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 31° 51' N
LONGITUDE 97° 22' W
ELEV. (GROUND) 574 ft.

CLIMATOLOGICAL SUMMARY

STATION LAKE WHITNEY, TEXAS

MEANS AND EXTREMES FOR PERIOD 1950-1967

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet: 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)	18	18	18	18		18		12	18	18		18	18		12		12	12	12	12	12	
Jan	57.7	32.8	45.3	90	1951	5	1964	671	1.91	2.77	1961	0.9	8.1	1964	2	1965	3	0	2	18	0	Jan
Feb	60.9	36.5	48.7	90	1954	-3	1951	486	2.41	2.23	1952	0.3	2.5	1951	0		5	0	*	11	0	Feb
Mar	68.7	43.0	55.9	95	1956	20	1962	314	1.54	2.14	1964	0	0		0		3	1	*	4	0	Mar
Apr	77.6	54.2	65.9	100	1963	33	1964+	81	4.05	4.79	1952	0	0		0		5	1	0	0	0	Apr
May	84.1	62.1	73.1	100	1958	42	1954	11	4.37	3.79	1959	0	0		0		5	8	0	0	0	May
Jun	92.0	69.2	80.6	105	1953	51	1964	1	3.54	4.15	1961	0	0		0		5	21	0	0	0	Jun
Jul	96.7	72.4	84.6	111	1954	62	1966+	0	1.63	2.50	1960	0	0		0		2	28	0	0	0	Jul
Aug	97.6	71.9	84.8	109	1952+	57	1967	0	1.50	1.88	1958	0	0		0		3	28	0	0	0	Aug
Sep	90.1	66.0	78.1	107	1951	44	1967	2	3.22	3.72	1967	0	0		0		4	16	0	0	0	Sep
Oct	80.8	54.7	67.8	99	1951	28	1957	62	2.71	4.86	1957	0	0		0		4	4	0	*	0	Oct
Nov	67.8	42.9	55.4	93	1955	16	1950	280	2.75	5.01	1964	T	T	1951	0		4	0	0	4	0	Nov
Dec	59.4	34.7	47.1	91	1955	11	1950	552	1.98	3.23	1952	0	0		1	1958	5	0	*	13	0	Dec
Year	77.8	53.4	65.6	111	Jul. 1954	-3	Feb. 1951	2460	31.61	5.01	Nov. 1964	1.2	8.1	Jan. 1964	2	1965	48	107	2	50	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 LAKE WHITNEY, TEXAS

Lake Whitney is a man-made reservoir, formed by the construction of Whitney Dam across the Brazos River, where it forms the boundary between Bosque and Hill Counties. Reached via State Highway 22, the lake is about 20 miles west of Hillsboro, in North Central Texas. One of Texas' most popular fishing lakes, Whitney is about 45 river miles long, and up to four miles wide. Capacity is 2,017,500 acre feet, and the surface area covers 49,710 acres. Facilities range from modern lodges to rustic fishing camps. There is no closed season on fishing. The surrounding terrain is rolling to hilly with timbers of cedar, mesquite, post oak, elm, and pecan.

The climate of the area surrounding Lake Whitney is humid subtropical with hot summers. In addition, it is continental in character with a large annual range in temperature. Extremes have varied from a record low of -3°F in winter to a record high of 111°F in summer. Tropical Maritime air masses control the climate throughout the late spring, summer, and early fall, while polar air masses largely determine the winter climate. The prevailing winds in the lake area are southerly throughout all months. Average hourly wind speeds are strongest in early spring and weakest in early fall.

Winter: Cold fronts push down across Lake Whitney about three to four times each month. Rapid temperature drops, sometimes as much as 20°F in an hour, occur with the passage of these fronts, and the accompanying winds may be strong and gusty—not pleasant weather for enjoying an outing on the lake. On the whole, however, cold spells last for only a day or two; winds lay, cloudiness decreases, and sunshine brings rapid warming. Freezing temperatures occur on about 56 percent of the winter nights, but these are confined usually to a brief period shortly before sunrise. Measurable precipitation, most often in high amounts, occurs on about six to eight days each month. Sunshine is approximately 50 percent of the total possible. The morning hours are often cloudy, followed by sunny afternoons.

Spring: Early spring is a period of rapidly changing weather, and average hourly wind speeds are higher in March and April than in any other months of the year. Average wind speeds are estimated at 13.7 miles per hour for each month. In the absence of cold fronts, hourly wind speeds are usually weakest near sunrise and strongest in the early afternoon. Measurable precipitation occurs on about seven to eight days each month. The month of March is one of the driest of the year, while April and May are the wettest. Thunderstorm activity increases significantly in April, and reaches a peak in May. Because of the possibility of squalls and/or lightning, it is dangerous to be on the lake during a thunderstorm. For the most part, spring temperatures are pleasantly mild.

