U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU

In Cooperation with the UNM Bureau of Business Research

LATITUDE: 35° 15' N
LONGITUDE: 108° 2' W
ELEV. (GROUND): 6800 Ft.

CLIMATOLOGICAL SUMMARY

STATION: BLUEWATER
NEW MEXICO

MEANS AND EXTREMES FOR PERIOD OF RECORD: 1928 - 1959

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 daily	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)	30	30	30	30	--	30	--	30	30	30	--	30	30	--	30	--	30	30	30	30	30	(a)
Jan.	44.7	10.6	27.6	67	1950	-29	1943	1160	0.40	1.30	1935	4.3	13.5	1939	6.0	1935+	1	0	3	31	6	Jan.
Feb.	48.7	14.7	31.8	75	1940	-22	1951	930	0.35	0.35	1959	3.9	15.7	1953+	5.5	1953	1	0	1	28	2	Feb.
Mar.	56.6	20.0	38.3	87	1938	- 6	1931	830	0.37	0.48	1940	2.5	8.0	1931	5.0	1931	1	0	*	28	*	Mar.
Apr.	66.5	27.4	47.0	88	1945	- 1	1945	540	0.44	1.00	1931	0.9	8.2	1949	8.2	1949	1	0	0	22	*	Apr.
May	74.8	35.5	55.3	93	1951	13	1951+	300	0.56	0.85	1959	0.3	4.0	1930	4.0	1930	2	*	0	10	0	May
June	84.9	43.8	64.5	98	1930	22	1954	60	0.58	1.12	1933	0	0	--	0	--	1	7	0	1	0	June
July	86.9	51.7	69.4	99	1958+	38	1955+	0	1.74	1.80	1931	0	0	--	0	--	5	11	0	0	0	July
Aug.	83.5	49.9	66.7	98	1934	33	1949+	30	2.61	1.55	1959	0	0	--	0	--	6	3	0	0	0	Aug.
Sept.	78.8	40.6	59.8	94	1948	21	1943	170	1.14	1.60	1941	T	T	1936	T	1936	3	1	0	4	0	Sept.
Oct.	69.3	29.2	49.3	85	1947	10	1955+	490	0.51	0.76	1933	T	0.5	1932	0.5	1932	2	0	0	20	0	Oct.
Nov.	55.8	16.0	35.9	76	1934	-25	1931	870	0.42	1.50	1931	2.2	15.5	1931	11.0	1931	1	0	*	28	1	Nov.
Dec.	47.0	11.0	29.0	68	1946+	-28	1945	1120	0.44	0.80	1945	3.0	16.0	1941	8.0	1941	1	0	2	30	4	Dec.
Year	66.5	29.2	47.9	99	July 1958+	-29	Jan. 1943	6500	9.56	1.80	July 1931	17.1	16.0	Dec. 1941	11.0	Nov. 1931	25	22	6	202	13	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 BLUEWATER, NEW MEXICO

Bluewater is located in north-central Valencia County in the San Jose river valley. The San Jose, a small, normally dry stream, drains the eastern slope of the Zuni mountains. About eight miles west of Bluewater a dam impounds water to form a lake, providing good fishing and water sports and furnishing irrigation water for truck crops grown in the valley and for industrial uses.

Bluewater records began on May 1, 1896, continuing through 1959 with breaks from 1903 to 1909 and from 1919 to 1925. In this summary only the most recent 30 years of record, excluding partial records in 1957 and 1958, are used. These partial records were, however, considered in determining extreme values.

The Continental Divide lies approximately 20 miles west of Bluewater. The Zuni mountains, southwest and west, rise to elevations of 8,000 to 9,000 MSL; and Mount Taylor, about 25 miles due east, has an elevation of 11,389 feet. The valley in this area runs from northwest to southeast with a moderate easterly slope.

Bluewater has an arid, continental climate with temperatures typical of moderately high mountain valleys. Less than 10 inches of annual precipitation furnish insufficient moisture for dry-land crops. However, since more than half of the annual precipitation falls in the July-September period, considerable native forage is produced in the surrounding area. The Gulf of Mexico is the area's principal source of moisture, which normally is brought in only during the summer by large-scale air circulations. Summer rains are usually associated with relatively short thundershowers. Occasionally, brief high-intensity showers cause flash floods in the normally dry arroyos. During winter and spring, the air moves from the west and southwest; and the higher mountains in these directions tend to capture much of the moisture before it reaches the Bluewater area. Consequently, winter and spring are usually relatively dry, with the average monthly precipitation totaling less than one-half inch. Much of the winter moisture falls as snow, with the annual snowfall totaling approximately 17 inches. Only rarely does one storm bring as much as six inches of snow, the heaviest fall of record being 17 inches in 1916. Snow seldom lies on the ground for more than a day or two, and winds are usually light during snowstorms so that there is little drifting.

