

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric 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° 28' N
LONGITUDE 100° 29' W
ELEV. (GROUND) 1964 ft.

CLIMATOLOGICAL SUMMARY

STATION SAN ANGELO DAM, TEXAS

MEANS AND EXTREMES FOR PERIOD 1954-1970

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	below 0°	below 0°
(a)	17	17	17	17		17		15	17	17		17	17	15		15	15	15	15				
Jan	57.1	30.5	43.8	87	1969	6	1963+	665	0.92	1.73	1961	0.2	3.0	1956	3	1956	2	0	2	19	0	Jan	
Feb	60.9	34.3	47.6	90	1957+	11	1960	502	0.98	1.90	1958	0.1	0.8	1964	1	1964	3	*	1	13	0	Feb	
Mar	68.3	40.7	54.5	95	1967	11	1962	350	0.71	1.10	1964	0.3	5.5	1962	-	-	2	1	*	7	0	Mar	
Apr	79.6	53.0	66.3	100	1955	26	1970	95	2.01	2.15	1957	0	0	0	0	0	3	5	0	*	0	Apr	
May	85.5	60.8	73.2	105	1967+	40	1970+	18	2.64	2.14	1968	0	0	0	0	0	3	11	0	0	0	May	
Jun	92.2	68.0	80.2	107	1960	48	1970	2	1.81	2.99	1961	0	0	0	0	0	2	22	0	0	0	Jun	
Jul	95.8	71.4	83.6	109	1960	60	1968	0	1.08	2.73	1959	0	0	0	0	0	3	27	0	0	0	Jul	
Aug	95.2	70.0	82.6	106	1962+	55	1961	0	1.71	2.85	1956	0	0	0	0	0	3	27	0	0	0	Aug	
Sep	87.6	64.0	75.8	105	1959	43	1967	6	2.74	3.62	1967	0	0	0	0	0	4	13	0	0	0	Sep	
Oct	78.5	53.3	65.9	96	1956+	30	1957	91	1.93	3.09	1962	0	0	0	0	0	3	3	0	*	0	Oct	
Nov	67.0	41.6	54.3	89	1965	19	1959+	330	1.14	1.80	1963	0.4	6.0	1957	-	-	3	0	*	5	0	Nov	
Dec	60.0	33.6	46.8	91	1954	12	1966+	567	0.71	1.37	1969	0.1	1.0	1967	0	0	2	0	*	15	0	Dec	
Year	77.4	51.8	64.6	109	July 1960	6	Jan. 1963+	2626	18.38	3.62	Sept. 1967	1.1	6.0	Nov. 1957	-	-	33	109	3	59	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 SAN ANGELO RESERVOIR, TEXAS

San Angelo Reservoir, on the North Concho River, three miles northwest of San Angelo, serves in flood control, conservation and recreational capacities. Completed in 1960, the reservoir has a surface area of 12,700 acres at capacity (396,400 acre-feet). Boating, swimming, fishing and all other water sports are available, as well as lake-side camps and service facilities.

Nearby, eight miles southwest of San Angelo, is Twin Buttes Reservoir on the Middle and South Concho Rivers, with a surface area of 22,680 acres, and a capacity of 640,600 acre-feet. Recreational facilities are available here also. Immediately downstream from Twin Buttes reservoir is Lake Nasworthy—a reservoir of 1,596 surface acres and 12,390 acre-feet.

Water sports at both San Angelo and Twin Buttes reservoirs are sometimes hampered by very low water levels during extreme drought periods, such as occurred from April 1970 through July 1971.

The surrounding area is rolling hills and plains, broken by forks of the Concho River. Agricultural income is derived principally from sheep, wool, cattle, and other livestock. San Angelo is the largest market in the United States for sheep, wool and mohair. Some cotton and grains also are grown in the area.

The area surrounding San Angelo reservoir has a warm-temperate, subtropical climate with dry winters and hot humid summers. Mean total annual rainfall is 18.38 inches. The rainfall pattern is typical of the Edwards Plateau with a double maxima - in May and September. Three-fourths of the mean annual rainfall occurs during the warm season, April through October. A large portion of the warm season rainfall is a result of thunderstorm activity, and wide variations in amounts occur from year to year. In exceptionally years, a significant proportion of the rainfall results from excessive downpours. Drought periods occur rather frequently.

The area experiences a wide range in summer and winter temperatures, characteristic of a continental type of climate. Periods of cold weather are short, however, so that even in January, fair, mild

weather is frequent. Hot daytime temperatures prevail for a considerable period in summer, but these are broken occasionally by thundershowers. Rapid cooling occurs after nightfall.

Rapid temperature changes occur in winter and early spring. Frequent "northers" are effective in closing off the supply of moisture from the Gulf of Mexico from about November through March, so that this is a relatively dry period. Precipitation may fall in the form of rain, freezing rain, sleet or snow. Significant amounts of snow are rare. The statistical mean does not adequately represent snowfall data as this value is biased by a few very rare, but exceptionally heavy snows that may occur only once every 10 years or longer.

The San Angelo area receives, in an average year, 63 percent of the total possible sunshine in winter, 68 percent in spring, 78 percent in summer and 71 percent in fall. Mean relative humidity, measured at noon c.s.t., is 50 percent in January, 43 percent in April, 41 percent in July and 50 percent in October. The prevailing winds are southerly seven months of the year, April through October: southwesterly in November and January; south-southwesterly in February and March; and westerly during the month of December. Thunderstorms occur on 36 days during an average year.

Mean annual lake (free water) evaporation is estimated at 71 inches, while evaporation exceeds precipitation by about 52 inches, in an average year.

The mean length of the warm season (freeze free period) is 235 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 25 and November 15, respectively.

