U.S. DEPARTMENT OF COMMERCE
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ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
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CLIMATOGRAPHY OF THE UNITED STATES NO. 21-41-2
CLIMATIC SUMMARIES OF RESORT AREAS

MINERAL WELLS, TEXAS

by Robert B. Orton

Mineral Wells is a city of 14,000 located in the Palo Pinto Mountains about 50 miles west of Fort Worth in north-central Texas. The mountain location and the nearby Brazos River Valley provide a setting of rugged beauty. The elevation is about 1,000 feet above sea level.

HISTORY

Late in 1877, Judge J. A. Lynch and his family arrived to homestead this area. When a well was drilled for domestic use in 1880, the water was found to have an odd taste. People drinking this mineral water reported relief from the pains of rheumatism and similar ills. These cures became nationally known and a town site was laid out in 1881. The railroad was built in 1891 and by 1906 visitors and health seekers numbered 15,000 per year.

As other mineral wells were drilled, the term "Crazy water" came into use. Present day visitors will find a "Crazy Hotel," a "Crazy Drug Store," a "Crazy Beauty Shop," etc.

Mineral Wells has been known as a health resort since the time of the first "crazy" well. It has become increasingly popular with retired persons and others seeking rest and recreation. There are mineral baths, massages, and a "Crazy Water Bar," as well as golf, riding, hunting, fishing, boating, and swimming. Water sports can be enjoyed on the Brazos River, Lake Mineral Wells, and the 20,000 acre Possum Kingdom Reservoir, which lies about 30 miles to the northwest. Guest ranches are open the year round and conventions and other meetings bring 50,000 visitors per year.

Mineral Wells has 6 clinics, 3 hospitals (with a total of 133 beds) and a nursing home. There are 12 resident physicians.

CLIMATE

Mineral Wells lies in the extreme northwest part of the humid subtropical region of southeastern United States. Tropical maritime air masses predominate during spring, summer, and fall. Large variations in temperature sometimes accompany winter polar air masses. During the year precipitation occurs on an average of 70 days and amounts to 29.1 inches. Most rainy days, however, have no more than a few hours of precipitation. Prevailing winds are southerly and the average wind speed is 13 mph. Seasonal climatic changes are fairly well defined.

Winter: Surges of cold continental air are common. Cold fronts are often accompanied by strong, gusty, northerly winds, and sudden drops in temperature. When these fronts become stationary south of Mineral Wells, prolonged periods of cold, cloudy weather occur. Precipitation is the least during winter and is associated with frontal activity. It may fall as rain, freezing rain, sleet, or snow.

Very cold weather rarely occurs before Christmas Day, and many persons would consider December weather to be mild. Even in January and February the periods of extreme cold are short and fair, mild weather often occurs. The average daily maximum temperature in January is 57° F. (14°C.).

Snow may fall once or twice a month, but the average accumulation during January and February is about 1 inch per month. Snow usually melts as it falls only briefly interrupting outdoor activities.

Spring: This is a very pleasant season. March has warm and cool spells of short duration; sometimes temperature changes are rather pro-

nounced. Cloudy weather and steady rain decrease while showery precipitation increases. Thunderstorm days increase to 4 in March, and 6 per month in April and May. As the season progresses, cold fronts are weaker and less frequent. Late spring thunderstorms are sometimes accompanied by destructive hail and windstorms. Showers and thundershowers are frequent during late afternoon or night, but usually of short duration. March and April are the windiest months of the year.

The average daily maximum temperature is 68°F. (20°C.) in March, 77°F. (25°C.) in April, and 85°F. (30°C.) in May. May averages 11 days with temperatures 90°F. (32°C.) or above.

Summer: This is a hot season with only a few days when temperatures do not reach 90°F. (32°C.). June may have some very hot days but thunderstorms (occurring on the average of 7 days during the month) tend to break the spells of hot weather. July and August are the hottest months. Daily maximum temperatures average 96° F. (36° C.) and reach 100°F. (38° C.) about 12 days per month. Highest temperatures occur with fair skies, westerly winds, and very low humidities. There is little variety in daily weather patterns during July and August. Small thundershowers develop in the late afternoon but dissipate by evening. Mid-day temperatures are too hot for most outdoor activity. Morning and evening temperatures are normally pleasant. About 1/3 of July and August nights have minimum temperatures 75°F. (24°C.) or above, thus requiring air conditioning for comfortable sleeping.

Fall: This is the most delightful season. Temperatures are neither hot nor cold, winds are light, and fair weather persists. Fall is well suited to all types of outdoor activities except swimming.