Summer: Daytime temperatures are hot, particularly those of July and August. Thundershowers may break up spells of hot weather in June, but there is less chance of this in July and August. The last two months are relatively dry, with little variation in the day-to-day weather regime. While temperatures are cool over the water, refrigerated type air-conditioning is recommended for maximum comfort indoors, in the vicinity of the lake, or for automobile travel to and from the area. Mean hourly wind speeds average about 10 miles per hour in August, and are approximately the same in September and October. Some early morning cloudiness may occur, but generally, sunshine is about 75 percent of the total possible.

Fall: This is perhaps the most delightful season in the Lake Whitney area. Weather changes occur, but these are moderate. The weather is characterized by mild days and cool nights, with long periods of dry, sunny weather, particularly in October and November. In September, rainfall increases from the previous month, then decreases slightly in October and November. Measurable amounts of precipitation occur on about five days in October and six days in November.

The mean annual lake evaporation at Lake Whitney is estimated at 57 inches, and thunderstorms occur on an average of 46 days each year.

LAKE WHITNEY, TEXAS

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1950	50.4	52.1	56.0	63.8	73.2	79.6	82.0	84.5	76.7	71.0	53.9	46.5	65.8
1951	46.7	46.5	57.8	64.6	73.0	81.0	87.4	89.0	79.1	70.1	51.0	48.5	66.2
1952	54.3	53.5	54.3	62.9	71.7	82.9	84.6	88.8	77.5	62.5	54.7	44.3	66.0
1953	50.1	48.2	60.0	61.5	70.8	84.8	83.6	83.2	77.3	69.3	53.0	45.0	65.6
1954	47.7	55.4	56.0	70.4	69.9	82.8	89.5	87.7	81.9	70.9	54.9	50.4	68.1
1955	46.6	49.1	58.0	68.7	75.3	77.4	83.4	82.2	79.3	67.5	55.4	48.1	65.9
1956	45.8	49.2	57.1	65.6	76.7	82.8	87.4	86.4	80.6	71.2	52.5	50.7	67.2
1957	44.9	54.9	54.2	62.0	71.7	79.7	85.9	85.3	75.6	61.8	52.4	50.7	64.9
1958	43.7	43.1	49.8	62.2	73.0	81.7	85.3	84.6	77.7	67.2	57.6	44.7	64.2
1959	42.5	47.7	55.8	62.4	74.5	79.1	81.1	82.9	78.7	65.8	49.4	49.8	64.2
1960	45.0	43.3	49.2	68.2	71.6	81.0	83.5	83.3	78.5	70.1	58.1	43.8	64.7
1961	40.6	51.0	59.8	64.6	73.6	76.9	80.2	81.2	77.2	66.8	53.0	46.7	64.3
1962	39.2	55.3	53.3	64.0	75.7	78.6	84.2	87.2	79.4	72.2	55.8	47.7	66.1
1963	37.5	46.6	60.6	71.1	73.7	82.0	86.6	86.4	79.7	72.6	58.7	39.7	66.3
1964	43.2	44.1	55.2	67.7	74.0	80.7	86.2	86.1	77.6	65.2	59.1	47.1	65.5
1965	48.8	44.8	49.1	69.0	73.3	80.2	84.8	83.3	79.4	65.8	62.2	51.2	66.0
1966	40.7	45.6	56.6	65.6	71.8	78.8	84.9	81.4	75.4	64.7	59.9	46.4	64.3
1967	47.1	47.0	63.3	72.1	71.9	81.1	81.8	82.8	73.9	65.6	55.3	46.0	65.7

