

Fifty-three Years (1969–2021) of Climatological Data:

NMSU Agricultural Science Center at Farmington, NM

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IMPACT

Given the marginal precipitation—averaging just 8 inches per year in the New Mexico Four Corners region—local industries and municipalities rely on surface water from the San Juan, Animas, and La Plata Rivers, which converge in Farmington, NM, and then flow into the Colorado River at Lake Powell in Utah. This water use is regulated for natural resources, agricultural, industrial, municipal, and residential use. Diligent weather data collection and subsequent monitoring from the New Mexico State University Agricultural Science Center at Farmington’s National Weather Service Station 1 (WS-1) and the New Mexico Climate Center Station 2 (WS-2) is crucial to inform those interested in global and regional environments and local economic impacts within the region. Weather data are used by the U.S. Department of Agriculture Natural Resources Conservation Service (USDA–NRCS) San Juan District, large and small acreage agricultural producers, and municipalities for water demand planning and monitoring flood events, and by private end-users for irrigation scheduling. Additionally, both weather station datasets are used in agricultural research. This varying and ongoing need for weather data demonstrates the importance of long-term weather monitoring for the region.

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INTRODUCTION

NMSU's Agricultural Experiment Station–Agricultural Science Center at Farmington (ASCF) is located 8 miles southwest of Farmington, NM, at 5,640 feet above sea level (36°4' N by 108° W) on 254 acres of land leased from the Navajo Nation. The daily weather data at ASCF have been recorded since 1969. The National Weather Service (NWS) designated WS-1 as an official climatological observation site in 1978. The WS-1 equipment is enclosed within a 5-foot-high chain link fence and mounted on the bare soil surface. Weather data are manually recorded during a 24-hour period from 8:00 a.m. to 8:00 a.m. Mountain Standard Time. Daily weather data are disseminated via the ASCF website at <https://farmingtonsc.nmsu.edu/research/weather.html>.

The New Mexico Climate Center (NMCC) established WS-2 at ASCF in 1985. It is located approximately 383 yards south of WS-1. It is enclosed in a 5-foot-high chain link fence surrounded by turf. The weather equipment is mounted on a tripod within the fenced area, and the turf is maintained at 2–3 inches. (National Weather Service, 2018). The WS-2 data (precipitation, air and soil temperatures, relative humidity, wind speed, and solar radiation) are stored in a Campbell Scientific data logger housed in a weather-resistant box. The data are recorded every 5 minutes over a 24-hour period from midnight to midnight. The data are electronically transmitted to NMCC, located on NMSU's main campus in Las Cruces, NM. NMCC weather data are accessible for download at <https://weather.nmsu.edu>. The weather data summarized in this report are available by request from ASCF via phone at 505-960-7757 (Monday–Friday, except during holiday office closures) or via email at farmingt@nmsu.edu.

SUMMARY

The 2021 summary of climatological data shows an average maximum air temperature of 68°F and an average minimum air temperature of 39°F for the year. The extreme maximum air temperature of 101°F occurred in July and the extreme minimum of 6°F occurred in January. The precipitation total for 2021 was 5.99 inches (Table 1), while the long-term average from 1969 through 2020 was 7.92 inches (Figure 1).

The 53-year climatological data from 1969 through 2021 shows the annual precipitation average of 7.88 inches and the maximum and minimum air temperatures from

January through December. The extreme maximum air temperature was 103°F, which occurred in July of 1989, 1990, 2003, and 2005. The extreme minimum air temperature was -18°F, which occurred in January 1971 (Table 2).

FREEZE DATES

In 2021, there were 142 frost-free days (frost temperature $\leq 32^\circ\text{F}$) as compared to the 53-year average of 162. There were 180 killing freeze-free days (killing freeze temperature $\leq 28^\circ\text{F}$) in 2021 as compared to the 53-year average of 184 killing freeze-free days (Table 3).

PRECIPITATION

Precipitation is collected from an NWS 8-inch standard rain gauge located at WS-1. The 2021 precipitation total from January to December was 5.99 inches, and the 53-year average annual precipitation from 1969 through 2021 was 7.88 inches (Table 4). The lowest monthly precipitation recorded for 2021 was in May at 0.07 inches, and the highest was in March at 0.93 inches (Table 4).

AIR TEMPERATURE

Daily air temperature is transmitted from a pole-mounted Nimbus PL digital beehive-style thermometer at WS-1 to a Nimbus data logger that is solar-powered and housed within a weather-resistant box. The NWS Nimbus data logger can store air temperatures for up to 30 days. The data are recorded for NWS and reported in the ASCF Annual Reports. Effective May 17, 2020, the air temperatures were collected from the NMCC site (WS-2) and used in the ASCF reports.

Average

The 2021 highest monthly average air temperature of 77°F occurred in July; the 53-year highest monthly mean air temperature of 76°F also occurred in July (Table 5).

Maximum

The 2021 highest average monthly maximum air temperature of 91°F, which occurred in July, was equal to the 53-year mean monthly maximum air temperature (Table 6). The 2021 extreme maximum air temperature of 101°F occurred in July. The 53-year extreme maximum air temperature was 103°F and was recorded in July of 1989, 1990, 2003, and 2005 (Table 7).

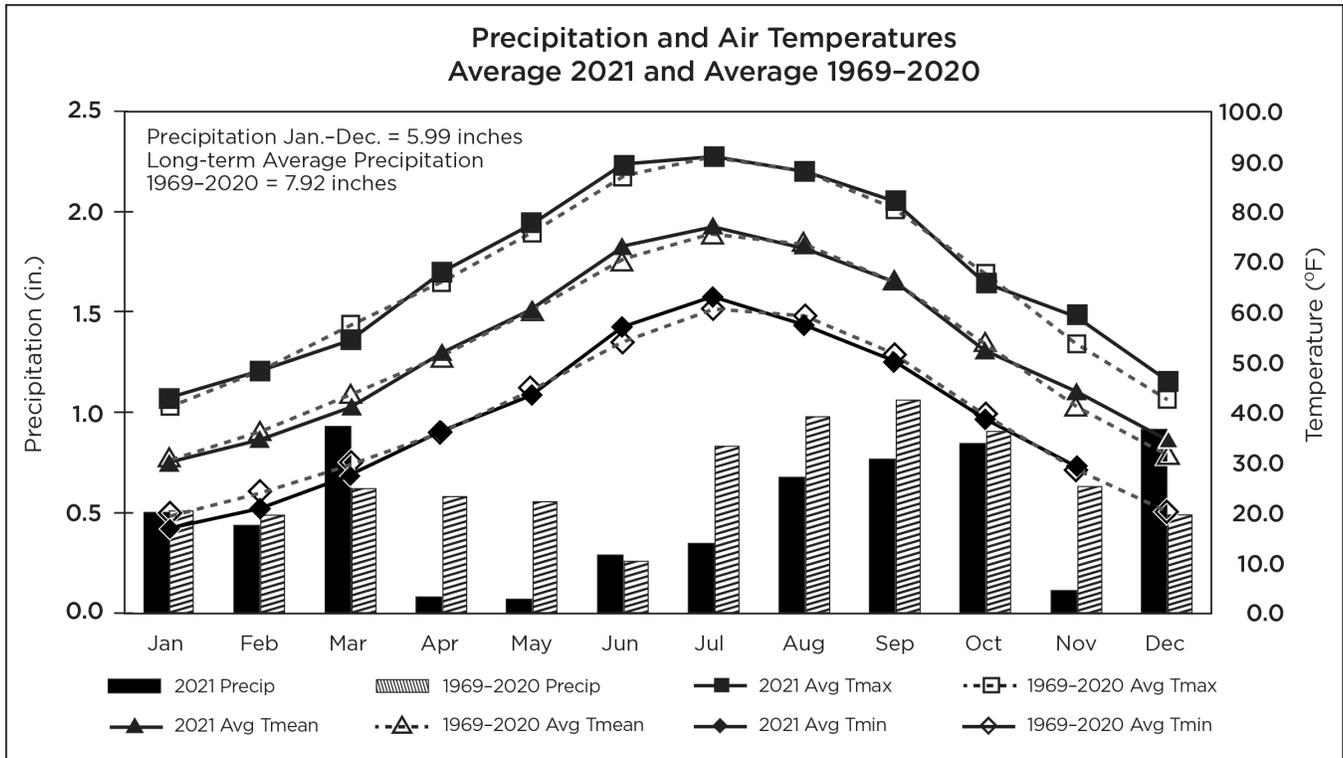


Figure 1. Precipitation and air temperature averages for 2021 and 1969–2020.

Minimum

The 2021 lowest average monthly minimum air temperature of 17°F occurred in January, which was lower than the 53-year average monthly minimum air temperature of 19°F in the month of January (Table 8). The 2021 extreme minimum air temperature of 6°F occurred in January. The 53-year average extreme minimum air temperature of -18°F occurred in January of 1971 (Table 9).

