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 35° 52' N
LONGITUDE 101° 58' W
ELEV. (GROUND) 3655 ft.

CLIMATOLOGICAL SUMMARY

STATION DUMAS, TEXAS

MEANS AND EXTREMES FOR PERIOD 1937-1966

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	32° and below	Min.: 32° and below	0° and below	Month
(a)	22	22	22	22		22		10	25	25		23	23		10		10	10	10	10	10	
Jan	46.8	19.1	33.0	79	1950	-18	1959	1007	0.60	1.59	1939	3.9	10.5	1960	6	1960+	2	0	6	29	2	Jan
Feb	52.1	24.2	38.2	86	1963	- 5	1942	781	0.61	1.40	1948	3.8	18.0	1964	18	1964	1	0	4	24	0	Feb
Mar	58.7	28.3	43.5	90	1946	- 2	1948	694	0.93	1.50	1957	3.4	14.5	1961	7	1958	1	0	1	23	*	Mar
Apr	70.7	39.7	55.2	99	1943	13	1945	314	1.22	1.93	1942	0.5	4.0	1938	1	1961	1	1	0	6	0	Apr
May	79.8	50.7	65.3	100	1964+	29	1954	77	2.56	2.50	1941	0	0		0		4	8	0	*	0	May
Jun	88.3	60.1	74.2	106	1939	41	1955	9	2.88	3.76	1954	0	0		0		5	14	0	0	0	Jun
Jul	92.3	64.5	78.4	109	1940	47	1943	1	3.56	3.11	1962	0	0		0		7	22	0	0	0	Jul
Aug	91.2	63.2	77.2	108	1944	49	1950	4	2.45	3.06	1945	0	0		0		4	20	0	0	0	Aug
Sep	84.0	55.4	69.7	105	1947+	32	1945	45	1.57	2.61	1960	0	0		0		3	8	0	0	0	Sep
Oct	73.7	43.3	58.5	96	1944	23	1958	234	1.34	3.00	1938	T	T	1960+	0		3	1	0	2	0	Oct
Nov	60.0	29.9	45.0	83	1949	4	1959	613	0.48	1.03	1961	0.8	4.5	1962	4	1962+	2	0	1	19	0	Nov
Dec	54.0	22.9	38.5	79	1939	- 6	1961	870	0.75	1.27	1943	3.8	18.0	1943	9	1960	2	0	4	28	*	Dec
Year	71.0	41.8	56.4	109	July 1940	-18	Jan 1959	4649	18.95	3.76	Jun 1954	16.2	18.0	Feb 1964+	18	Feb 1964	35	74	16	131	2	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 DUMAS, TEXAS

Dumas, county seat of Moore County, in the northern Panhandle, is the heart of the nation's largest grain sorghum-producing area, center of one of the world's largest natural gas fields, and produces two-thirds of the nation's helium. The city has 32 major industrial plants. The surrounding terrain is level to rolling plains with some broken areas. The Canadian River "breaks" extend into the southeastern part of the county. Newly created Lake Meredith offers fishing, boating, swimming and water skiing.

The climate of Dumas is a dry steppe type with mild winters. Average annual rainfall is 18.95 inches. Monthly and annual rainfall is characterized by extreme variability. In 1960, total precipitation was 27.24 inches. In 1966, only 8.18 inches were recorded. Rainfall occurs most frequently as thundershowers rather than general rains. This accounts for the extreme variability in amounts. Maximum rainfall occurs during the months of May, June, July, and August. Sixty percent of the average total annual amount is received during this four-month period. Dry periods of no rain for several weeks or more are not unusual.

November through March, the area is cut off from the Gulf of Mexico moisture source by frequent cold fronts; consequently, this is a dry season. Average total precipitation for this five-month period is only 3.37 inches. Cold season precipitation falls as rain or snow, or sometimes as rain and snow mixed. Snowfalls are generally light, with the snow remaining on the ground only a short time. Snow is not usually a dependable source of moisture as strong winds cause heavy drifting and a very uneven snow cover. On rare occasions during winter, Gulf moisture is carried northward into deep low pressure centers over the Panhandle or southern part of the High Plains resulting in heavy snows. During the snowstorm of February 3-5, 1964, portions of the Texas Panhandle were buried under 18 to 26 inches of snow. Dumas received 18 inches. Winds of 30 to 35 miles per hour piled snow in 8 to 10 foot drifts.