Moderately warm weather continues through September and 2/3 of the days have temperatures reaching 90°F. (32°C.). Rainfall increases during September and October with weak tropical weather systems moving in from the Gulf of Mexico, or occasionally from the Pacific. The weather has greater variety than in summer, yet continues mild. Thunderstorm activity gradually decreases, with mean occurrences of 4 thunderstorm days in September, 3 in October and 2 in November. Average rainfall drops off sharply after October.

MINERAL WATER INFORMATION

The water at Mineral Wells is pumped from wells drilled to an approximate depth of 250 feet. The water is naturally cool in contrast to mineral hot springs. Originally, about 400 wells were drilled in the town site but, as the city grew, most of these were plugged and have since been covered by buildings. About 15 commercial wells are operated by the two major hotels and a mineral water company. The hotels provide facilities for heated mineral water baths and massages. Mineral drinking water can be readily obtained.

The mineral water company uses an open kettle evaporation process to separate the mineral crystals which are then packaged for sale. These crystals may then be added to ordinary water for drinking or for bathing. The company also sells a liquid concentrate which contains about 15 times the mineral content of the water as it comes from the wells. The natural mineral water is also bottled and sold for drinking purposes.

The health facilities, hotels, motels, guest ranches, and recreational facilities in and near Mineral Wells are open at all seasons. Detailed information about clinics, accommodations, restaurants, parks, transportation, etc., may be obtained by writing to: Mineral Wells Chamber of Commerce, Mineral Wells, Texas 76067.

ANALYSIS OF MINERAL WATER

	Grains per U. S. Gallon
Sodium sulfate	251
Sodium chloride	26
Calcium bicarbonate	19
Magnesium bicarbonate	11
Sodium carbonate	8
Sodium bicarbonate	5
Iron and aluminum oxides	0.6
Silica	0.4
Total Solids	321

TABLE 1. TEMPERATURE (°F.) 1949-1962

Month	Means: Daily Maximum	Means: Daily Minimum	Means: Monthly	Extremes: Record Highest	Extremes: Year	Extremes: Record Lowest	Extremes: Year	Mean Heating Degree Days**	Mean Number of Days: Maximum: 100° and above	Mean Number of Days: Maximum: 90° and above	Mean Number of Days: Maximum: 50° and below	Mean Number of Days: Maximum: 32° and below	Mean Number of Days: Minimum: 75° and above	Mean Number of Days: Minimum: 65° and above	Mean Number of Days: Minimum: 50° and above	Mean Number of Days: Minimum: 32° and below	Mean Number of Days: Minimum: 0° and below
(a)	14	14	14	14		14		11	10	10	10	10	10	10	10	10	10
Jan.	57	32	45	88	1953	4	1949	620	0	0	10	2	0	0	1	16	0
Feb.	62	38	50	91	1956	3	1951	429	0	*	6	1	0	0	3	8	0
Mar.	68	43	55	96	1956	14	1962	322	0	1	3	*	0	*	8	5	0
Apr.	77	52	64	98	1950	30	1954	103	0	2	*	0	0	3	19	*	0
May	85	62	73	100	1959+	39	1954	18	*	11	*	0	*	13	29	0	0
June	93	70	81	110	1960	54	1955+	*	5	22	0	0	6	25	30	0	0
July	97	73	85	112	1954	60	1952	0	12	28	0	0	11	31	31	0	0
Aug.	98	72	85	109	1953	59	1961	0	12	29	0	0	10	29	31	0	0
Sep.	90	65	78	108	1953+	49	1951+	8	2	19	0	0	1	18	30	0	0
Oct.	80	55	67	104	1951	30	1957	74	*	3	0	0	0	6	22	*	0
Nov.	66	41	54	90	1955	12	1950	352	0	*	3	0	0	*	6	5	0
Dec.	59	35	47	90	1955	9	1950	558	0	*	8	*	0	0	2	13	0
Year	78	53	65	112	1954	3	1951	2484	31	115	30	3	28	125	212	47	0

(a) Average length of record.