Critical Days

There were 148 days from January through December with temperatures equal to or below 32°F in 2021; the 53-year average was 139 days (Table 10). There were zero days with temperatures below 0°F during the critical months of January, February, and December in 2021, compared to the 53-year average of 1 day in January and zero days in February and December (Table 10). In the critical months of May through September in 2021, there were 17 days with temperatures of 95°F or above; in comparison, the 53-year average was 12 days (Table 11). June and July are critical months for 100°F or above; in 2021, there were a total of 3 days as compared to the 53-year average of 1 day (Table 11).

EVAPORATION

The evaporation rate is measured using a U.S. Weather Bureau no. 252 hook gauge mounted in an NWS Class-A evaporation pan. Evaporation measurements are taken from April 1 through October 31. The 2021 average evaporation for the seven-month data collection period was 0.325 inches as compared to the 47-year average of 0.330 inches (Table 12). The 2021 seven-month total evaporation was 72.69 inches versus the 47-year average of 69.56 inches (Table 13).

WIND RUN

Daily wind speeds are recorded from NWS Nimbus 3-cup anemometers via Nimbus display units. The low wind speed is recorded in miles per day at 6-inch (1980 through March 2019) and 10-inch heights (April 2019 to present) above the evaporation pan rim. The high wind speed is recorded at 79 inches above bare soil. In 2021, April had the highest daily low wind average at 73 miles per day (MPD), while the April monthly average from 1980 through 2021 was 81 MPD (Table 14). The 2021 average daily high wind also occurred in the month of April at 101 MPD as compared to the April average from 1981–2021 of 143 MPD (Table 15).

SOLAR RADIATION

Solar radiation data are collected from the NMCC (WS-2) site. The data are stored in a Campbell Scientific data logger that is housed in a protective shelter. The solar radiation is recorded in megajoules per square meter (MJ/m²). Those units are then converted into Langley units (used in this publication) by using a multiplication factor of 23.89. June 2021 had the highest record Langley units at 630 as compared to the 45-year average for June at 655 (Table 16).

CORN GROWING DEGREE DAYS

Corn growing degree days (GDD) are expressed as heat units using air temperatures required for plant growth and developmental stages. The air temperature threshold for corn GDD in this report was determined by using an upper air temperature parameter of 86°F and lower temperature of 50°F. The peak corn GDD from May through September 2021 was in July at 754 GDD, while the 53-year average for July was 718 GDD (Table 17).

SOIL TEMPERATURE

Soil maximum and minimum temperatures are collected from a National Oceanic and Atmospheric Administration (NOAA) Weather Service soil sensor probe buried 4 inches below the soil surface. This soil equipment is located outside of the WS-1 fenced area. Due to equipment changes since 1977, the soil data (2001–2021) are a continuation of the dataset contained in O'Neill et al. (2018). All prior year soil temperature data are available upon request from ASCF.

Average

The highest average monthly soil temperature from 2001–2021 was in July at 94°F. The extreme average

maximum soil temperature was also in July at 99°F. The lowest average minimum soil temperature of 29°F occurred in January. The extreme average minimum soil temperature of 23°F occurred in the months of January and December (Table 18).

Maximum

The 2021 maximum soil temperature average of 96°F occurred in July. The 21-year (2001–2021) monthly average maximum of 94°F also occurred in July (Table 19). The extreme maximum soil temperature of 106°F occurred in July 2005 (Table 20).

Minimum

The 2021 average minimum soil temperature of 28°F occurred in January. The 21-year (2001–2021) monthly average minimum soil temperature of 29°F also occurred in January (Table 21). The extreme minimum soil temperature of 9°F occurred in January 2013 (Table 22).

ACKNOWLEDGMENTS

Thank you to current and prior NMSU ASCF faculty and staff for their contributions of weather data collection and reporting since 1969. Their efforts contribute to the diligent and long-term weather data collection process at ASCF, an official National Weather Service observation site. Thank you to Stanley Engle, Research Assistant, Sr., NMSU Department of Plant and Environmental Sciences, for his continuous support of the NMCC weather station at ASCF. A thank you to Raymond Jojola and Troy Marshall, hydro-meteorology technicians, National Oceanic and Atmospheric Administration (NOAA) NWS–Albuquerque, for years of maintenance on the ASCF NWS WS-1 equipment.

CONVERSIONS

This table is provided for conversion of English (U.S.) and metric (SI) units for data in this report.

To convert English to metric, multiply by	English (U.S.) units	Metric (SI) units	To convert metric to English, multiply by
2.540	inches (in.)	centimeters (cm)	0.394
0.305	feet (ft)	meters (m)	3.281
1.609	miles (mi)	kilometers (km)	0.621
0.093	square feet (ft ²)	square meters (m ²)	10.764
2.590	square miles (mi ²)	square kilometers (km ²)	0.386
0.405	acres (ac)	hectares (ha)	2.471
28.350	ounces (oz)	grams (g)	0.035
29.574	fluid ounces (fl oz)	milliliters (mL)	0.034
3.785	gallons (gal)	liters (L)	0.264
0.454	pounds (lb)	kilograms (kg)	2.205
907.185	ton (2,000 lb; t)	kilograms (kg)	0.001
0.907	ton (2,000 lb; t)	metric tons (t) or megagrams (Mg)	1.102
1.000	parts per million (ppm)	ppm (mg/kg)	1.000
1.121	pounds/acre (lb/ac)	kilograms/hectare (kg/ha)	0.892
2.240	tons/acre (t/ac)	megagrams/hectare (Mg/ha)	0.446
16.018	pounds per cubic feet (lb/ft ³)	kilograms per cubic meter (kg/m ³)	0.062
0.070	cubic feet/acre (ft ³ /ac)	cubic meters/hectare (m ³ /ha)	14.291
73.078	ounces/acre (oz/ac)	milliliters/hectare (mL/ha)	0.014
62.710	bushels/acre (corn: 56 lb/bu)	kilograms/hectare (kg/ha)	0.016
67.190	bushels/acre (wheat: 60 lb/bu)	kilograms/hectare (kg/ha)	0.015
125.535	Cwt/acre (100 wt)	kilograms/hectare (kg/ha)	0.008
0.042	Langleys (Ly)	Megajoules per square meter (MJ/m ²)	23.900
(°F - 32) ÷ 1.8	Fahrenheit (°F)	Celsius (°C)	(°C × 1.8) + 32

Additional English–metric conversions: <https://www.extension.iastate.edu/agdm/wholefarm/html/c6-80.html>

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O'Neill, M.K., D. Smeal, M.M. West, S.C. Allen, and K. Djaman. 2018. Forty-eight years (1969–2016) of climatological data: NMSU Agricultural Science Center at Farmington, New Mexico [Bulletin 809]. Las Cruces: New Mexico State University Agricultural Experiment Station.

Table 1. Summary of 2021 Climatological Data at the NMSU Agricultural Science Center at Farmington, NM

Month	Average Air Temperature			Extreme Air Temperature			Wind Movement		Evaporation Total (in.)	Solar Radiation (Langleys)
	Maximum (°F)	Minimum (°F)	Mean (°F)	Maximum (°F)	Minimum (°F)	Precipitation (in.)	Miles Per Day (MPD)			
							6-10 in.	79 in.		
Jan	43	17	30	56	6	0.50	51	72		246
Feb	48	21	35	60	13	0.44	55	71		344
Mar	54	27	41	70	11	0.93	62	79		416
Apr	68	36	52	79	18	0.08	73	101	10.51	559
May	78	44	61	87	32	0.07	63	82	11.78	608
Jun	89	57	73	100	49	0.29	57	72	12.64	630
Jul	91	63	77	101	56	0.35	58	70	12.77	582
Aug	88	57	73	93	51	0.68	42	59	10.98	518
Sept	82	51	66	93	37	0.77	31	39	8.31	448
Oct	66	39	52	78	26	0.85	50	68	5.71	362
Nov	59	29	44	74	16	0.11	36	46		281
Dec	46	22	34	57	10	0.92	40	45		197
Mean	68	39	53	79	27		51	67		432
Total						5.99			72.69	5190

Table 2. Summary of Fifty-three Year (1969–2021) Average Monthly Climatological Data at the NMSU Agricultural Science Center at Farmington, NM

Month	Precipitation (in.)	Mean Air Temperature		Extreme Air Temperature			
		Maximum (°F)	Minimum (°F)	Maximum (°F)	Year(s) Recorded	Minimum (°F)	Year(s) Recorded
Jan	0.51	41	19	66	2000	-18	1971
Feb	0.49	48	24	70	1986	-14	1989
Mar	0.63	57	30	82	2004	3	2002
Apr	0.57	66	36	86	1992	16	1979
May	0.55	76	45	97	2000	23	1975
Jun	0.26	87	54	101	2016	32	1999
Jul	0.82	91	61	103	1989, 1990, 2003, 2005	43	1969, 2020
Aug	0.97	88	59	99	1969, 1970, 1983, 2002	41	1980
Sep	1.06	81	52	97	1995	28	1971, 1999
Oct	0.90	68	40	88	2010, 2015	5	2019
Nov	0.62	54	28	75	1999, 2001, 2020	1	1976
Dec	0.49	43	20	67	1999	-16	1990
Total	7.88						