The spring and fall seasons are the most pleasant in the San Angelo area, temperatures are more moderate than in winter or summer. Wind speeds are lightest from July through October, and strongest during March and April. Evaporative-type home air conditioners are effective for cooling about 96 percent of the time during July and August—the warmest months.

SAN ANGELO DAM, TEXAS
Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1954	47.9	54.6	55.9	69.7	71.3	81.7	85.8	84.7	80.1	68.4	55.8	50.5	67.2
1955	45.4	47.6	58.4	70.6	76.0	81.0	82.0	82.0	78.1	67.7	52.7	46.9	65.8
1956	44.7	47.4	56.9	64.7	69.6	83.8	84.6	84.0	77.7	69.4	52.6	49.8	66.0
1957	45.6	55.2	57.0	62.9	69.6	78.1	85.9	84.6	74.2	72.5	50.3	50.3	64.7
1958	44.0	44.3	47.9	62.0	71.5	81.9	84.7	83.5	76.1	62.9	55.3	44.2	63.2
1959	42.3	46.4	55.1	67.8	74.6	78.6	77.7	80.0	78.3	64.6	47.6	48.9	63.1
1960	45.3	44.5	50.6	67.8	72.3	83.6	84.4	82.5	74.0	69.9	56.5	42.1	64.8
1961	41.1	49.1	57.9	65.3	74.2	77.3	78.3	79.2	74.0	66.5	50.8	46.3	63.4
1962	39.1	55.4	52.6	62.6	77.4	80.0	86.1	83.6	77.4	71.2	56.2	46.4	63.4
1963	38.8	47.7	60.4	72.6	75.5	80.0	86.2	85.8	78.0	71.2	57.1	40.3	65.9
1964	44.4	43.7	47.7	60.4	77.1	81.6	86.2	85.8	75.9	64.4	56.8	46.1	65.1
1965	48.4	44.1	48.5	67.5	72.3	79.5	84.2	81.0	77.4	65.1	61.0	50.0	65.5
1966	39.7	43.3	57.2	69.2	72.3	79.7	85.8	79.1	73.0	62.1	59.2	44.3	63.4
1967	45.0	47.6	63.1	71.4	73.2	81.5	82.0	80.2	70.5	64.2	54.5	43.4	64.7
1968	43.7	43.3	51.8	60.6	71.3	79.9	79.5	81.9	72.1	67.3	52.4	47.8	62.2
1969	48.4	48.5	47.8	65.2	69.9	76.9	85.2	83.6	73.7	62.7	51.9	45.8	63.8
1970	40.7	47.6	49.7	65.3	69.1	77.9	83.2	83.1	75.0	60.9	51.9	52.6	63.1

STATION HISTORY

A climatological station was established at San Angelo reservoir on June 10, 1953. The instrument site is at the U.S. Corps of Engineers Project Office Building, 3.5 miles west of the San Angelo post office. Station equipment consists of a cotton region shelter; maximum and minimum thermometers; standard 8-inch, non-recording rain gage; and a standard 4-foot, Class A evaporation pan. Daily temperature, precipitation and evaporation data are published monthly in Climatological Data - Texas. Station index number: 41-7040-06.

Climatologist for Texas
National Weather Service
3600 Manor Road, Austin, Texas 78723
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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.

SAN ANGELO DAM, TEXAS
Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1954	0.40	0.04	0.14	3.81	2.22	1.07	0.18	0.48	0.94	0.48	0.36	T	10.12
1955	0.57	0.73	0.01	3.10	2.56	0.76	1.23	1.47	1.06	0.49	0.15	0.28	9.41
1956	0.88	0.09	0.11	1.65	1.04	0.06	0.56	2.85	1.08	3.02	0.69	0.81	12.84
1957	0.20	1.46	0.22	3.92	7.21	1.52	0.10	0	2.40	2.21	1.70	0.52	21.46
1958	1.96	2.97	1.25	1.31	2.67	1.49	0.13	2.36	4.66	1.85	0.53	0.08	21.26
1959	0	0.54	0.08	2.69	2.40	4.22	6.64	0	3.77	5.48	1.36	1.87	28.05
1960	2.68	0.32	0.37	2.26	1.76	0.37	1.59	3.38	0.91	3.97	0.22	1.92	19.65
1961	3.13	0.99	0.31	0.87	2.23	6.39	1.36	0.11	3.16	0.97	1.28	0.19	20.99
1962	0.01	0.13	0.47	3.21	0.60	1.08	2.38	0.11	2.39	3.64	1.01	0.64	17.32
1963	0.05	0.81	0.07	1.32	3.57	5.15	0.01	1.85	0.75	0.43	2.79	0.28	17.08
1964	1.10	1.44	1.25	1.65	1.65	0.20	0.06	2.15	3.46	0.67	1.14	0.30	15.07
1965	0.72	2.91	0.03	0.08	4.57	2.03	0	2.28	2.20	1.30	0.53	0.68	17.33
1966	0.47	0.19	0.42	2.23	1.69	0.56	0.02	5.56	3.47	1.31	0	0	15.92
1967	0	0.20	1.05	0.07	2.07	0.94	2.22	1.51	7.40	0.33	2.63	1.49	19.91
1968	3.24	1.48	2.04	3.31	2.80	3.65	1.84	0.56	2.10	0.20	3.47	0.38	25.66
1969	0.03	0.98	1.72	4.06	3.63	0.72	0.02	2.43	2.50	5.25	1.54	0	25.66
1970	0.25	1.41	2.71	1.57	1.94	0.49	0.03	0.26	4.29	1.15	0	0.08	14.18

Monthly Temperatures and Precipitation