Temperatures, like rainfall, show extreme variability, especially during the colder six months of the year, November through April. Cold fronts from the northern Rocky Mountains and Great Plains regions sweep across the level Panhandle plains at speeds of 25 to 40 miles per hour. Temperature drops of 50 to 60 degrees F. within a 12-hour period are not uncommon in association with these fronts, and 30 to 40 degree F. drops have occurred within a few minutes. Normally, the coldest period occurs in mid-January. Cold spells are generally of short duration, rarely lasting more than two or three days before southwesterly winds from off the high New Mexico plateaus cause rapid warming. The dry air, high elevation, and usually clear skies are ideal for solar radiation; consequently, there is a large range between minimum temperature during the early morning and the maximum temperature during the afternoon. This daily range averages about 28°F.

The summer climate in Dumas is characterized by warm days and cool nights. The heat of summer is moderated by low humidity and wind during the daytime. The high elevation and dry air allow rapid radiation after sundown so that summer evenings and nights are pleasantly cool. The evaporative-type home air conditioner cools effectively in this climate.

Winds are strongest during intense thunderstorms but are of short duration. The strongest continuous winds occur during spring in association with migrating low pressure centers. The strong winds accompanying the most intense low centers may result in duststorms in the area. Prevailing winds are south to southwesterly during all months.

Hail may accompany almost any thunderstorms; however, damaging hailstorms are relatively infrequent and cover a small area. Severe local storms are most frequent in April, May, and June.

Dumas receives about 74 percent of the total possible sunshine annually. Average annual relative humidity is about 72 percent at 6:00 a.m., c.s.t., and 39 percent at 6:00 p.m., c.s.t. Average lake evaporation is estimated at 64 inches annually.

The growing season (freeze free period) averages 185 days. The average date of the last spring freeze is April 20. The average date of the first fall freeze is October 22.

In summary, the climate of Dumas is generally pleasant, particularly the late spring, summer, and fall seasons. Unpleasant weather is most frequent in late winter and early spring.