Table 3. Freeze Dates and Number of Consecutive Freeze-free Days at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Less than or equal to 32°F			Less than or equal to 28°F		
	Last Spring Frost date	First Fall Frost date	Frost-free Period days	Last Spring Killing Freeze date	First Fall Killing Freeze date	Killing Freeze-free Period days
1969	27-Apr	5-Oct	161	26-Apr	6-Oct	163
1970	2-May	8-Oct	159	1-May	9-Oct	161
1971	9-May	18-Sep	132	27-Apr	18-Sep	144
1972	2-May	30-Oct	181	27-Apr	31-Oct	187
1973	2-May	11-Oct	162	2-May	27-Oct	178
1974	21-May	30-Oct	162	20-May	4-Nov	168
1975	8-May	14-Oct	159	7-May	14-Oct	160
1976	27-Apr	7-Oct	164	27-Apr	19-Oct	175
1977	21-Apr	31-Oct	193	5-Apr	2-Nov	211
1978	6-May	26-Oct	173	6-May	13-Nov	191
1979	12-May	21-Oct	162	20-Apr	22-Oct	185
1980	26-May	16-Oct	143	25-May	17-Oct	145
1981	9-May	16-Oct	160	5-Apr	17-Oct	194
1982	6-May	6-Oct	153	21-Apr	10-Oct	172
1983	19-May	21-Sep	125	17-May	9-Nov	176
1984	8-May	15-Oct	160	8-May	16-Oct	161
1985	14-May	30-Sep	139	1-Apr	1-Nov	214
1986	27-Apr	12-Oct	168	27-Apr	13-Oct	169
1987	21-Apr	19-Oct	181	21-Apr	11-Nov	204
1988	7-May	12-Nov	189	11-Apr	16-Nov	219
1989	30-Apr	18-Oct	171	21-Mar	27-Oct	219
1990	10-Apr	9-Oct	181	31-Mar	21-Oct	204
1991	5-May	28-Oct	176	29-Apr	29-Oct	182
1992	21-Apr	8-Oct	170	19-Mar	8-Oct	203
1993	9-May	19-Oct	163	20-Apr	27-Oct	190
1994	30-Apr	17-Oct	170	8-Apr	31-Oct	206
1995	25-Apr	6-Oct	164	18-Apr	6-Oct	171
1996	30-Apr	19-Sep	142	29-Apr	18-Oct	172
1997	2-May	13-Oct	163	2-May	13-Oct	163
1998	15-May	6-Oct	144	19-Apr	6-Oct	170
1999	5-Jun	28-Sep	115	16-Apr	29-Sep	166
2000	12-May	14-Oct	154	3-Apr	2-Nov	212
2001	23-Apr	11-Oct	170	13-Apr	11-Oct	180
2002	22-Apr	4-Oct	165	22-Apr	4-Nov	196
2003	11-May	27-Oct	168	8-Apr	27-Oct	201
2004	1-May	23-Oct	174	29-Mar	30-Oct	214
2005	22-Apr	31-Oct	192	21-Apr	15-Nov	207
2006	20-Apr	23-Sep	155	19-Apr	22-Oct	183
2007	7-May	7-Oct	153	19-Apr	7-Oct	171
2008	3-May	12-Oct	162	2-May	12-Oct	163

Table 3 (continued). Freeze Dates and Number of Consecutive Freeze-free Days at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

	Less than or equal to 32°F			Less than or equal to 28°F		
	Last Spring Frost	First Fall Frost	Frost-free Period	Last Spring Killing Freeze	First Fall Killing Freeze	Killing Freeze-free Period
2009	27-Apr	22-Sep	147	16-Apr	2-Oct	168
2010	12-May	26-Oct	166	12-May	26-Oct	166
2011	3-May	8-Oct	157	2-May	28-Oct	178
2012	16-Apr	25-Oct	192	16-Apr	25-Oct	192
2013	3-May	5-Oct	154	3-May	17-Oct	166
2014	13-May	3-Nov	172	1-May	4-Nov	186
2015	10-May	28-Oct	170	17-Apr	6-Nov	202
2016	26-Apr	20-Oct	176	3-Apr	18-Nov	227
2017	19-May	25-Sep	130	10-Apr	15-Oct	189
2018	19-Apr	15-Oct	178	18-Apr	15-Oct	179
2019	21-May	11-Oct	143	12-Apr	11-Oct	182
2020	17-Apr	29-Sep	162	29-Mar	26-Oct	181
2021	24-May	13-Oct	142	19-Apr	15-Oct	180
Mean	4-May	13-Oct	162	20-Apr	22-Oct	184

Table 4. Average Monthly Precipitation in Inches at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1969	0.85	0.31	0.21	0.30	1.13	1.00	0.69	0.47	2.07	2.88	0.38	0.29	10.58
1970	0.06	0.03	0.49	0.60	0.11	0.81	0.68	0.02	2.48	0.48	0.46	0.20	6.42
1971	0.18	0.09	0.05	0.11	0.41	0.00	0.31	1.72	1.06	1.15	0.77	0.16	6.01
1972	0.03	0.00	0.03	0.00	0.02	0.18	0.04	1.34	0.57	3.53	0.19	0.93	6.86
1973	0.28	0.17	1.82	1.54	0.65	0.95	0.27	0.61	1.49	0.35	0.30	0.37	8.80
1974	1.10	0.13	0.01	0.20	0.02	0.09	1.48	0.12	0.37	2.39	0.48	0.38	6.77
1975	0.11	0.61	1.52	0.78	0.35	0.13	0.84	0.24	0.80	0.14	0.22	0.20	5.94
1976	0.06	0.16	0.00	0.10	0.41	0.09	0.62	0.80	1.31	0.01	0.01	0.00	3.57
1977	0.42	0.00	0.00	0.01	0.29	0.04	1.01	1.41	0.38	0.30	0.62	0.63	5.11
1978	0.90	0.64	1.27	0.71	0.96	0.00	0.07	0.18	1.55	1.46	2.24	0.59	10.57
1979	0.88	0.19	0.46	0.28	0.58	0.43	1.40	0.49	0.08	1.37	0.97	0.73	7.86
1980	1.45	0.70	0.63	0.25	0.25	0.07	0.08	0.89	1.05	0.84	0.02	0.00	6.23
1981	0.00	0.30	1.76	0.21	1.05	0.16	1.34	0.35	0.69	0.89	0.36	0.03	7.14
1982	0.32	0.77	1.18	0.67	0.82	0.00	1.27	2.78	1.50	0.16	0.92	0.76	11.15
1983	0.94	0.69	1.84	0.31	0.13	0.35	1.67	0.72	0.53	0.52	0.91	0.67	9.28
1984	0.00	0.12	0.54	1.00	0.00	0.67	0.62	1.64	0.45	1.13	0.23	0.87	7.27
1985	0.39	0.13	1.74	1.76	0.29	0.01	1.38	0.43	1.31	1.21	0.52	0.22	9.39
1986	0.11	0.77	0.51	0.97	0.13	0.81	4.10	0.93	2.18	0.65	2.73	0.76	14.65
1987	0.10	1.75	0.66	0.00	0.68	0.02	0.28	1.17	0.27	1.07	1.65	0.59	8.24
1988	0.63	0.82	0.02	0.72	1.11	0.33	0.58	2.34	0.27	0.22	0.78	0.19	8.01
1989	1.19	0.56	0.06	0.00	0.00	0.00	1.24	1.62	0.14	0.51	0.00	0.00	5.32
1990	0.53	0.53	0.74	0.85	1.07	0.07	0.35	1.32	1.97	1.12	0.78	0.59	9.92
1991	0.59	0.26	0.67	0.01	0.27	0.69	0.35	0.58	1.38	0.38	2.07	1.01	8.26
1992	0.15	0.18	0.74	0.25	1.75	0.05	0.98	1.25	0.85	0.42	0.31	0.63	7.56
1993	2.05	0.82	0.93	0.28	0.38	0.04	0.03	2.06	0.84	1.25	0.47	0.15	9.30
1994	0.09	0.48	0.24	0.57	1.32	0.07	0.20	0.66	1.37	1.18	0.96	0.64	7.78
1995	0.57	0.14	1.45	1.28	0.90	0.03	0.23	1.88	2.04	0.10	0.14	0.39	9.15
1996	0.09	0.43	0.28	0.17	0.00	0.64	0.24	1.07	0.63	2.21	0.72	0.22	6.70
1997	1.03	0.48	0.03	2.88	0.82	0.62	1.28	1.12	2.68	0.43	0.67	0.80	12.84
1998	0.12	0.61	0.65	0.73	0.03	0.02	1.38	1.48	0.68	2.07	1.27	0.06	9.10
1999	0.14	0.05	0.13	1.21	1.26	0.44	2.51	2.99	0.25	0.01	0.06	0.12	9.17
2000	0.62	0.25	2.05	0.21	0.03	0.12	0.80	1.22	0.50	2.16	0.78	0.22	8.96
2001	0.44	0.80	1.37	0.67	0.87	0.03	0.82	1.01	0.26	0.24	0.48	0.55	7.54
2002	0.04	0.04	0.17	0.37	0.00	0.00	0.42	0.32	3.26	1.75	0.72	0.60	7.69
2003	0.08	1.29	0.49	0.02	0.01	0.15	0.11	1.24	0.87	0.72	1.03	0.31	6.32
2004	0.34	0.90	0.00	2.50	0.00	0.14	0.38	0.16	2.53	0.60	0.82	0.37	8.74
2005	1.09	1.81	0.36	0.85	0.55	0.11	0.52	1.84	0.48	0.92	0.06	0.10	8.69
2006	0.39	0.05	0.71	0.58	0.09	0.24	1.90	0.79	1.38	1.90	0.06	0.73	8.82
2007	0.42	0.59	1.13	0.35	1.73	0.10	0.68	0.81	0.74	0.11	0.21	0.99	7.86
2008	1.21	0.74	0.14	0.03	0.25	0.13	0.63	0.53	0.28	0.76	0.61	0.96	6.27
2009	0.36	0.44	0.21	0.28	0.78	0.47	0.15	0.27	0.09	0.68	0.32	0.42	4.47
2010	1.34	0.95	0.82	0.26	0.10	0.10	0.65	2.50	0.84	1.32	0.12	0.78	9.78
2011	0.03	0.18	0.34	1.09	0.86	0.01	0.65	0.05	1.02	1.86	0.55	0.30	6.94
2012	0.10	0.40	0.20	0.01	0.08	0.01	1.07	0.15	0.67	0.08	0.24	0.69	3.70

