

U.S. DEPARTMENT OF COMMERCE WEATHER BUREAU
IN COOPERATION WITH Alamogordo Chamber of Commerce
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 29

LATITUDE 32° 53' N
LONGITUDE 105° 57' W
ELEV. (GROUND) 4350 Ft.

STATION ALAMOGORDO, NEW MEXICO

CLIMATOLOGICAL SUMMARY

MEANS AND EXTREMES FOR PERIOD 1924-1955

Month	Temperature (°F)								** Mean degree days	Precipitation Totals (Inches)						Mean number of days					Month				
	Means			Extremes						Mean	Greatest daily	Year	Snow, Sleet, Hail			Precip. .10 inch or more	Temperatures								
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Greatest daily	Year	Mean		Maximum monthly	Year	Greatest daily	Year		Max.		Min.	
																						90° and above	32° and below	32° and below	0° and below
(a)	30	30	30	30	-	30	-	30	30	30	-	30	30	-	30	-	30	30	30	30	30	(a)			
Jan.	55.9	28.1	42.0	76	1952	0	1948+	713	0.68	1.03	1944	1.9	9.9	1946	8.0	1946	2	0	*	23	*	Jan.			
Feb.	61.6	32.6	47.1	78	1951+	1	1951	501	0.51	0.84	1931	0.9	6.5	1951	6.0	1928	2	0	*	14	0	Feb.			
Mar.	67.8	37.6	52.7	90	1946	14	1926	381	0.40	0.75	1924	0.4	3.0	1932	2.0	1932	1	*	0	8	0	Mar.			
Apr.	76.8	45.5	61.1	96	1948	20	1938	150	0.28	0.99	1941	0.1	2.0	1936	2.0	1936	1	1	0	1	0	Apr.			
May	85.1	53.5	69.3	104	1951	33	1953	19	0.65	1.23	1941	T	T	1944+	T	1944+	2	9	0	0	0	May			
June	94.0	62.4	78.2	109	1924	46	1955+	0	0.60	2.01	1953	T	T	1941	T	1941	1	25	0	0	0	June			
July	94.2	65.5	79.9	110	1951	49	1941	0	1.75	1.80	1954	0	0	-	0	-	4	26	0	0	0	July			
Aug.	92.7	64.2	78.4	106	1951	51	1953	0	1.48	1.85	1942 ⁶	T	T	1939	T	1939	4	23	0	0	0	Aug.			
Sep.	87.9	58.8	73.4	102	1948+	33	1945	0	1.48	2.60	1941	0	0	-	0	-	3	15	0	0	0	Sep.			
Oct.	77.9	48.1	63.0	96	1929	23	1945	109	0.92	1.34	1928	T	T	1940	T	1940	2	1	0	*	0	Oct.			
Nov.	65.1	34.9	50.0	88	1927	12	1938	450	0.48	1.28	1946	0.2	2.0	1946	2.0	1946	2	0	0	12	0	Nov.			
Dec.	57.4	29.3	43.3	78	1933	-1	1953	673	0.50	1.45	1942 ⁶	0.7	4.0	1925	4.0	1925	2	0	*	22	*	Dec.			
Year	76.4	46.7	61.5	110	July 1951	-1	Dec. 1953	2996	9.73	2.60	Sept. 1941	4.2	9.9	Jan. 1946	8.0	Jan. 9 1946	26	100	*	80	*	Year			

(a) Average length of record, years.

+ Also on earlier dates, months or years

T Trace, an amount too small to measure.

* Less than one half.

⁶ Data for partial year considered

** Base 65°F

CLIMATE OF ALAMOGORDO, NEW MEXICO

Alamogordo is located on the eastern edge of the Tularosa Valley about three miles from the foothills of the Sacramento Mountains which form the eastern border of the Valley. These Mountains rise abruptly above the valley to an average elevation of 7,000 to 8,000 feet (MSL) with peaks above 12,000 feet. The Tularosa Valley is a closed basin about 35 miles wide at this point with the Organ and San Andres Mountains forming the western border. Northward the valley extends about 50 miles, narrowing gradually, while to the south it opens onto a vast rolling plain.