DUMAS, TEXAS

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1939	-	-	-	57.1	68.2	75.5	80.4	76.0	72.8	59.0	45.5	39.4	-
1940	25.0	39.4	48.4	54.8	66.0	73.9	82.0	76.2	71.4	-	-	-	-
1941	-	-	41.2	55.2	62.7	70.4	76.2	75.2	67.8	-	48.1	38.4	-
1942	35.0	34.8	44.8	55.4	-	73.0	77.4	76.3	68.0	56.2	49.0	39.4	-
1943	36.8	43.0	45.4	61.2	62.4	75.9	78.9	81.4	69.4	57.8	45.4	29.6	57.3
1944	-	39.0	-	52.0	65.2	74.0	77.6	78.7	71.4	71.6	45.8	35.8	-
1945	37.2	47.2	49.8	47.7	67.2	72.4	75.2	78.0	72.0	57.1	46.5	34.6	57.1
1946	33.9	41.6	48.8	59.8	61.2	74.5	81.0	77.4	68.2	-	-	41.4	-
1947	33.0	33.5	40.8	-	-	75.3	80.2	80.5	75.6	64.2	40.6	35.7	-
1948	32.0	32.6	39.5	60.2	-	75.5	78.8	76.8	71.5	55.1	40.5	-	-
1949	-	-	45.2	52.9	63.5	72.7	78.4	75.0	68.2	57.8	52.0	37.1	-
1950	37.9	43.0	44.9	55.5	-	74.1	73.9	73.7	64.4	54.2	-	37.1	-
1951	33.5	-	-	-	-	-	-	-	-	-	-	-	-
1952	-	-	41.5	54.1	64.2	79.6	77.6	79.8	68.6	55.9	-	-	-
1953	-	-	-	-	-	-	79.3	75.7	71.7	60.2	46.3	34.4	-
1954	-	-	-	-	59.7	76.5	-	-	-	-	-	-	-
1955	-	-	-	-	64.3	71.4	78.8	78.0	-	-	41.4	-	-
1956	-	-	45.7	52.7	68.2	77.9	78.4	77.9	73.1	62.3	40.9	40.1	-
1957	34.7	44.6	43.4	-	-	-	-	-	-	56.4	41.0	42.3	-
1958	35.7	37.9	34.8	50.5	66.1	75.5	76.6	78.2	70.7	56.8	44.0	36.4	55.3
1959	29.5	37.4	42.5	52.5	65.3	76.2	76.6	78.7	69.5	53.1	40.0	38.3	55.0
1960	30.7	30.8	40.5	58.3	63.8	74.6	74.9	77.5	69.7	57.3	46.0	34.3	54.9
1961	34.8	37.9	44.4	52.0	65.4	73.1	75.4	75.3	65.2	56.5	38.9	33.7	54.4
1962	28.6	43.2	42.5	55.3	70.2	71.4	77.3	78.3	68.2	59.8	46.2	38.9	56.7
1963	25.9	40.7	48.0	60.0	68.3	74.0	81.8	78.8	71.7	65.8	47.1	30.2	57.7
1964	36.0	30.3	41.7	55.2	68.4	73.8	81.8	77.7	68.4	58.1	44.4	35.1	55.9
1965	39.1	34.7	35.8	57.3	65.4	71.1	78.3	75.9	67.2	57.8	51.1	40.8	56.2
1966	27.9	33.5	47.4	54.1	65.0	73.5	83.2	73.6	68.1	55.5	48.0	33.9	55.3

STATION HISTORY

Rainfall observations began in Dumas on January 1, 1937. A standard rain gauge was installed on the roof of the courthouse, one block southeast of the post office. The station was relocated to a ground exposure 1½ blocks northeast of the post office April 30, 1939, and maximum and minimum temperature observations were begun. After several short moves, the station was relocated to Radio Station KDDD, one mile north of the post office, February 11, 1952. The surrounding terrain is level in all directions with farmland to the north and west, and residential and commercial areas to the south and east. Temperature and precipitation records are published in CLIMATOLOGICAL DATA-TEXAS. There are many gaps in the data for earlier years, but records are complete from 1958 to the present.

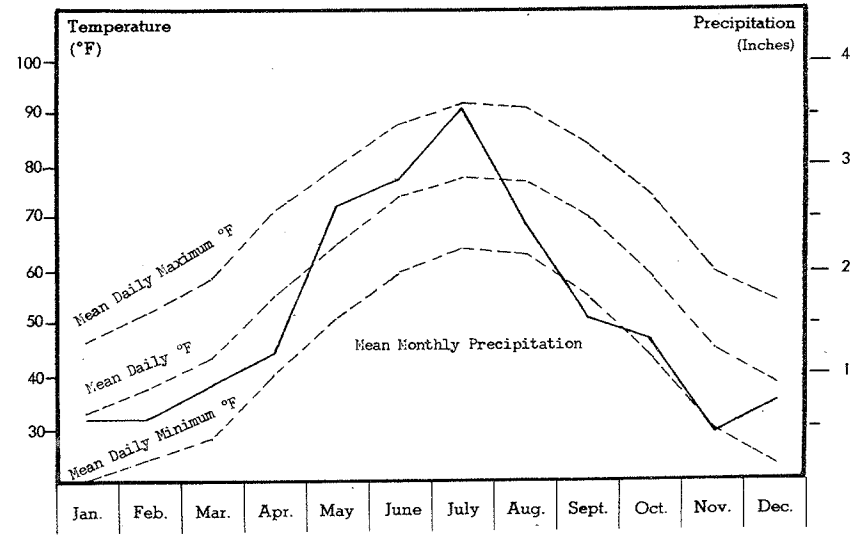
Weather Bureau State Climatologist
Environmental Science Services Administration
3600 Manor Road, Austin, Texas 78723
April 8, 1967

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.