Table 4 (continued). Average Monthly Precipitation in Inches at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2013	0.88	0.07	0.14	0.49	0.26	0.00	0.54	1.34	3.29	0.66	0.91	0.14	8.72
2014	0.00	0.41	0.88	0.13	0.26	0.00	0.47	1.07	1.55	0.15	0.31	0.88	6.11
2015	1.22	0.93	0.31	0.61	1.70	1.80	0.91	1.14	0.51	1.10	0.89	0.65	11.77
2016	0.46	0.34	0.01	0.80	0.93	0.00	0.47	1.37	1.05	0.28	1.50	0.97	8.18
2017	0.71	0.91	0.29	1.63	1.14	0.02	2.51	0.11	1.57	0.08	0.14	0.00	9.11
2018	0.25	0.09	0.09	0.20	0.32	0.80	0.60	0.21	0.14	0.81	0.06	1.40	4.97
2019	0.56	0.99	1.32	0.31	1.93	0.29	0.31	0.07	0.53	0.16	0.75	0.87	8.09
2020	0.58	0.21	0.65	0.01	0.03	0.15	1.24	0.02	0.46	0.29	0.16	0.19	3.99
2021	0.50	0.44	0.93	0.08	0.07	0.29	0.35	0.68	0.77	0.85	0.11	0.92	5.99
Mean	0.51	0.49	0.63	0.57	0.55	0.26	0.82	0.97	1.06	0.90	0.62	0.49	7.88

Table 5. Average* Monthly Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1969	34	35	37	52	63	67	76	76	69	50	40	34
1970	31	40	39	44	60	68	76	76	64	50	42	33
1971	30	34	43	50	58	71	77	74	64	52	40	30
1972	30	38	48	53	60	70	78	74	66	54	36	26
1973	22	35	39	45	59	68	75	75	63	55	44	30
1974	24	28	48	48	63	74	75	74	65	55	40	28
1975	26	34	40	46	56	66	74	72	64	54	38	30
1976	28	41	40	52	60	70	77	74	66	51	40	32
1977	25	37	39	54	59	74	76	75	68	56	43	36
1978	33	34	46	52	56	69	76	71	65	56	42	24
1979	24	32	40	50	58	67	74	72	69	56	35	32
1980	33	39	40	48	57	71	76	73	65	52	41	37
1981	30	37	41	55	59	71	74	72	65	51	44	34
1982	30	31	42	49	57	67	73	72	65	50	40	32
1983	31	36	42	45	56	66	74	75	68	54	41	34
1984	28	34	41	47	64	69	76	74	66	47	42	35
1985	30	32	41	53	61	71	76	74	62	54	40	31
1986	40	39	47	51	60	70	72	74	62	52	40	33
1987	29	36	39	53	59	70	73	71	65	56	39	29
1988	24	36	41	51	59	72	76	74	64	58	41	31
1989	27	35	49	57	63	70	78	72	69	55	41	31
1990	29	36	46	54	59	75	76	73	69	54	42	24
1991	25	37	41	49	59	68	75	74	66	56	38	29
1992	28	39	45	56	62	68	72	73	66	56	35	26
1993	35	38	44	51	61	69	74	71	64	52	38	32
1994	33	35	46	52	61	73	77	76	66	53	38	35
1995	33	44	44	48	57	67	74	76	67	53	44	35
1996	32	41	43	51	64	71	76	73	61	52	40	32
1997	29	36	46	47	61	70	74	73	68	52	41	31
1998	34	35	42	48	61	67	77	74	70	54	42	32
1999	35	39	48	49	58	68	74	71	63	54	45	30
2000	34	40	42	53	63	71	75	75	68	54	35	34
2001	31	37	45	54	63	71	77	74	70	57	45	31
2002	32	34	42	57	63	75	78	74	66	53	40	32
2003	38	36	44	51	63	71	81	77	66	59	41	34
2004	30	33.5	50	52.5	63.5	72	75	73	65	54	40.5	32.5
2005	38	40	43	52	62	69	79	73	68	56	43	32
2006	34	37	43	55	65	74	78	73	62	52	44	31
2007	28	37	47	52	61	72	78	76	68	55	44	30
2008	24	33	42	50	58	70	75	74	66	54	44	31
2009	32	38	45	49	64	68	77	73	67	50	43	27
2010	26	33	41	51	57	72	76	72	67	56	39	38
2011	24	32	45	50	56	71	77	76	65	53	40	30

Table 5 (continued). Average* Monthly Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	32	35	45	55	63	74	76	75	67	55	44	32
2013	24	32	44	50	60	73	77	73	67	50	41	28
2014	32	39	44	50	59	71	77	72	69	56	42	34
2015	33	40	47	51	57	72	74	74	68	59	41	30
2016	29	38	46	51	59	76	76	72	65	58	45	34
2017	33	42	49	50	58	73	77	73	67	55	48	35
2018	35	39	44	55	64	74	80	76	69	53	37	32
2019	30	33	47	55	55	67	74	75	68	48	40	32
2020	30	34	43	50	62	70	74	76	65	54	44	27
2021	30	35	41	52	61	73	77	73	66	52	44	34
Mean	30	36	43	51	60	70	76	74	66	54	41	31

*The average temperature represents the sum of the average daily temperatures ($[\text{maximum} + \text{minimum}]/2$) in each month.

Table 6. Average* Monthly Maximum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1969	42	46	50	69	78	81	91	90	83	62	51	45
1970	42	54	52	60	78	84	91	91	78	63	55	44
1971	43	48	59	66	74	87	93	87	80	65	51	39
1972	43	54	66	70	78	86	93	87	80	63	46	37
1973	32	42	50	59	74	84	90	90	79	70	57	42
1974	34	40	62	64	80	91	89	88	80	66	52	39
1975	37	44	52	60	71	85	89	88	79	70	53	42
1976	41	54	56	68	76	87	92	88	79	65	53	45
1977	34	51	53	69	74	90	90	89	81	71	54	47
1978	41	44	58	65	70	85	90	86	78	70	51	33
1979	31	42	52	65	72	84	90	86	84	71	46	43
1980	41	50	53	64	72	89	93	88	80	66	55	51
1981	49	51	53	70	74	88	90	88	80	65	58	46
1982	41	41	54	63	72	84	89	85	78	65	51	41
1983	40	46	53	59	72	82	90	89	83	68	52	43
1984	41	48	56	61	80	84	91	87	80	60	55	45
1985	41	44	55	67	75	88	91	89	76	67	51	43
1986	49	51	61	64	75	84	86	89	75	65	50	44
1987	40	47	52	68	74	87	90	86	80	71	51	40
1988	35	47	57	65	75	87	92	87	80	73	53	43
1989	38	45	63	73	79	86	93	87	84	69	56	45
1990	41	47	58	67	73	90	90	87	82	68	54	36
1991	35	49	53	65	75	84	90	88	80	71	49	37
1992	38	50	58	71	76	84	86	87	81	72	48	36
1993	44	48	59	67	76	86	91	85	79	66	50	43
1994	46	46	61	66	76	90	93	91	81	66	50	46
1995	42	58	58	61	71	83	91	90	81	69	59	47
1996	45	54	58	68	82	87	91	89	76	66	53	43
1997	39	48	63	61	77	86	90	87	82	67	54	42
1998	45	46	57	62	78	85	92	90	86	68	56	45
1999	50	54	64	63	73	86	89	84	80	73	63	44
2000	47	53	56	68	82	89	93	91	84	66	46	45
2001	41	48	57	68	79	89	92	88	85	72	59	43
2002	45	49	57	72	79	93	94	90	80	66	53	43
2003	51	48	56	67	79	88	97	91	82	74	52	46
2004	41	45	65	66	80	89	91	88	79	67	51	44
2005	48	49	56	67	78	86	96	88	83	69	57	45
2006	46	52	56	70	82	91	92	86	75	64	57	42
2007	38	48	61	66	74	88	93	90	82	69	59	39

