | 1.29 | 2.63 | 3.48 | 3.78  | 2.07  | 1.17 | 1.34 | 4.37 | 4.89  | 1.13 | 2.23 | 3.60  | 31.98 |
| 1965 | 3.99 | 6.56 | 4.09 | 1.70  | 11.81 | 3.90 | 0.50 | 0.20 | 3.49  | 0.26 | 0.89 | 2.67  | 40.06 |
| 1966 | 4.15 | 4.04 | 1.64 | 26.68 | 3.92  | 0.67 | 0.49 | 4.36 | 3.22  | 2.46 | 2.18 | 4.25  | 58.06 |

T - Trace

Monthly Temperatures and Precipitation