DUMAS, TEXAS

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1937	0.22	0.44	1.58	1.73	3.63	1.58	0.49	0.50	1.39	-	-	-	-
1938	-	0.53	0.88	0.93	2.23	1.19	3.52	1.71	1.94	3.00	0.06	0.25	-
1939	2.11	0.32	0.18	2.67	0.91	2.80	2.68	3.48	0.11	0.87	0.07	1.19	17.39
1940	0.98	0.53	0.27	0.43	2.35	1.19	0.04	0.77	0.55	-	-	-	-
1941	-	-	1.37	2.28	8.33	1.87	6.54	2.41	2.45	-	0.29	0.26	-
1942	T	0.04	0.82	4.25	0.39	5.58	2.97	1.97	0.43	6.66	0	0.81	23.92
1943	T	0	0.10	1.00	1.29	2.29	4.33	2.82	0.02	0.50	0.12	2.16	14.63
1944	1.51	0.71	-	2.39	4.02	4.19	1.54	1.97	0.60	0.60	0.74	1.30	-
1945	1.18	0.74	0.35	0.85	0.48	2.85	0.95	4.02	3.09	2.11	0	0.12	16.74
1946	0.10	0.45	0.10	1.11	2.92	1.81	1.82	2.85	2.57	-	1.55	T	-
1947	0.32	0.15	0.98	1.92	3.93	1.73	1.76	1.62	0	0.81	0.85	1.06	15.13
1948	0.56	2.48	0.90	0.26	3.02	2.58	1.60	6.00	0.91	0.93	-	-	-
1949	-	-	0.83	2.15	5.06	1.86	7.03	2.82	1.94	0.46	0.05	0.58	-
1950	0.02	0.14	0.11	1.69	-	5.49	7.50	3.54	5.62	1.27	0	0	-
1951	0.93	-	-	-	-	-	-	-	-	-	-	-	-
1952	0.15	0.25	1.13	3.59	0.81	2.13	2.21	4.12	0.36	0	1.05	0.63	16.43
1953	0.30	0.13	0.56	0.08	0.89	0.14	4.24	4.19	0.03	2.24	0.54	0.43	13.77
1954	-	-	-	-	3.90	3.82	-	-	-	-	-	-	-
1955	-	-	-	-	3.10	1.17	1.73	1.28	-	-	0.07	-	-
1956	0.10	0.60	T	0.05	2.81	1.36	3.89	1.79	0.35	0.20	0	0	11.15
1957	0.50	0.28	3.43	-	-	-	-	-	-	2.18	0.79	T	-
1958	0.51	0.57	2.00	2.13	5.22	1.87	10.84	1.07	1.42	0.13	0.59	0.44	26.79
1959	0.48	0.11	0.76	0.64	2.97	2.59	4.00	4.80	0.65	2.23	0.12	4.28	23.63
1960	1.48	1.22	0.57	0.49	0.42	4.09	6.27	1.65	6.41	3.23	0.10	1.31	27.24
1961	0.13	1.00	3.16	0.27	1.32	4.88	7.19	1.66	1.65	1.44	1.71	0.40	24.81
1962	0.58	0.50	0.68	0.30	0.63	5.11	6.05	1.13	1.67	0.46	0.84	0.34	18.29
1963	0.15	0.74	T	0.11	2.51	1.67	2.63	2.58	2.60	0.12	0.19	0.70	14.00
1964	T	1.95	T	0.12	2.45	1.61	1.72	1.38	2.64	T	2.21	0.43	14.51
1965	0.12	0.39	0.63	0.16	3.61	10.21	1.58	2.02	1.03	1.19	0	1.19	22.13
1966	0.75	0.93	0.10	0.07	0.01	2.93	0.92	1.96	0.27	0.18	T	0.06	8.18

T - Trace

Monthly Temperatures and Precipitation