Table 6 (continued). Average* Monthly Maximum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	34	43	58	66	74	85	90	88	80	69	56	40
2009	42	51	59	64	78	81	92	88	80	63	55	37
2010	35	42	54	65	73	88	90	85	82	69	52	47
2011	35	44	59	64	71	87	92	90	79	66	51	40
2012	45	46	60	70	79	90	90	89	81	70	58	42
2013	35	43	59	65	75	90	90	87	79	64	52	38
2014	46	52	58	65	74	87	92	86	83	69	55	43
2015	42	52	61	66	70	86	87	88	83	71	53	41
2016	38	52	61	65	73	92	91	84	79	72	56	43
2017	41	52	64	65	73	91	92	87	81	70	62	49
2018	47	52	58	70	80	90	93	90	84	65	51	42
2019	39	44	58	68	68	84	90	89	82	65	55	43
2020	40	46	55	65	80	87	89	92	82	72	59	42
2021	43	48	54	68	78	89	91	88	82	66	59	46
Mean	41	48	57	66	76	87	91	88	81	68	54	43

*The average maximum air temperature (°F) represents the sum of the maximum daily temperatures in each month divided by the number of days in that month.

Table 7. Extreme Maximum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1969	57	61	74	82	89	96	96	99	95	78	63	56
1970	56	65	65	72	86	98	98	99	90	76	64	61
1971	60	64	77	77	84	97	101	91	90	67	70	57
1972	61	66	76	78	86	94	100	98	89	82	57	52
1973	47	61	63	76	85	98	99	97	88	81	73	65
1974	45	60	72	75	93	99	95	94	93	83	64	56
1975	61	58	65	77	85	96	95	95	89	84	73	57
1976	54	68	71	77	86	96	100	93	94	78	70	55
1977	46	65	69	81	91	98	97	98	93	82	74	63
1978	53	59	79	77	88	95	95	94	90	83	67	47
1979	46	60	62	78	82	96	97	96	94	83	60	54
1980	55	64	67	81	86	99	97	97	88	84	73	63
1981	60	67	71	82	84	100	97	96	85	78	68	56
1982	60	64	64	75	75	93	97	95	91	79	64	53
1983	53	68	68	83	89	92	96	99	93	74	70	50
1984	51	60	68	79	93	94	95	93	89	75	68	54
1985	50	60	70	79	85	95	100	95	93	75	68	51
1986	64	70	75	79	85	94	96	96	88	75	63	55
1987	56	61	69	80	82	93	98	93	89	83	66	58
1988	49	62	77	78	87	99	96	93	93	83	70	56
1989	50	67	81	85	90	98	103	92	91	85	67	53
1990	56	64	74	80	86	100	103	94	93	79	69	55
1991	44	58	67	79	85	94	97	93	91	82	67	46
1992	52	58	67	86	85	92	95	95	89	83	61	49
1993	54	61	72	81	86	96	96	96	88	84	61	56
1994	58	63	74	81	90	100	98	97	89	80	70	55
1995	53	68	74	77	82	92	101	97	97	83	68	64
1996	56	65	71	82	90	93	96	96	90	83	66	57
1997	58	60	75	76	88	93	98	92	91	84	68	54
1998	56	62	77	80	87	99	100	95	90	85	67	60
1999	62	65	75	78	85	94	99	91	89	85	75	67
2000	66	66	70	85	97	94	97	97	93	83	57	55
2001	51	62	70	81	90	96	99	94	93	86	75	59
2002	59	63	74	81	95	98	100	99	90	77	63	55
2003	57	59	74	78	95	96	103	98	92	87	67	62
2004	51	62	82	78	89	96	99	97	91	78	67	60
2005	57	57	68	80	94	98	103	95	89	83	74	59
2006	57	62	71	85	92	99	100	92	87	83	69	54
2007	56	64	76	81	85	95	98	96	89	80	71	53
2008	51	54	70	79	89	93	94	97	87	81	74	53
2009	53	69	73	78	88	92	96	96	88	77	72	49
2010	44	50	75	78	90	98	98	94	89	88	71	59
2011	50	63	72	79	87	96	97	95	89	81	68	57

Table 7 (continued). Extreme Maximum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	53	59	73	85	87	98	97	95	90	83	70	60
2013	54	58	74	80	87	99	97	93	91	77	68	55
2014	60	66	69	78	91	94	97	92	91	77	74	59
2015	58	66	76	78	81	98	97	94	88	88	71	57
2016	55	66	73	82	85	101	97	94	88	79	70	56
2017	52	64	80	80	86	100	99	93	95	84	73	63
2018	62	62	73	80	89	96	98	96	90	81	60	56
2019	51	58	73	80	82	92	96	95	94	81	68	53
2020	52	56	65	81	91	94	96	96	94	81	75	55
2021	56	60	70	79	87	100	101	93	93	78	74	57
Maximum	66	70	82	86	97	101	103	99	97	88	75	67
Year(s) Reorded	2000	1986	2004	1992	2000	2016	1989 1990 2003 2005	1969 1970 1983 2002	1995	2010 2015	1999 2001 2020	1999

Table 8. Average* Monthly Minimum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1969	25	24	24	35	48	51	61	62	55	39	30	22
1970	20	27	26	29	43	53	62	62	49	36	30	22
1971	16	20	26	33	42	54	61	60	48	38	28	21
1972	18	22	31	36	43	55	62	60	53	45	27	15
1973	12	26	29	32	44	52	60	60	48	40	31	19
1974	14	17	33	33	46	57	61	59	50	44	28	17
1975	14	23	28	31	40	48	60	57	50	39	24	19
1976	16	28	25	36	45	53	62	59	54	37	26	17
1977	15	22	25	39	44	59	62	61	55	42	31	26
1978	25	25	33	38	43	53	61	57	52	43	33	15
1979	16	22	28	34	44	50	58	57	53	40	25	20
1980	26	28	27	33	41	52	59	58	50	35	27	24
1981	20	23	29	39	44	54	58	56	50	37	30	22
1982	18	21	30	34	43	51	58	60	52	35	29	22
1983	21	26	31	31	41	51	58	61	52	41	29	24
1984	16	20	27	33	48	53	61	60	52	36	30	25
1985	20	19	32	38	46	54	61	59	48	41	29	19
1986	23	26	33	39	44	55	59	60	50	40	29	22
1987	18	25	26	39	45	53	57	57	49	40	28	19
1988	13	24	25	36	44	56	61	60	48	43	29	19
1989	16	24	34	40	47	54	63	58	54	40	26	16
1990	18	25	35	41	45	59	63	60	56	40	30	11
1991	16	25	30	34	44	53	59	59	51	40	27	21
1992	18	27	32	40	48	52	57	58	50	40	22	16
1993	26	28	30	36	45	52	57	58	48	38	25	20
1994	19	24	31	38	46	56	60	61	50	39	27	24
1995	24	29	31	35	43	50	58	61	52	37	29	23
1996	19	28	29	34	47	54	60	58	47	38	28	21
1997	19	24	28	32	46	54	59	59	54	37	28	20
1998	22	25	28	33	45	48	62	59	54	40	29	19
1999	21	24	31	34	43	50	59	57	46	36	28	15
2000	22	28	29	37	44	54	58	58	52	42	25	23
2001	21	26	32	40	47	54	63	59	54	42	32	19
2002	19	18	26	41	46	57	61	58	51	39	27	22
2003	25	24	31	35	47	53	64	62	50	44	29	22
2004	19	22	35	39	47	55	59	58	51	41	30	21
2005	28	31	30	37	47	52	62	59	54	43	29	19
2006	21	21	31	39	48	57	64	60	48	40	31	20
2007	17	26	32	38	48	56	62	62	53	40	28	20
2008	13	24	27	34	42	54	61	60	51	40	32	22
2009	22	25	31	34	49	54	62	58	53	36	30	16
2010	17	24	28	37	42	55	62	59	53	43	26	28
2011	14	19	31	36	42	55	61	62	52	39	29	20

Table 8 (continued). Average* Monthly Minimum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	19	23	30	39	47	58	62	61	53	40	30	21
2013	13	20	29	36	45	56	63	60	55	36	29	17
2014	18	26	30	35	45	54	63	59	56	43	28	25
2015	24	27	34	36	45	57	60	60	54	46	28	19
2016	19	24	30	38	44	60	61	59	51	44	34	24
2017	24	31	34	36	44	56	63	60	52	39	33	21
2018	23	25	29	40	47	58	66	62	54	41	24	22
2019	21	23	35	41	42	51	59	60	53	31	24	21
2020	20	21	31	35	44	53	59	60	48	35	29	13
2021	17	21	27	36	44	57	63	57	51	39	29	22
Mean	19	24	30	36	45	54	61	59	52	40	28	20