The Sacramento Mountains, the eastern border of the valley, have considerable effect on the climate of Alamogordo as well as furnishing a variable climate within a few miles of the City. Moisture laden winds originating in the Gulf of Mexico bring much of the moisture that falls in southeastern New Mexico. These air currents are retarded and deprived of their moisture as they cross the mountain range resulting in average annual rainfall at stations on the eastern slope being half again as heavy as at Alamogordo on the leeward side. These mountains also tend to shut out many invasions of cold arctic air which, during the winter, sometimes sweep southward over the great plains and across the eastern section of the State. Annual mean temperature averages are about 4° higher at Alamogordo than at similar elevations on the eastern slope. A marked change in climate also occurs as one ascends the mountains. At Mountain Park, nine miles northeast of Alamogordo and 2,400 feet higher, the annual mean temperature is 10° lower and the annual precipitation double that of Alamogordo; while at Cloudcroft, 13 miles east-northeast and 4,300 feet higher, the annual mean temperature is 16° lower and the annual precipitation almost three times greater.

Alamogordo is the county seat of Otero County. Cotton, truck crops and feed are raised in the valley under irrigation and stock raising is of major importance in the adjacent plains and mountains. Considerable fruit is also grown in nearby mountain valleys. The White Sands National Monument, a large area of pure white gypsum sand, lies about 15 miles southwest of the City.

Climatological records began in Alamogordo in 1909 although there were records made in that vicinity as early as 1890. Only the most recent 30 years of complete records are summarized in this publication. The records for 1942 and 1943 were not used in compiling the means since they were not complete, however, the partial records for these years were considered in obtaining the extreme monthly values of temperature and precipitation.

The average annual rainfall at Alamogordo is less than 10 inches placing the area in an arid climate classification. Fifty-eight per cent of the year's moisture falls during the summer months, July through October, and most of this precipitation falls in brief but sometimes heavy thundershowers. Prolonged rainy periods are practically unknown. Even during the summer, which is considered the rainy season, there is an average of only three or four days a month when as much as one-tenth of an inch of rain falls. Fall, winter and spring are drier with only one or two days a month on the average when a tenth of an inch of moisture falls. Snow does occasionally fall during the winter but very seldom lies on the ground for 24 hours although nearby mountains are normally snow-covered during the colder months.

Moderately warm summers and mild winters are the rule in Alamogordo. During the summer, daytime temperatures usually exceed 90° and quite often reach 100° or higher. Because of the elevation and the very dry air, daily temperature ranges normally exceed 30° and nighttime temperatures are generally comfortably cool even during the warmer summer months. Winters are characterized by clear, sunny, mild, dry weather. Minima during the winter frequently drop below freezing, but in the thirty years summarized, only four days showed readings of zero or below. During this 30-year period -1° was the lowest temperature recorded but looking back through earlier records we find that the lowest official temperature at Alamogordo was -10° in January, 1913. Daytime temperatures during winter months average well over 50° and there were only 11 days in the 30 years when temperatures failed to rise above the freezing mark sometime during the day.

The average year at Alamogordo has a growing season of 217 days or seven months, beginning with the average date of April 5th for the last freezing temperature in the spring and ending on November 7th, the average date for the first temperature of 32° or lower in the fall. While sunshine, relative humidity and wind records are not available for Alamogordo, the following information is based on records in that section of the country and considered applicable to the Alamogordo area. The city lies in that southwestern section of the country noted for its abundant sunshine and during the year sunshine is enjoyed during approximately 80% of the hours from sunrise to sunset. Even in winter months the sun shines more than 75% of the possible hours. Typical of desert climates, humidities are low throughout the year. Relative humidity generally ranges from 40% to 65% during the cool morning hours falling to 15% to 25% (Continued under Precipitation Table)

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