Summers are cool at this altitude. Daytime maxima of 90° occur on only about 20 days during the warmer months, and no reading of 100° was recorded during the 30-year period summarized, although a few days with temperatures above 100° were recorded earlier--probably because of the use of a nonstandard thermometer shelter. Generally clear skies, low humidities, and the valley location combine to produce rapid cooling after sundown, so that summer nights are cool. In the winter, daytime temperatures are moderately warm, averaging in the mid-40s in the coldest months. Normally, only six days a year have a shade temperature failing to rise above freezing. Winter nights are relatively cold. Temperatures below freezing can be expected from early October through April, and in the average winter 13 nights will have a minimum temperature of zero or below.

While sunshine and humidity records are not available for Bluewater, this area enjoys the low humidities characteristic of the Southwest. The relative humidity probably averages near 50 per cent for the year. Humidities of near 70 per cent can be expected in the cooler morning hours but will drop to around 30 per cent during the afternoons and sometimes to below 10 per cent during the warmer spring hours. Sunny weather is the rule, resulting in approximately 75 per cent of the possible hours of sunshine throughout the year. A short wind record made at the Grants Airport about eight miles southeast of Bluewater indicates an average hourly wind velocity for the year of 10 miles per hour. Spring is the windiest period: average hourly velocities are around 12 miles per hour and occasionally exceed 25 miles per hour. The prevailing wind direction normally parallels the valley, the strongest winds generally coming from a westerly direction.

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Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1928	31.0	31.4	40.9	45.5	55.4	64.3	69.9	65.1	59.2	50.2	36.2	26.8	48.0
1929	26.6	27.3	37.5	44.4	55.3	64.4	69.6	65.6	59.2	48.6	33.4	31.2	46.9
1930	24.7	35.4	36.3	50.0	51.4	65.8	69.4	67.5	59.3	47.0	33.8	22.6	46.9
1931	24.8	34.6	35.8	47.0	53.4	64.6	70.2	67.0	61.0	51.0	32.7	19.2	46.8
1932	17.6	34.0	37.0	47.3	54.9	62.6	69.0	67.0	57.6	47.9	38.2	22.5	46.3
1933	22.2	26.0	41.0	41.8	51.2	65.1	69.6	65.6	63.4	51.4	38.9	33.2	47.4
1934	29.7	37.4	42.6	48.8	59.4	62.2	70.8	69.2	58.6	51.8	35.2	30.2	49.7
1935	30.6	33.6	38.7	46.5	50.8	65.0	70.3	66.6	58.7	50.0	35.4	29.6	48.0
1936	28.4	34.2	39.6	44.5	56.4	66.5	68.4	66.4	57.0	47.4	35.6	30.4	47.9
1937	15.8	31.0	36.6	46.1	56.8	62.9	67.6	67.8	61.6	50.8	39.0	32.7	47.4
1938	31.2	32.9	42.0	51.7	53.6	65.0	67.0	64.6	55.7	47.6	32.3	31.6	47.9
1939	26.4	22.1	40.0	50.0	57.0	65.6	68.6	66.0	61.3	46.8	37.4	33.4	47.9
1940	29.6	32.8	41.8	49.0	58.4	67.1	70.5	67.4	60.6	52.6	36.4	36.2	50.2
1941	32.2	38.5	40.6	43.9	56.6	60.8	65.4	65.6	58.4	49.0	37.5	30.2	48.2
1942	26.3	29.8	35.0	48.6	55.4	65.0	70.0	66.6	58.9	49.2	40.4	34.4	48.3
1943	31.0	36.4	39.9	51.1	56.4	63.8	70.4	68.8	56.8	46.4	36.6	27.0	48.8
1944	25.8	32.9	36.7	45.7	55.4	63.4	69.6	67.5	59.7	51.6	36.8	31.3	48.0
1945	30.2	35.6	37.0	45.6	59.0	62.6	68.8	68.7	60.8	50.0	35.2	22.2	48.0
1946	23.2	31.1	39.4	49.6	54.5	68.0	70.4	67.4	61.4	46.7	34.6	32.3	48.2
1947	24.8	34.4	38.8	45.5	57.9	63.6	69.6	65.2	60.4	49.6	31.4	26.8	47.3
1948	27.4	31.6	33.1	48.8	56.9	63.1	68.9	66.1	59.5	46.9	32.4	30.7	47.1
1949	23.7	28.3	36.9	45.8	52.7	62.1	67.9	65.2	61.4	46.0	39.5	25.0	46.2
1950	27.1	35.0	38.2	45.9	52.3	63.2	67.2	63.3	56.0	53.7	38.7	33.4	47.8
1951	29.0	31.9	37.3	45.4	54.8	61.7	72.9	68.4	60.5	48.0	35.4	28.1	47.8
1952	32.8	30.9	33.2	45.5	56.3	65.0	67.9	68.6	59.6	49.2	30.7	26.7	47.2
1953	35.8	29.4	39.1	44.3	50.3	65.6	70.8	65.8	59.3	48.2	36.1	24.8	47.4
1954	29.9	35.0	36.3	52.1	57.1	64.3	70.8	66.2	60.8	51.9	38.3	26.9	49.1
1955	25.1	23.3	37.1	43.2	53.3	62.9	68.5	69.1	61.9	49.9	36.9	32.7	47.0
1956	33.2	25.4	40.8	46.9	58.8	68.8	69.3	67.1	62.6	50.1	31.5	28.0	48.5
1959	32.0	32.8	38.7	49.6	57.2	68.7	71.3	66.6	61.8	50.3	39.7	31.0	50.0