*The average monthly minimum temperature represents the sum of the minimum daily temperatures in each month divided by the number of days in that month

Table 9. Extreme Minimum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1969	9	12	13	27	37	44	43	52	46	26	14	7
1970	0	15	11	20	27	39	53	54	34	21	18	14
1971	-18	5	6	17	31	38	54	54	28	18	17	4
1972	2	2	14	24	30	47	56	54	37	22	15	2
1973	1	10	20	18	28	41	52	49	37	26	14	9
1974	-11	1	20	18	28	38	53	52	33	30	14	1
1975	-2	9	9	19	23	38	55	49	40	20	7	6
1976	-4	12	11	23	34	38	54	52	42	22	1	9
1977	-2	13	12	21	33	51	57	54	46	32	20	10
1978	12	0	20	26	31	45	51	46	32	31	18	-9
1979	-8	5	17	16	29	36	51	51	42	23	6	9
1980	14	18	13	18	27	36	53	41	37	17	12	11
1981	10	11	21	19	32	36	44	49	42	21	13	4
1982	-1	-3	19	22	30	38	47	54	38	21	17	6
1983	9	20	22	20	27	36	61	55	30	35	11	10
1984	2	11	14	18	27	40	53	54	39	23	15	13
1985	6	-1	13	28	29	39	53	51	31	31	8	8
1986	8	8	19	23	33	42	53	52	40	28	16	8
1987	2	8	9	24	35	43	50	47	40	32	14	1
1988	-2	16	9	21	30	38	54	54	33	36	12	1
1989	4	-14	14	29	36	41	55	48	36	15	9	3
1990	0	4	19	30	39	47	55	52	45	26	16	-16
1991	-3	12	17	24	30	39	53	54	39	20	11	3
1992	10	17	20	30	40	41	47	48	37	28	7	-2
1993	10	18	18	24	32	39	49	52	38	17	8	8
1994	7	4	12	26	35	46	50	57	39	26	8	11
1995	12	21	18	24	34	38	45	55	36	24	13	9
1996	6	12	16	20	39	41	54	52	29	16	19	3
1997	-1	13	13	19	26	46	51	53	43	19	17	8
1998	12	15	13	25	31	40	59	52	46	27	16	3
1999	11	7	21	20	30	32	50	49	28	19	9	3
2000	1	14	17	28	29	44	52	52	33	32	10	11
2001	10	8	21	24	34	36	57	52	36	28	13	8
2002	3	6	3	27	35	48	56	50	39	30	19	8
2003	17	8	22	24	29	46	53	57	41	28	12	7
2004	8	6	21	32	32	44	52	51	35	26	8	4
2005	19	18	20	20	34	37	56	53	42	30	16	-2
2006	10	11	17	27	35	48	56	49	31	24	4	5
2007	4	3	9	24	32	38	56	56	33	19	14	2
2008	-7	4	17	21	27	40	54	53	41	22	13	7
2009	15	12	21	19	43	44	56	48	31	22	12	1
2010	5	12	18	21	26	44	49	53	44	24	6	3
2011	-5	-6	19	21	26	46	51	57	44	27	19	4

Table 9 (continued). Extreme Minimum Air Temperature in °F at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2012	7	16	13	25	37	45	57	55	45	24	16	5
2013	-6	11	13	21	28	40	57	52	33	27	15	3
2014	8	14	18	25	27	46	58	48	41	35	12	3
2015	9	15	16	24	32	49	54	56	48	31	15	6
2016	8	8	20	25	35	50	54	49	37	31	12	11
2017	5	15	17	23	32	44	57	52	30	27	15	8
2018	13	11	12	22	36	47	57	53	41	25	12	5
2019	-7	10	24	27	32	38	48	49	42	5	10	7
2020	6	0	21	21	33	40	43	52	32	17	14	5
2021	6	13	11	18	32	49	56	51	37	26	16	10
Minimum	-18	-14	3	16	23	32	43	41	28	5	1	-16
Year(s) Recorded	1971	1989	2002	1979	1975	1999	1969 2020	1980	1971 1999	2019	1976	1990

Table 10. Number of Days 32°F or Below and 0°F in Critical Months at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Number of Days 32°F or below											Number of Days 0°F or below			
	Jan	Feb	Mar	Apr	May	Jun	Sep	Oct	Nov	Dec	Total	Jan	Feb	Dec	Total
1969	22	26	25	7	0	0	–	7	22	29	138	0	0	0	0
1970	29	25	26	23	2	0	0	12	23	30	170	1	0	0	1
1971	29	27	22	13	1	0	2	8	26	27	155	4	0	0	4
1972	31	27	19	10	2	0	0	2	24	31	146	0	0	0	0
1973	31	26	25	17	1	0	0	5	16	28	149	0	0	0	0
1974	30	28	14	14	2	0	0	2	24	30	144	2	0	0	2
1975	29	27	24	15	3	0	0	6	25	30	159	2	0	0	2
1976	31	22	24	8	0	0	0	10	22	31	148	2	0	0	2
1977	31	28	26	8	0	0	0	1	20	30	144	3	0	0	3
1978	28	21	12	6	2	0	0	1	14	29	113	0	1	5	6
1979	29	27	25	11	3	0	0	5	24	31	155	3	1	0	4
1980	23	21	25	15	2	0	0	12	18	28	144	0	0	0	0
1981	29	26	24	3	1	0	0	11	19	31	144	0	0	0	0
1982	29	25	18	12	1	0	0	12	22	29	148	1	2	0	3
1983	31	25	18	15	6	0	1	0	18	26	140	0	0	0	0
1984	31	29	24	15	1	0	0	12	18	29	159	0	0	0	0
1985	31	25	16	5	1	0	1	2	19	30	130	0	1	0	1
1986	28	21	20	6	0	0	0	6	18	29	128	0	0	0	0
1987	28	25	24	10	0	0	0	3	22	31	143	0	0	0	0
1988	31	25	27	9	2	0	0	0	16	29	139	2	0	0	2
1989	31	24	13	5	0	0	0	6	27	31	137	0	2	0	2
1990	30	21	14	3	0	0	0	6	19	28	121	2	0	7	9
1991	31	22	20	11	2	0	0	4	23	31	144	2	0	0	2
1992	31	23	15	3	0	0	0	2	28	29	131	0	0	1	1
1993	28	22	24	11	3	0	0	9	25	31	153	0	0	0	0
1994	30	24	14	8	0	0	0	4	22	28	130	0	0	0	0
1995	28	18	15	15	0	0	0	7	23	28	134	0	0	0	0
1996	31	23	21	11	0	0	2	9	24	28	149	0	0	0	0
1997	29	27	23	16	1	0	0	11	22	31	160	1	0	0	1
1998	31	23	20	17	1	0	0	4	22	30	148	0	0	0	0
1999	30	26	19	12	4	1	2	8	24	30	156	0	0	0	0
2000	25	23	24	5	1	0	0	1	24	29	132	0	0	0	0
2001	31	23	13	6	0	0	0	2	13	29	117	0	0	0	0
2002	31	28	23	2	0	0	0	4	25	31	144	0	0	0	0
2003	30	22	21	9	3	0	0	2	18	29	134	0	0	0	0
2004	31	25	11	1	1	0	0	6	20	30	125	0	0	0	0
2005	27	17	21	8	0	0	0	1	19	30	123	0	0	1	1
2006	29	27	20	3	0	0	1	10	17	30	137	0	0	0	0
2007	31	22	14	4	1	0	0	5	23	28	128	0	0	0	0
2008	29	29	23	12	2	0	0	6	20	28	149	3	0	0	3
2009	30	25	20	14	0	0	1	10	17	31	148	0	0	0	0
2010	31	28	25	9	5	0	0	5	24	20	147	0	0	0	0

Table 10 (continued). Number of Days 32°F or Below and 0°F in Critical Months at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	Number of Days 32°F or below											Number of Days 0°F or below			
	Jan	Feb	Mar	Apr	May	Jun	Sep	Oct	Nov	Dec	Total	Jan	Feb	Dec	Total
2011	31	25	18	9	3	0	0	6	23	31	146	2	3	0	5
2012	31	29	20	6	0	0	0	5	17	28	136	0	0	0	0
2013	27	28	18	9	2	0	0	11	22	31	148	2	0	0	2
2014	30	26	20	12	2	0	0	0	22	26	138	0	0	0	0
2015	30	25	13	8	1	0	0	2	21	31	131	0	0	0	0
2016	30	26	21	6	0	0	0	1	10	28	122	0	0	0	0
2017	28	16	8	10	1	0	2	3	9	28	105	0	0	0	0
2018	30	23	20	6	0	0	0	4	4	31	118	0	0	0	0
2019	31	26	8	4	1	0	0	17	4	30	121	2	0	0	2
2020	31	27	17	6	0	0	2	6	17	31	137	0	0	0	0
2021	31	27	25	9	2	0	0	9	18	27	148	0	0	0	0
Mean	30	25	20	9	1	0	0	6	20	29	139	1	0	0	1
Total	1566	1306	1039	492	66	1	14	303	1056	1550	7393	34	10	14	58

