

U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
In Cooperation with the UNM Bureau of Business Research

LATITUDE: 36° 27' N
LONGITUDE: 103° 09' W
ELEV. (GROUND): 4969 Ft.

CLIMATOLOGICAL SUMMARY

STATION: CLAYTON
NEW MEXICO

MEANS AND EXTREMES FOR PERIOD OF RECORD: 1945 - 1960

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 daily	Year		90° and above	Max.		Min.		
																			32° and below	32° and below	0° and below	0° and below	
(a)	30φ	30φ	30φ	16	--	16	--	30φ	30φ	16	--	16	16	--	16	--	16	16	16	16	16	(a)	
Jan.	46.7	19.0	32.9	78	1956	-21	1959	995	0.27	0.71	1960	4.1	11.2	1945	7.0	1945	1	0	4	29	1	Jan.	
Feb.	50.8	22.3	36.6	81	1951	-17	1951	821	0.39	0.75	1953	3.1	8.1	1953	7.5	1953	1	0	3	25	*	Feb.	
Mar.	56.3	26.7	41.5	85	1946	-11	1948	729	0.66	0.90	1959	5.3	16.0	1958	8.6	1959	2	0	2	24	*	Mar.	
Apr.	65.7	36.3	51.0	90	1950	14	1952	420	1.13	1.61	1944	2.1	10.9	1955	10.9	1955	3	*	*	10	0	Apr.	
May	74.0	45.7	59.9	93	1953+	24	1954	184	2.59	4.67	1954	T	0.6	1953	0.6	1953	5	1	0	1	0	May	
June	83.8	55.3	69.6	100	1960+	38	1951	24	1.91	2.26	1950	0	0	--	0	--	3	11	0	0	0	June	
July	88.4	59.8	74.1	102	1957	45	1958	0	2.56	2.59	1950	0	0	--	0	--	6	14	0	0	0	July	
Aug.	86.4	59.3	72.9	102	1944+	46	1950	0	2.01	2.90	1956	0	0	--	0	--	5	11	0	0	0	Aug.	
Sept.	79.5	52.2	65.9	99	1948+	28	1945	68	1.87	3.48	1960	0.1	1.0	1945	1.0	1945	2	4	0	0	0	Sept.	
Oct.	69.0	41.2	55.1	90	1954	22	1949	318	1.30	1.88	1948	0.2	2.6	1960	2.6	1960	2	*	*	4	0	Oct.	
Nov.	56.5	28.2	42.4	80	1949	-1	1951	678	0.39	1.01	1953	2.6	12.0	1946	5.0	1952+	1	0	2	22	*	Nov.	
Dec.	48.5	21.6	35.1	83	1955	-4	1949	927	0.36	0.71	1947	2.8	9.0	1960	8.1	1958	1	0	3	28	*	Dec.	
Year	67.1	39.0	53.1	102	July 1957+	-21	Jan. 1959	5138	15.44	4.67	May 1954	20.3	16.0	Mar. 1958	10.9	Apr. 1955	32	41	15	143	3	Year	

* Less than one half.

** Base 65° F (estimated).

(a) Average length of record, years.

T Trace, an amount too small to measure.

+ Also on earlier dates, months, or years.

φ Partial year's record considered.

CLIMATE OF CLAYTON, NEW MEXICO

Clayton, county seat of Union County in extreme northeastern New Mexico, is located in the east-central section of the county on the southwestern edge of the Great Plains. The surrounding country is a rolling prairie with a gradual downward slope to the east. While open to winter invasions of arctic air over the central plains, Clayton is far enough south and west to miss many of these outbreaks. Stock raising is the principal agricultural activity in the area. Small grains and feed crops are also grown there.

The first weather records were begun in Clayton in 1896. In the means-and-extremes table in this summary only the records made by the first-order Weather Bureau station are used except for those normal values based on the standard 30-year period 1921-1950. In the precipitation and temperature tables the 30-year record 1931-1960 is shown.

Clayton has a semiarid continental climate. Temperatures show the seasonal changes and large annual and diurnal ranges characteristic of such a climate. Because of the elevation summers are quite moderate, with the average maximum temperature in July, the warmest month, only 88°. In the average summer high daily temperature readings exceed 90° about one third of the time, and readings of 100° occur about once a year. Rapid cooling after sundown results in minimum temperatures below 60° on most nights, even in midsummer. The winter shade temperature usually rises to the mid-40s, and an average of only 15 days fails to see temperatures rise above the freezing mark. Winter nights are moderately cold, with the minima going below freezing most of the time from early November until late March; however, below-zero readings occur on an average of only three times a year.

