

Local Climatological Data

Annual Summary With Comparative Data

1974

HOUSTON, TEXAS

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Narrative Climatological Summary

Houston, the largest city in Texas, is located in the flat Coastal Plains, about 50 miles from the Gulf of Mexico and about 25 miles from Galveston Bay. The climate is predominantly marine. The terrain includes numerous small streams and bayous which, together with the nearness to Galveston Bay, favor the development of both ground and advective fogs. Prevailing winds are from the southeast and south, except in January, when frequent passages of high pressure areas bring invasions of polar air and prevailing northerly winds.

Temperatures are moderated by the influence of winds from the Gulf, which results in mild winters and, on the whole, relatively cool summer nights. Another effect of the nearness of the Gulf is abundant rainfall, except for rare extended dry periods. Polar air penetrates the area frequently enough to provide stimulating variability in the weather.

The average number of days with minimum temperatures of 32° or lower is only 7 per year at the City Office, about 15 at William P. Hobby Airport located in southeast Houston, and about 23 at Intercontinental Airport located in north Houston. Most freezing temperatures last only a few hours since they are usually accompanied by clear skies. The extreme persistence of freezing temperatures was in January-February 1951, when the temperature remained 32° or below for 123 consecutive hours.

Monthly rainfall is evenly distributed throughout the year. Annual downtown rainfall has varied from 72.86 inches in 1900 to 17.66 in 1917; 72.86 inches was also recorded at William P. Hobby Airport in 1946. About 75 percent of the years have total precipitation between 30 and 60 inches. Monthly precipitation at the city office has ranged from 17.64 inches to only a trace. Since thundershowers are the main source of rainfall, precipitation may vary substantially in different sections of the City on a day-to-day basis.

Records of sky cover for daylight hours indicate about one-fourth of the days per year as clear, with a maximum of clear days in October and November. Cloudy days are relatively frequent from December to May and partly cloudy days are the more frequent for June through September. Sunshine averaged near 60 percent of the possible amount for the year at the Federal Building for 1938-1960, ranging from 46 percent for the winter months to 69 percent for the summer. Data from the airport locations since 1961 indicate slightly higher percentages of sunshine. Snow rarely occurs; however, on February 14-15, 1895, 20.0 inches of unmelted snow was measured, but 24-hour amounts were not reported. In only one winter season, 1972-73, were as many as three measurable snows recorded.

Heavy fog occurs on an average of 16 days a year and light fog occurs about 62 days a year in the City, but the frequency of heavy fog is considerably higher at William P. Hobby Airport and at Intercontinental Airport.

Destructive windstorms are fairly infrequent, but both thundersqualls and tropical storms occasionally pass through the area.

At the city office, the average date of the last temperature 32° or lower in spring is February 5. The average date of the first 32° temperature in fall is December 11. The average period from the last 32° temperature in spring to the first in fall is 309 days. The latest date of 32° temperature in spring is March 27, 1955, and the earliest date in fall is October 25, 1892.

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NATIONAL OCEANIC AND
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ENVIRONMENTAL
DATA SERVICE

NATIONAL CLIMATIC CENTER
ASHEVILLE, N.C.

STATION LOCATION

HOUSTON, TEXAS

| Location | Occupied from | Occupied to | Airline distance and direction from previous location | Latitude North | Longitude West | Elevation above | | | | | | | | | | Remarks | |
|---|---------------|-------------|---|----------------|----------------|----------------------------|------------------|----------------------|--------------|------------------|--------------------------|---------------------|--------------|------------------|-------------|--|-----------|
| | | | | | | Sea level | | Ground | | | | | | | | | Sea level |
| | | | | | | Ground at temperature site | Wind instruments | Extreme thermometers | Psychrometer | Telepsychrometer | Tipping bucket rain gage | Weighting rain gage | 8" rain gage | Hygrothermometer | Pyranometer | | |
| <u>Cotton Station</u> | 7/14/81 | 9/15/09 | | | | | | | | | | | | | | Location of cotton station not available. | |
| <u>CITY</u> | | | | | | | | | | | | | | | | | |
| 4th Floor, Stewart Bldg. Preston & Fannin Sts. | 9/16/09 | 12/13/09 | | 29° 46' | 95° 22' | 51 | 122 | 111 | 111 | | 104 | | 104 | | | | |
| 8th Floor, Stewart Bldg. Preston & Fannin Sts. | 12/14/09 | 2/28/26 | | 29° 46' | 95° 22' | 51 | 122 | 111 | 111 | | 104 | | 104 | | | | |
| 19th Floor, Shell Bldg. Texas & Fannin Sts. | 3/01/26 | 12/22/32 | 1/8 mi. SW | 29° 46' | 95° 22' | 52 | 314 | 293 | 293 | | 287 | | 287 | | | | |
| 22nd Floor, Shell Bldg. Texas & Fannin Sts. | 12/23/32 | 6/21/35 | | 29° 46' | 95° 22' | 52 | 314 | 293 | 293 | | 287 | | 287 | | | | |
| 14th Floor, Shell Bldg. Texas & Fannin Sts. | 6/22/35 | 8/25/38 | | 29° 46' | 95° 22' | 52 | 314 | 293 | 293 | | 287 | | 287 | | | | |
| 10th Floor, Federal Building Franklin & Fannin Sts. | 8/26/38 | Present | 1/4 mi. NE | 29° 46' | 95° 22' | 41 | 190 | 162 | 158 | | 160 | | 159 | | | Temperature and precipitation data telemetered to airport office 3/31/61 to 6/14/67. Summary published through August 1967. | |
| <u>COOPERATIVE</u> | | | | | | | | | | | | | | | | | |
| Harrisburg, Texas | 11/01/23 | 2/29/32 | | 29° 42' | 95° 17' | 38 | | | 4 | | | | 4 | | | Suburb of the City of Houston. | |
| <u>AIRPORT</u> | | | | | | | | | | | | | | | | | |
| Houston Municipal AP | 7/16/30 | 8/01/40 | | 29° 39' | 95° 17' | 50 | 37 | 30 | 30 | | | | 25 | | | | |
| Houston International Airport | 8/01/40 | 7/29/60 | 1000 ft. S | 29° 39' | 95° 17' | 50 | 87 | 28 | 28 | | | | 21 | | | Known as Houston Municipal Airport until 4/15/55. | |
| Houston International Airport† William P. Hobby Airport effective 9/1/67. | 7/29/60 | 5/31/69 | | 29° 39' | 95° 17' | 50 | 20 | 23 | 23 | | a23 | | 22 | 4 | | Moved from third to ground floor of same building and hygrothermometer installed 1500 feet E of thermometer site. a - Added 9/1/68. | |
| Trailer, NW corner of Houston Intercontinental Airport | 6/01/69 | 8/15/72 | 23 mi. NNW | 29° 59' | 95° 22' | 96 | 20 | 5 | 5 | | c4 | | 3 | b4 | | b - Commissioned 11/14/69. c - Commissioned 1/1/70. | |
| Qualitron Building Intercontinental Airport 17795 J. F. Kennedy Blvd. | 8/15/72 | Present | 1.6 mi. SE | 29° 58' | 95° 21' | 96 | d20 | | | | | | 45 | 45 | d4 | d - Same site as prior to 8/15/72. | |

Requests for additional climatic information should be addressed to: Director, National Climatic Center, Federal Building, Asheville, N. C. 28801

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