Table 11. Number of Days 95°F or Above and Number of Days 100°F or Above in Critical Months at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	May	Jun	Jul	Aug	Sep	Total	Jun	Jul	Total
1969	0	1	3	5	1	10	0	0	0
1970	0	5	13	5	0	23	0	0	0
1971	0	5	11	0	0	16	0	2	2
1972	0	0	13	4	0	17	0	1	1
1973	0	5	6	6	0	17	0	0	0
1974	0	17	1	0	0	18	0	0	0
1975	0	1	1	3	0	5	0	0	0
1976	0	3	11	0	0	14	0	1	1
1977	0	3	6	3	0	12	0	0	0
1978	0	1	2	0	0	3	0	0	0
1979	0	1	9	3	0	13	0	0	0
1980	0	6	11	5	0	22	0	0	0
1981	0	5	5	1	0	11	0	0	0
1982	0	0	4	1	0	5	0	0	0
1983	0	0	3	1	0	4	0	0	0
1984	0	0	3	0	0	3	0	0	0
1985	0	3	12	1	0	16	0	0	0
1986	0	0	2	2	0	4	0	0	0
1987	0	0	2	0	0	2	0	0	0
1988	0	5	7	0	0	12	0	0	0
1989	0	2	16	0	0	18	0	5	5
1990	0	8	3	0	0	11	2	1	3
1991	0	0	3	0	0	3	0	0	0
1992	0	0	2	1	0	3	0	0	0
1993	0	4	3	2	0	9	0	0	0
1994	0	6	11	5	0	22	1	0	1
1995	0	0	12	6	1	19	0	3	3
1996	0	0	6	4	0	10	0	0	0
1997	0	0	4	0	0	4	0	0	0
1998	0	3	16	1	0	20	0	2	2
1999	0	0	2	0	0	2	0	0	0
2000	1	0	5	7	0	13	0	0	0
2001	0	3	10	0	0	13	0	0	0
2002	1	14	16	5	0	36	0	1	1
2003	1	2	26	7	0	36	0	9	9
2004	0	3	6	2	0	11	0	0	0
2005	0	2	22	1	0	25	0	7	7
2006	0	11	11	0	0	22	0	1	1
2007	0	3	12	3	0	18	0	0	0
2008	0	0	0	3	0	3	0	0	0
2009	0	0	7	1	0	8	0	0	0
2010	0	1	6	0	0	7	0	0	0
2011	0	3	4	2	0	9	0	0	0

Table 11 (continued). Number of Days 95°F or Above and Number of Days 100°F or Above in Critical Months at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	May	Jun	Jul	Aug	Sep	Total	Jun	Jul	Total
2012	0	5	2	1	0	8	0	0	0
2013	0	5	1	0	0	6	0	0	0
2014	0	0	8	0	0	8	0	0	0
2015	0	7	2	0	0	9	0	0	0
2016	0	11	6	0	0	17	1	0	1
2017	0	5	6	0	0	11	1	0	1
2018	0	6	11	5	0	22	0	0	0
2019	0	0	1	1	0	2	0	0	0
2020	0	0	0	4	4	8	0	0	0
2021	0	8	9	0	0	17	1	2	3
Mean	0	3	7	2	0	12	0	1	1
Total	3	173	374	101	6	657	6	35	41

Table 12. Average Daily Evaporation in Inches at the NMSU Agricultural Science Center at Farmington, NM, 1975–2021

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Mean
1975	0.206	0.299	0.401	0.396	0.403	0.270	0.242	0.317
1976	0.309	0.380	0.515	0.444	0.423	0.302	0.190	0.366
1977	0.304	0.396	0.498	0.423	0.394	0.317	0.213	0.364
1978	0.310	0.311	0.427	0.469	0.422	0.321	0.257	0.360
1979	0.278	0.278	0.362	0.354	0.342	0.317	0.229	0.309
1980	0.258	0.322	0.489	0.452	0.406	0.272	0.280	0.354
1981	0.254	0.297	0.470	0.388	0.363	0.255	0.165	0.313
1982	0.245	0.323	0.427	0.392	0.314	0.193	0.260	0.308
1983		0.328	0.384	0.404	0.357	0.291	0.203	0.328
1984	0.245	0.391	0.389	0.379	0.334	0.261	0.106	0.301
1985	0.212	0.282	0.409	0.409	0.374	0.233	0.141	0.294
1986	0.245	0.317	0.366	0.366	0.366	0.225		0.314
1987		0.277	0.383	0.393	0.335	0.274	0.101	0.294
1988		0.373	0.369	0.421	0.314	0.285	0.198	0.327
1989		0.393	0.418	0.446	0.356	0.312		0.385
1990	0.255	0.373	0.516	0.411	0.366	0.294	0.186	0.343
1991	0.299	0.377	0.366	0.411	0.358	0.284		0.349
1992	0.277	0.280	0.405	0.383	0.348	0.272	0.211	0.311
1993	0.322	0.339	0.465	0.477	0.328	0.304	0.180	0.345
1994	0.278	0.383	0.501	0.504	0.402	0.309	0.246	0.375
1995	0.249	0.315	0.424	0.445	0.375	0.324	0.241	0.339
1996	0.303	0.435	0.424	0.451	0.358	0.236	0.182	0.341
1997	0.246	0.301	0.395	0.399	0.309	0.259	0.187	0.299
1998	0.242	0.367	0.471	0.420	0.366	0.334	0.189	0.341
1999	0.277	0.347	0.437	0.379	0.280	0.274	0.240	0.319
2000	0.320	0.426	0.470	0.425	0.366	0.295	0.157	0.351
2001	0.281	0.378	0.465	0.405	0.352	0.361	0.235	0.354
2002	0.307	0.428	0.493	0.455	0.396	0.261	0.149	0.356
2003	0.274	0.374	0.493	0.504	0.397	0.311	0.212	0.366
2004	0.248	0.403	0.480	0.442	0.365	0.276	0.159	0.339
2005	0.272	0.362	0.420	0.490	0.338	0.277	0.162	0.332
2006	0.323	0.415	0.488	0.408	0.341	0.251	0.163	0.341
2007	0.266	0.315	0.447	0.416	0.360	0.289	0.211	0.329
2008	0.311	0.367	0.460	0.381	0.367	0.296	0.208	0.341
2009	0.277	0.285	0.336	0.430	0.362	0.261	0.169	0.303
2010	0.278	0.351	0.413	0.395	0.306	0.286	0.182	0.316
2011	0.300	0.344	0.482	0.424	0.377	0.252	0.171	0.336
2012	0.293	0.396	0.482	0.381	0.366	0.296	0.241	0.351
2013	0.300	0.349	0.462	0.387	0.318	0.265	0.177	0.323
2014	0.252	0.335	0.455	0.421	0.296	0.218	0.185	0.309
2015	0.247	0.210	0.295	0.302	0.343	0.255	0.141	0.256
2016	0.234	0.291	0.499	0.408	0.234	0.223	0.184	0.296
2017	0.187	0.286	0.469	0.333	0.297	0.207	0.225	0.286
2018	0.346	0.382	0.421	0.397	0.374	0.298	0.126	0.335

Table 12 (continued). Average Daily Evaporation in Inches at the NMSU Agricultural Science Center at Farmington, NM, 1975–2021

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Mean
2019	0.244	0.184	0.382	0.401	0.367	0.277	0.214	0.296
2020	0.306	0.396	0.448	0.361	0.409	0.308	0.234	0.352
2021	0.348	0.378	0.412	0.401	0.332	0.251	0.157	0.325
Mean	0.275	0.343	0.436	0.412	0.354	0.277	0.193	0.330
Years	43	47	47	47	47	47	44	47

Blank cells represent three or more days of missing data.