The average annual precipitation of slightly more than 15 inches places the area in the "semiarid" classification. More than 70 per cent of this yearly moisture normally falls during the growing season April-September, producing good forage on the extensive range

land in this area and permitting some dry-land farming. Most summer rainfall is associated with usually brief afternoon and evening thundershowers, which occasionally produce heavy rain over a small area and sometimes bring a little hail. A few small tornadoes have been reported in the area, but no extensive damage from them has been reported. Occasionally, in autumn and winter more general rain and snow fall for several hours, but such prolonged storms are infrequent. Winters are generally dry: an average of only one day a month receives as much as one-tenth inch of moisture. However, winters average 20 inches of snow, though most snowfalls are light with an occasional storm producing up to six inches. At times strong winds accompany such a winter storm, resulting in blizzard conditions and heavy drifting. In general, however, snow does not lie on the ground for any extended period.

A summary of a short wind record shows an average hourly velocity for the year of 15 miles per hour. Somewhat higher winds normally prevail during the spring months, but velocities exceeding 24 miles per hour are experienced only 10 per cent of the usual year. Stronger winds blow chiefly from a westerly or southwesterly direction, except in the winter and spring months when strong northerly winds are more common. The average annual relative humidity ranges from around 70 per cent in the early morning to about 40 per cent later in the day. Sunshine averages about 75 per cent of possible for the year, with this fairly high figure persisting throughout the winter months. The growing season at Clayton averages 177 days. The average date of the last freeze in the spring is April 26, and that of the first freeze in the fall is October 20.

G. F. VON ESCHEN
State Climatologist
Weather Bureau Airport Station
Albuquerque, New Mexico

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	36.4	39.4	38.1	49.9	57.0	73.8	74.4	71.0	70.0	56.8	42.8	36.4	53.8
1932	29.8	42.6	37.7	52.4	62.2	67.8	76.2	73.7	64.1	53.8	43.8	28.0	52.7
1933	37.4	33.0	45.0	48.9	60.6	73.8	76.9	72.3	69.9	58.4	47.2	44.1	55.6
1934	38.7	40.0	44.8	54.6	65.6	73.0	79.0	76.6	63.4	60.4	46.0	37.4	56.6
1935	40.4	38.5	46.7	51.6	64.3	69.5	75.8	73.5	63.9	54.4	41.5	35.1	53.8
1936	32.0	31.6	45.4	53.0	61.3	72.0	75.1	76.6	64.2	52.2	42.6	36.5	53.5
1937	24.7	36.2	40.8	51.2	62.2	69.2	76.8	77.4	68.1	56.2	42.9	35.0	53.4
1938	36.2	37.8	48.0	51.9	59.8	69.3	73.4	76.2	66.8	57.4	39.8	36.8	54.4
1939	35.4	29.2	43.6	52.1	61.8	71.0	75.0	72.2	68.0	54.8	42.4	39.0	53.7
1940	24.4	35.6	44.7	50.4	61.4	69.6	76.6	71.2	67.6	59.2	39.0	37.0	53.1
1941	35.2	38.3	38.6	49.4	60.4	66.2	71.6	71.6	64.0	53.4	45.4	37.7	52.6
1942	33.4	32.6	40.5	52.0	59.8	67.6	72.8	70.6	62.2	52.1	45.8	37.4	52.2
1943	34.2	40.0	39.6	55.3	66.2	69.4	72.1	76.2	65.2	53.2	40.8	30.8	52.8
1944	33.6	36.2	39.7	47.0	60.0	68.6	73.2	64.8	56.0	43.2	33.8	33.8	52.4
1945	33.4	37.3	44.8	46.6	60.9	66.5	72.6	74.0	64.1	56.2	46.6	40.7	53.6
1946	35.8	39.5	46.9	59.0	66.8	70.6	76.6	72.4	66.1	55.2	40.0	40.7	55.0
1947	32.7	33.4	38.7	49.2	58.8	68.0	73.4	74.4	69.7	60.0	36.5	33.4	52.4
1948	30.5	31.8	34.2	56.4	60.3	69.2	74.1	73.0	68.7	55.1	38.4	37.4	52.4
1949	26.0	34.2	42.9	50.8	59.8	67.6	72.9	71.7	65.7	54.5	51.9	33.7	52.6
1950	35.3	41.5	40.4	51.3	59.6	70.5	70.4	69.2	63.1	61.0	43.1	38.0	53.6
1951	30.6	38.8	39.4	48.1	60.4	66.0	74.6	73.1	64.6	53.3	38.9	34.4	51.8
1952	37.3	37.6	38.4	50.3	59.6	75.6	73.9	75.4	65.0	54.4	37.0	34.6	53.3
1953	41.8	34.2	46.1	48.2	58.3	76.1	75.2	71.4	67.7	55.5	44.3	32.5	54.3
1954	37.1	44.3	40.3	56.8	57.5	72.0	77.2	73.7	68.8	55.4	46.3	38.1	55.6
1955	33.4	31.4	41.6	51.5	59.5	66.5	73.6	73.2	67.1	57.0	40.1	39.7	52.9
1956	35.8	33.8	43.5	50.0	64.8	73.6	73.0	72.3	68.5	57.1	39.6	38.5	54.2
1957	32.2	43.1	40.2	46.4	56.5	67.9	76.1	72.4	63.4	52.7	37.1	40.3	52.4
1958	34.3	36.5	32.8	46.7	62.6	70.2	72.0	74.5	66.1	55.2	43.2	36.4	52.6
1959	29.7	35.9	40.3	49.6	60.5	71.5	72.9	73.1	63.9	51.7	39.6	37.0	52.1
1960	30.8	27.8	41.0	53.6	61.0	70.8	71.7	73.4	65.7	53.8	43.6	32.4	52.1

