

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 32° 39' N
 LONGITUDE 97° 27' W
 ELEV. (GROUND) 770 ft.

CLIMATOLOGICAL SUMMARY

STATION BENBROOK RESERVOIR, TEXAS

MEANS AND EXTREMES FOR PERIOD 1950-1967

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	90° and above	Max.			Min.	
																			32° and below	32° and below		0° and below	0° and below
(a)	14	14	14	14		14		12	18	18		18	18		12		12	12	12	12			
Jan	53.7	31.2	42.5	79	1957	4	1962	706	1.70	2.18	1965	1.0	8.0	1964	8	1964	3	0	3	18	0	Jan	
Feb	58.7	35.6	47.2	88	1956	14	1960	520	1.78	3.62	1965	0.3	3.0	1961	-	-	4	0	1	11	0	Feb	
Mar	66.1	42.2	54.2	93	1956	14	1962	358	1.54	1.83	1964	*	0.5	1962	.5	1962	3	*	*	5	0	Mar	
Apr	76.4	54.7	65.6	97	1963	29	1957	98	4.81	2.92	1957	0	0		0		6	1	0	*	0	Apr	
May	83.2	62.2	72.7	101	1967	38	1954	16	5.59	3.95	1966	0	0		0		6	7	0	0	0	May	
Jun	91.1	69.1	80.1	103	1959	54	1955+	1	2.77	4.98	1966	0	0		0		5	20	0	0	0	Jun	
Jul	96.6	73.5	85.1	111	1954	60	1967	0	2.05	2.68	1960	0	0		0		3	20	0	0	0	Jul	
Aug	96.7	72.2	84.5	108	1964	57	1961	0	1.89	2.44	1966	0	0		0		3	28	0	0	0	Aug	
Sep	89.3	66.2	77.8	103	1963	44	1967	3	3.24	4.80	1964	0	0		0		5	15	0	0	0	Sep	
Oct	78.8	55.3	67.5	98	1956	28	1957	75	2.48	3.98	1961	0	0		0		4	3	0	*	0	Oct	
Nov	66.8	43.6	55.2	88	1955	19	1959	304	1.93	2.88	1952	*	0.6	1951	0		4	0	*	3	0	Nov	
Dec	57.2	35.4	46.3	88	1955	10	1963	578	1.56	1.30	1956+	T	T	1958	0		4	0	1	12	0	Dec	
Year	76.2	53.4	64.8	111	Jul. 1954	4	Jan. 1962	2659	31.34	4.98	Jun. 1966	1.3	8.0	Jan. 1964	8	Jan. 1964	50	94	5	49	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.

For the period 1954-1967

THE CLIMATE OF BENBROOK RESERVOIR, TEXAS

Benbrook Reservoir is on the Clear Fork of the Trinity River in southwestern Tarrant County, nine miles southwest of downtown Fort Worth. The reservoir has a surface area of 5,820 acres and a storage capacity of 164,800 feet.

The climate of the area surrounding Benbrook Reservoir is humid subtropical with hot summers. It is also continental, with a wide range between winter and summer temperature extremes. Precipitation occurs mostly as the result of thunderstorm activity during the warm season. The greatest amounts of rain occur during the months of April, May, June, September, and October. The colder months, November through March, make up the dry season. Rainfall occurs more frequently during the night.

Sudden drops in temperature and strong northerly winds often accompany the passage of cold fronts during the winter and early spring. Periods of cold weather are short, rarely lasting longer than about 48 hours. Short periods of fair, mild weather occur throughout the winter season. Winter precipitation may fall as rain, freezing rain, sleet, or snow. Snowfall is not significant. Rare, heavy snows unduly bias the data so that the arithmetic mean does not furnish a reliable estimate of expected snowfall.

Daytime temperatures are hot in summer. The average daily maximum is near 97°F in both July and August. The highest temperatures are associated generally with fair skies, westerly winds and comparatively dry air. Refrigerated-type air-conditioning is recommended for maximum comfort indoors.