STATION HISTORY

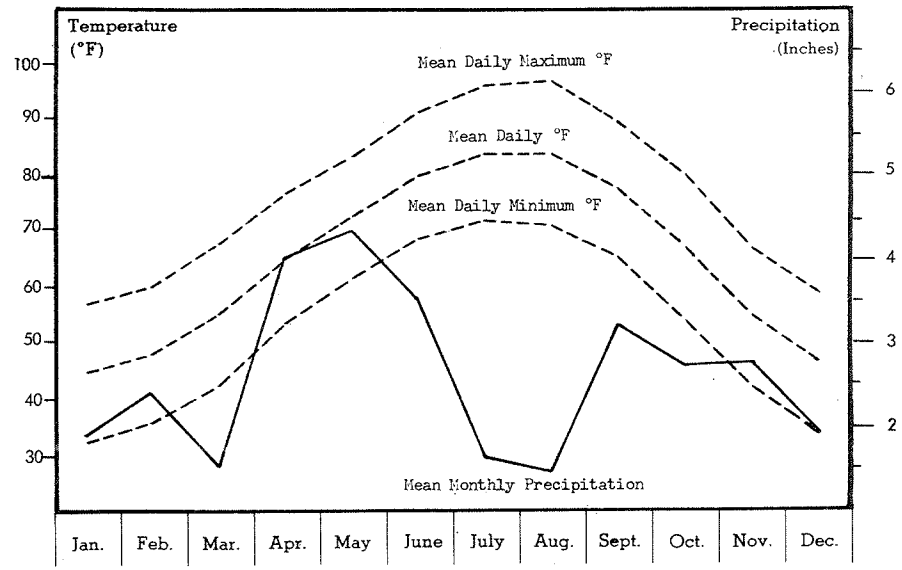
A climatological station was established at Whitney Dam, seven miles south-southwest of Whitney, on October 11, 1949. On May 29, 1953, the station was moved 0.9 mile south-southwest, approximately seven miles southwest of Whitney. The U.S. Army Corps of Engineers is the official Cooperative Observer. The station equipment, consisting of a cotton region shelter, maximum and minimum thermometers, standard eight-inch rain gage, recording rain gage, and standard class "A" evaporation pan, are located near the Resident Engineer's office. Daily maximum and minimum temperature, 24-hour precipitation, and evaporation data are published monthly in CLIMATOLOGICAL DATA-TEXAS, and hourly precipitation data are published in HOURLY PRECIPITATION DATA-TEXAS. In official records, the station is known as Whitney Dam, index number 41-9715-03.

ESSA State Climatologist for Texas
Airport Administration Building
3600 Manor Road, Austin, Texas 78723
November 1969

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.

LAKE WHITNEY, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1950	1.99	5.16	0.83	3.56	3.69	2.66	4.06	1.76	3.66	1.16	1.37	0	29.90
1951	2.33	2.18	1.33	5.07	3.63	5.05	1.63	0.05	3.11	1.87	0.55	0.18	26.98
1952	0.33	3.37	3.03	9.03	6.04	0.17	1.06	0.24	1.56	0	7.16	5.50	37.49
1953	0.46	1.53	3.10	4.06	5.05	1.73	1.58	1.28	4.22	3.34	1.43	1.97	29.75
1954	1.26	0.33	0.56	4.49	3.55	2.06	0.71	0.10	2.25	5.43	2.86	0.45	24.05
1955	1.22	2.51	1.80	2.53	6.13	2.83	2.53	2.19	2.11	0.23	1.02	0.25	25.35
1956	2.62	1.64	0.10	3.34	2.67	1.13	0.02	0.37	0.21	1.80	2.54	2.12	18.56
1957	1.44	2.31	2.41	11.15	5.04	2.99	1.02	0.13	3.26	7.56	5.34	0.99	43.64
1958	1.82	2.86	2.33	4.25	6.11	3.04	0.79	3.19	2.62	1.32	1.86	1.72	31.91
1959	0.06	3.30	0.62	2.41	5.47	8.59	3.79	1.62	4.11	7.30	1.01	3.13	41.41
1960	3.27	2.15	0.92	2.79	2.27	3.06	2.82	1.78	1.04	3.83	1.08	7.71	32.72
1961	7.90	4.35	1.95	0.43	3.51	12.38	2.52	0.72	2.92	3.03	4.93	2.54	47.18
1962	0.79	1.44	0.68	3.22	2.91	8.79	0	0.74	5.43	2.42	2.63	1.25	30.30
1963	0.58	0.42	0.29	2.26	4.16	1.84	0.28	2.40	1.34	0.15	4.07	1.29	19.08
1964	3.96	1.71	4.18	2.08	0.65	3.15	0.10	1.88	3.65	0.61	6.33	0.96	29.26
1965	2.88	4.13	0.37	0.81	11.84	0.94	1.21	3.14	2.84	2.14	2.72	2.36	35.38
1966	1.09	3.23	1.30	8.60	2.68	1.92	0.29	4.75	5.00	0.41	0.15	0.39	29.81
1967	0.33	0.72	2.00	2.77	3.26	2.18	4.87	0.60	8.63	6.09	2.36	2.74	36.55

Monthly Temperatures and Precipitation