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1931	.00	.47	.61	1.07	2.30	.57	.63	2.61	2.02	.77	.04	.36	11.45
1932	.41	.22	.39	.69	1.04	3.67	.63	2.75	1.98	.56	T	.62	10.98
1933	T	.03	T	.19	1.10	1.19	1.28	2.17	.09	.75	.35	T	7.15
1934	T	.49	T	.16	.46	1.04	1.16	1.77	1.08	1.08	.16	.03	7.24
1935	.71	.20	.05	T	2.63	.97	1.30	1.30	1.56	.73	.41	.22	9.53
1936	.19	.00	.00	.14	2.41	.58	.96	.18	1.64	.23	T	.21	5.54
1937	.10	.05	.65	.22	4.68	1.95	.49	.30	2.47	.65	.09	.38	12.03
1938	.02	.64	.52	.78	1.12	2.68	3.03	.50	4.34	1.72	T	.44	15.48
1939	1.55	.45	.46	1.12	1.94	2.00	.91	1.37	.88	.02	.99	1.44	13.13
1940	.28	.56	.44	.35	1.40	.55	1.17	2.09	1.80	.03	1.86	.46	10.99
1941	.37	.58	2.66	3.85	7.49	3.33	4.23	3.29	8.69	3.11	.01	.04	37.65
1942	.03	.58	1.36	7.29	3.34	3.36	1.27	2.44	2.51	3.38	T	.25	22.81
1943	.05	T	T	1.19	1.46	.80	.62	2.65	.57	.13	.09	.70	8.26
1944	.36	.40	.05	4.67	5.07	1.12	2.24	5.45	.85	.99	.48	.51	22.19
1945	.93	.36	.32	.76	.35	.82	3.02	2.47	3.82	1.52	T	.05	14.42
1946	.05	.17	.93	.09	.38	.24	.66	3.57	1.47	1.72	1.17	.05	10.50
1947	.26	.45	.39	.54	5.70	2.10	5.84	.97	.02	1.10	.36	1.07	17.80
1948	.63	1.07	1.18	.29	4.37	1.57	3.38	2.36	.36	3.20	.08	.02	18.57
1949	.52	.70	.93	.77	6.77	2.62	5.01	1.04	.33	.10	.02	.20	19.01
1950	.04	T	.04	.54	.80	4.51	7.77	1.29	3.56	.48	T	.20	19.23
1951	.84	.51	.49	.46	4.09	1.82	3.07	2.24	.39	.33	.28	.10	14.62
1952	.33	.77	.46	2.90	.72	.29	1.27	3.41	.24	T	.66	.25	11.30
1953	.08	.86	.42	1.15	.92	.38	2.40	2.73	.17	.45	1.49	.38	10.43
1954	.30	.09	.35	.53	5.59	.46	1.77	2.32	.39	1.88	T	.04	13.72
1955	.03	.37	.06	2.05	5.45	1.19	1.12	1.46	1.86	.06	.02	.15	12.82
1956	.10	.12	.16	.24	2.87	1.00	4.23	3.01	T	.15	.04	T	11.92
1957	.20	.06	2.30	1.50	4.07	.78	1.22	3.34	.33	1.51	.79	.00	16.10
1958	.26	.46	1.81	1.69	3.83	.47	5.15	.83	1.60	.10	.36	.64	17.20
1959	.72	.10	1.57	.53	2.57	.78	1.30	3.88	.49	1.19	.15	.68	13.96
1960	1.06	.48	.32	.82	.49	2.66	2.84	1.38	5.22	2.97	T	1.10	19.34

STATION HISTORY

Weather records were begun in Clayton in 1896 and continued through 1899. The station was re-established in January 1909; and cooperative temperature and rainfall records were continued until March 1944, when a first-order Weather Bureau station was established. All records have been made in the immediate vicinity, with no significant changes in elevation or exposure of the instrumental equipment occurring from site to site.