Prevailing winds are southerly the year round. The strongest winds are the peak gusts and squalls associated with thunderstorms. The strongest persistent winds occur in March and April in association with the intense low pressure centers that move eastward through Oklahoma. Mean annual relative humidity is about 81 percent at 6:00 a.m., 55 percent at noon, and 53 percent at 6:00 p.m., Central Standard Time. Mean annual sunshine is estimated at 65 percent of the total possible. Mean lake evaporation is estimated at 58 inches annually.

Thunderstorms occur on an average of 44 days each year. These are most frequent in April, May, and June, occurring on an average of six to seven days each month. Thunderstorms occur on an average of one day per month in November, December, and January. A few of these thunderstorms may be accompanied by destructive wind or hailstorms, or high intensity rainfall.

BENBROOK RESERVOIR, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1950	4.61	3.62	0.79	5.34	3.10	4.25	-	3.80	4.38	0.24	0.09	0	18.82
1951	0.59	1.94	0.74	1.43	3.67	5.05	0.78	0.41	1.33	2.02	0.76	0.10	18.69
1952	0.99	2.77	1.58	5.59	6.70	0.10	0.92	2.09	1.48	T	6.81	2.66	31.69
1953	0.55	0.88	2.41	4.59	4.62	1.09	1.42	1.38	0.84	3.83	2.06	0.91	24.58
1954	1.53	0.29	0.49	4.78	3.02	1.30	1.14	0.19	0.64	1.84	1.22	0.98	17.42
1955	1.14	2.05	2.25	2.13	4.79	3.93	1.84	2.08	3.72	0.62	T	0.82	25.37
1956	1.24	2.03	0.07	2.04	3.17	2.55	0.48	0.49	0	4.28	1.20	2.46	20.01
1957	1.68	1.65	2.15	16.02	11.84	2.34	0.75	0.19	4.77	4.66	4.07	1.74	51.86
1958	1.31	0.76	2.81	5.76	3.92	0.75	3.59	1.15	3.62	1.56	1.87	1.45	28.53
1959	0.24	1.26	0.31	2.86	2.14	4.36	5.85	3.27	1.99	7.78	1.15	2.28	28.28
1960	3.67	1.68	0.55	1.90	4.45	1.34	5.85	3.27	1.56	2.38	0.26	4.47	31.38
1961	3.54	2.29	3.73	0.42	1.28	8.05	1.38	0.19	3.46	5.07	2.55	1.95	33.71
1962	0.44	1.94	1.15	4.40	0.85	3.23	4.08	3.25	5.83	2.57	2.16	1.43	30.85
1963	0.50	0.01	0.51	4.66	2.88	1.36	2.79	1.07	1.08	0.15	1.76	1.28	18.05
1964	3.66	1.08	3.81	2.40	3.80	0.48	1.91	3.87	10.06	0.60	4.86	0.78	37.31
1965	3.16	5.15	1.07	2.47	9.15	1.29	0.77	0.85	3.43	2.41	2.09	1.71	33.55
1966	1.42	2.33	1.59	7.77	4.70	7.33	0.67	7.05	3.32	2.78	0.52	1.01	40.49
1967	0.28	0.41	1.64	2.42	4.19	1.14	4.36	0.89	6.63	2.08	1.51	2.25	27.80

T - Trace

BENBROOK RESERVOIR, TEXAS

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1950	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	-
1951	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	-
1952	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	-
1953	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1954	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1955	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1956	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1957	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1958	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1959	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1960	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1961	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1962	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1963	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1964	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1965	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1966	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
1967	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4

STATION HISTORY

Both a recording and a nonrecording rain gage were installed at the Benbrook Dam site on June 22, 1949. A cotton region shelter, maximum and minimum thermometers, and a standard four-foot, Class A evaporation pan were added on June 22, 1953. Temperature, 24-hour precipitation, and evaporation data are published monthly in CLIMATOLOGICAL DATA-TEXAS; hourly precipitation data are published in HOURLY PRECIPITATION DATA-TEXAS, under the name Benbrook Dam, station index number 41-0691-03.

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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.

Monthly Temperatures and Precipitation