+ Also on earlier dates, months, or years

** Base 65°F

* Less than one-half

TABLE 2. PRECIPITATION (INCHES) 1949-1962

Month	Precipitation: Mean	Precipitation: Greatest Monthly	Precipitation: Year	Precipitation: Greatest Daily	Precipitation: Year	Snow, Sleet: Mean Total	Snow, Sleet: Maximum Monthly	Snow, Sleet: Year	Mean number of Days: Maximum Depth on Ground	Mean number of Days: 0 or Trace	Mean number of Days: .10 or more	Mean number of Days: .50 or more	Mean number of Days: 1.0 or more	Rainy Periods, per Year #: 1 Day	Rainy Periods, per Year #: 2 Successive Days	Rainy Periods, per Year #: 3 or more Successive Days
(a)	14	14		14		14	14		10	10	10	10	10	10	10	10
Jan.	1.7	4.6	1949	2.20	1961	1.0	4.0	1961	4	26	3	1	*	2	1	1
Feb.	1.5	3.9	1957	2.34	1957	1.2	6.0	1961	1	22	3	1	*	2	1	1
Mar.	1.5	4.0	1949	1.96	1949	.2	3.0	1962	0	25	3	1	*	3	1	*
Apr.	3.2	9.7	1957	2.66	1957	0	0		0	22	5	3	*	2	1	1
May	4.4	15.7	1957	4.09	1957	0	0		0	23	6	3	1	2	1	1
June	3.1	8.7	1962	3.31	1962	0	0		0	24	5	2	1	1	1	1
July	3.1	10.3	1962	6.24	1962	0	0		0	26	3	1	1	2	1	*
Aug.	1.7	4.1	1949	2.16	1958	0	0		0	27	3	1	1	2	1	*
Sep.	2.7	7.4	1962	3.21	1962	0	0		0	24	4	2	1	2	1	*
Oct.	3.1	9.6	1959	5.12	1959	0	0		0	25	4	2	1	2	1	*
Nov.	1.7	5.0	1952	2.03	1962	*	.3		0	25	3	1	*	2	1	*
Dec.	1.5	4.0	1960	2.07	1956	.1	1.0	1958+	1	26	3	1	*	1	1	1
Year	29.1	15.7	1957	6.24	1962	2.5	6.0	1961	4	295	45	19	6	23	12	6

Days with 0.01 inch or more precipitation.

+ Also on earlier dates, months, or years.

(a) Average length of record.

* Less than one-half.

TABLE 3. ESTIMATES OF MEAN VALUES OF RELATIVE HUMIDITY, POSSIBLE SUNSHINE, AND WIND

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Relative Humidity (%)													
Midnight c.s.t.	76	73	67	71	75	72	65	64	67	72	70	73	70
6:00 a.m., c.s.t.	81	80	76	79	85	84	79	78	80	82	79	80	80
Noon c.s.t.	62	59	53	55	55	53	47	45	49	54	53	58	54
6:00 p.m., c.s.t.	63	57	49	53	53	50	43	41	47	54	56	58	52
Possible Sunshine (%)	55	60	65	65	70	80	80	75	70	70	70	60	70
Wind													
Mean Speed (m.p.h.)	13	13	14	15	13	13	12	11	12	11	12	13	13
Prevailing Direction	S	S	S	S	S	S	S	S	S	S	S	S	S

TABLE 4. INTERDIURNAL CHANGE OF MAXIMUM AND MINIMUM TEMPERATURES

Number of degrees change		Frequency in Percent												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
Maximum														
F.	C.													
0-4	0-2	33	34	30	34	54	77	81	80	70	52	37	34	51
5-8	3-4	22	24	28	21	29	15	14	14	19	26	24	25	22
9-12	5-7	16	17	21	25	11	5	3	4	5	13	20	19	14
>12	>7	29	25	21	20	6	3	2	2	6	9	19	22	14
Minimum														
F.	C.													
0-4	0-2	41	45	41	50	69	81	91	88	74	56	42	45	60
5-8	3-4	28	29	30	31	20	16	8	11	22	31	34	33	24
9-12	5-7	16	16	20	10	9	3	1	1	3	8	15	13	10
>12	>7	15	10	9	9	2	0	0	0	1	5	9	9	6

TABLE 5. DAILY RANGE OF TEMPERATURE - MAXIMUM TO MINIMUM

Range in Degrees		Frequency in Percent												
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual
F.	C.													
0-10	0-6	11	11	7	6	3	2	3	*	3	6	10	13	6
11-20	6-11	26	26	25	33	28	19	15	13	18	32	24	27	24
21-30	12-17	37	36	38	40	60	74	79	77	59	42	37	34	51
31-40	17-22	22	23	26	19	8	5	3	10	20	18	27	24	17
>40	>22	4	4	4	2	1	0	0	0	0	2	2	2	2

* Less than 0.5 %.

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