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1928	T	.45	.22	.40	1.33	0	1.30	3.63	.41	.70	.35	.07	8.95
1929	.13	.34	.09	.05	1.33	.03	3.10	4.78	3.29	.55	.33	.02	14.04
1930	.29	.09	.27	.81	.25	.37	2.33	1.92	.59	.07	.21	.23	7.43
1931	.22	.55	1.24	2.43	.92	1.05	4.12	3.11	2.40	.28	1.90	.25	18.47
1932	.81	.72	.93	.59	1.07	.46	3.97	2.43	.17	.70	0	.64	12.49
1933	.09	.19	.05	.23	.42	3.37	3.26	3.40	1.55	1.24	.95	.04	14.79
1934	.20	.20	T	.77	1.14	T	1.68	3.52	.76	.15	.57	.66	9.65
1935	1.58	.60	.61	.80	.98	T	1.37	5.51	1.59	.14	.72	.56	14.46
1936	.27	.72	.21	.03	.36	.43	2.62	2.84	1.92	.25	.21	.37	10.23
1937	.38	.69	.59	.07	.42	.14	.74	1.19	2.43	.39	.03	.29	7.36
1938	.11	.37	.74	.23	.43	1.24	.49	1.15	2.42	.22	.01	.21	7.62
1939	1.14	.40	.44	.44	.17	.33	.72	1.66	1.98	.06	.72	.06	8.12
1940	.68	.62	.49	.23	.41	.16	1.45	1.76	2.02	.78	.95	1.37	10.92
1941	.51	.37	1.08	1.22	1.80	1.83	1.73	1.33	2.69	1.08	1.19	.55	15.38
1942	.30	.12	.14	.04	.18	.22	.94	2.77	.46	1.22	.04	1.17	7.60
1943	.71	T	.73	.12	.19	.84	.76	2.76	.45	.53	.39	.82	8.30
1944	.10	.24	.17	.08	.45	.35	1.21	1.83	.80	.79	.64	.41	7.07
1945	.56	.06	.59	.61	.02	0	1.77	3.04	.52	.38	0	1.27	8.82
1946	.56	.07	.36	.02	.12	.02	2.01	4.40	1.04	.11	1.05	0	9.76
1947	.51	T	T	.03	1.40	.17	.32	4.71	.44	.24	.47	.73	9.02
1948	.20	1.14	.18	.02	.79	2.04	.73	1.44	1.01	1.29	.09	.43	9.36
1949	.36	.40	T	.66	.69	1.28	4.10	2.21	.87	.39	0	.09	11.05
1950	.14	.18	.45	.41	T	0	2.76	1.11	1.14	T	0	0	6.19
1951	.31	.14	.11	.31	0	0	.90	1.82	.11	.30	.86	.56	5.42
1952	.61	.27	.15	1.65	.24	.50	1.15	2.09	.39	0	.53	.13	7.71
1953	0	.55	.52	.47	.02	.13	1.44	1.56	0	.45	.03	.24	5.41
1954	.11	.07	.57	0	.10	.53	2.15	1.20	2.65	.73	.04	.28	8.43
1955	.11	.17	.02	T	.27	.54	1.40	4.49	0	0	.06	.28	7.34
1956	.92	.36	.03	.02	.57	.09	.88	.11	.07	.25	0	0	3.30
1959	.18	.44	T	.54	.85	1.37	.71	4.41	.05	2.03	.14	1.54	12.26

STATION HISTORY

A climatological substation was established near the Post Office on May 1, 1896, and operated by J.S. Van Doren until January 1903. After several years of inactivity the station was reactivated in November 1908 about one-half mile south of the Post Office. C. B. Russell, John Howard, and G. W. Grose acted as observers at this site until March 1919. No records were maintained until June 1925, when the station was again set up one and one-half miles south-southeast of the Post Office, with S.C. Young as observer until October 1942, at which time J.F. Neilson, Jr., took over and served until March 1956. The station was then moved 0.6 mile west, and Mrs. Kenneth R. McNeill was observer until December 1958. At that time the station was moved 1.4 miles farther west, with Mrs. Robert H. McCord serving as observer until the station was closed in December 1959.