Table 13. Total Monthly Evaporation in Inches at the NMSU Agricultural Science Center at Farmington, NM, 1975–2021

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
1975	6.18	9.27	12.03	12.28	12.49	8.10	7.50	67.85
1976	9.27	11.78	15.45	13.76	13.11	9.06	5.89	78.32
1977	9.12	12.28	14.94	13.11	12.21	9.51	6.60	77.77
1978	9.30	9.64	12.81	14.54	13.08	9.63	7.97	76.97
1979	8.34	8.62	10.86	10.97	10.60	9.51	7.10	66.00
1980	7.74	9.98	14.67	14.01	12.59	8.16	8.68	75.83
1981	7.62	9.21	14.10	12.03	11.25	7.65	5.12	66.98
1982	7.35	10.01	12.81	12.14	9.73	7.28	8.06	67.38
1983		8.85	11.51	12.51	11.06	8.72	6.35	59.00
1984	6.37	12.15	11.66	11.74	10.43	7.84	3.29	63.48
1985	6.35	8.74	12.27	12.68	11.61	6.99	4.44	63.08
1986	7.36	9.82	10.97	11.34	11.34	6.75		57.58
1987		6.64	11.47	12.19	10.39	8.23	3.12	52.04
1988		11.55	11.06	13.05	9.74	8.55	6.16	60.11
1989		12.18	12.54	13.83	11.04	9.37		58.96
1990	7.65	11.56	15.48	12.74	11.35	8.82	5.77	73.37
1991	8.68	11.68	10.99	12.77	11.11	8.53		63.76
1992	7.76	8.67	12.15	11.89	10.80	8.19	6.53	65.99
1993	9.66	10.52	13.94	14.78	10.17	9.11	5.57	73.75
1994	8.35	11.90	15.04	15.63	12.46	9.28	7.38	80.04
1995	7.48	9.78	12.72	13.81	11.63	9.74	7.48	72.64
1996	9.10	13.50	12.72	13.99	11.10	7.08	5.66	73.15
1997	7.37	9.33	11.84	12.36	9.59	7.78	5.80	64.07
1998	7.27	11.37	14.12	13.03	11.36	10.03	5.85	73.03
1999	8.31	10.75	13.12	11.75	8.68	8.21	7.45	68.27
2000	9.62	13.20	14.11	13.16	11.36	8.86	4.87	75.18
2001	8.45	11.35	13.92	11.75	10.93	10.59	7.29	74.28
2002	9.21	13.29	14.79	14.09	12.28	7.82	4.63	76.11
2003	8.22	11.58	14.80	15.63	12.32	9.33	6.58	78.46
2004	7.43	12.49	14.27	13.69	11.32	8.28	4.93	72.41
2005	8.17	11.21	12.59	15.20	10.47	8.30	5.03	70.97
2006	8.72	12.85	14.65	12.65	10.58	7.52	5.05	72.02
2007	7.97	9.78	13.41	12.90	11.15	8.68	6.54	70.43
2008	9.33	11.38	13.80	11.84	11.39	8.89	6.45	73.08
2009	8.33	8.86	10.08	13.34	11.24	7.83	5.26	64.94
2010	8.35	10.88	12.40	12.25	9.49	8.58	5.64	67.59
2011	9.02	10.68	14.46	13.15	11.71	7.57	5.32	71.91
2012	8.78	12.29	14.45	11.80	11.35	8.88	7.48	75.03
2013	9.02	10.82	13.86	12.00	9.86	7.96	5.50	69.02
2014	7.68	10.64	13.64	13.52	10.24	8.09	5.69	69.50
2015	8.02	7.87	10.64	10.08	11.49	8.17	5.38	61.65
2016	7.83	9.94	14.98	13.12	8.40	7.74	5.80	67.81
2017	7.24	10.00	14.10	12.83	9.30	7.78	7.05	68.29

Table 13 (continued). Total Monthly Evaporation in Inches at the NMSU Agricultural Science Center at Farmington, NM, 1975–2021

Year	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
2018	10.57	12.18	13.42	12.91	11.79	9.08	4.72	74.67
2019	7.63	7.63	11.74	12.75	11.45	8.83	6.80	66.83
2020	9.19	12.32	13.13	12.44	12.71	9.69	7.55	77.02
2021	10.51	11.78	12.64	12.77	10.98	8.31	5.71	72.69
Mean	8.28	10.70	13.13	12.91	11.08	8.49	6.07	69.56
Years	43	47	47	47	47	47	44	47

Blank cells represent three or more days of missing data.

Table 14. Wind Run Monthly Average in Miles Per Day (MPD) Measured at 6-in. and 10-in. Anemometer Heights* Above the Evaporation Pan Rim at the NMSU Agricultural Science Center at Farmington, NM, 1980–2021

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1980	64	66	100	97	80	57	44	41	27	30	23	14
1981	50	80	94	85	71	64	58	60	20	55	56	52
1982	69	36	63	89	78	42	59	75	77	86	77	89
1983	82	101	107	101	108	98	76	70	62	73	94	98
1984	63	101	104	114	78	94	66	61	70	71	99	67
1985	49	87	128	98	76	66	70	76	70	72	148	55
1986	53	61	72	95	78	64	52	66	60	45	50	45
1987	60	41	50	50	31	22	25	19	21	48	71	79
1988	76	73	99	88	99	81	75	71	75	64	82	82
1989	84	75	96	86	69	73	78	72	73	68	68	59
1990	78	97	90	91	91	84	82	82	76	72	71	83
1991	61	73	106	98	99	75	79	67	72	57	59	47
1992	64	66	80	76	72	74	66	70	62	58	68	66
1993	103	86	105	107	91	81	71	75	74	65	82	79
1994	81	96	83	94	71	61	72	72	63	58	84	59
1995	76	65	83	81	80	61	63	59	52	64	58	49
1996	92	79	88	93	72	73	72	60	44	51	53	71
1997	43	79	78	73	70	62	55	48	50	48	39	35
1998	59	75	83	81	66	72	70	66	62	78	66	59
1999	76	74	83	109	95	70	63	63	61	65	73	78
2000	83	88	93	93	85	80	66	64	62	63	60	57
2001	65	74	72	91	83	77	64	67	74	74	65	75
2002	74	90	104	83	59	64	69	55	62	50	56	49
2003	36	58	60	68	70	70	56	60	56	50	56	62
2004	36	56	61	65	53	54	54	46	48	44	52	29
2005	52	54	72	71	50	50	49	43	44	44	46	39
2006	52	51	61	66	57	61	53	47	43	44	37	48
2007	40	53	47	62	50			41	51	62	38	54
2008	48	69	81	92	82	65	50	35	31	60	65	69
2009	41	57	77	80	52	44	48	43	47	54	49	66
2010	33	59	79	82								
2011						74	60	57	58	61	72	51
2012	65	78	84	84	73	62	50	52	46	63	60	64
2013	58	82	94	103	77	65	62	49	54	65	61	64
2014	76	69	90									
2015			47	51	46	38	42	39	29	35	43	44
2016	26	47	61	44	41	36	36	29	25	22	28	21
2017	26	25		36	32	25	24	16	22	37	25	28
2018	32	33	42	66	35	38	28	24	16	30	17	13
2019	20			67	57	54	46	46	50	67	49	38
2020	50	65	56	74	65	72	54	52	50	47	51	42
2021	51	55	62	73	63	57	58	42	31	50	36	40

Table 14 (continued). Wind Run Monthly Average in Miles Per Day (MPD) Measured at 6-in. and 10-in. Anemometer Heights* Above the Evaporation Pan Rim at the NMSU Agricultural Science Center at Farmington, NM, 1980–2021

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mean (MPD)	59	69	80	81	69	63	58	55	52	56	60	55
Mean (MPH)	2	3	3	3	3	3	2	2	2	2	2	2

Blank cells represent three or more days of missing data.

*Low wind anemometer height at 6 in. above the evaporation pan (1980–March 2019) was changed due to installation of a new anemometer at 10 in. height beginning April 2019.

Table 15. Wind Run in Average Miles Per Day (MPD) at 79-in. Anemometer Height Above Ground Surface at the NMSU Agricultural Science Center at Farmington, NM, 1981–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	112	124	141	124	102	81	62	82	71	81	76	58
1982	88	63	97	127	100	122	103	91	99	95	86	99
1983	111	139	147	154	141	120	116	102	113	107	130	136
1984	64	115	93	136	88	96	52	46	49	44	136	110
1985	95	127	183	155	142	136	136	133	125	127	72	117
1986	113	129	145	179	154	139	128	134	128	118	116	99
1987	139	131	143	158	139	126	122	119	132	108	123	117
1988	121	122	163	148	166	138	132	126	120	91	98	98
1989	97	133	151	147	132	123	126	120	125	115	112	104
1990	125	152	146	170	165	154	141	136	127	135	127	130
1991	101	120	190	191	167	138	140	119	129	111	109	85
1992	117	119	137	142	133	137	118	118	111	110	113	106
1993	164	139	153	171	144	86	57	80	103	87	92	
1994	130	156	144	166	135	130	136	127	120	119	154	115
1995	137	129	147	176	185	137	128	118	115	137	129	100
1996	171	145	161	182	149	140	127	119	112	134	119	147
1997	106	149	146	153	137	113	112	101	105	115	118	110
1998	100	133	145	144	112	120	111	100	105	131	111	106
1999	143	142	145	186	196	92	85	100	107	98	93	126
2000	132	141	149	158	144	135	108	104	108	110	113	109
2001	116	127	173	147	141	128	106	108	121	125	110	132
2002	117	144	163	134	126	115	114	96.4	108	90	110	107
2003	98	134	143	139	134	128	106	107	113	103	116	129
2004	93	121	135	134	120	114	112	99	100	102	119	87
2005	107	111	146	153	117	116	111	94	98	98	119	113
2006	131	140	139	143	126	127	106	95	103	104	122	106
2007	96	131	121	147	122	129	109	89	96	117	103	128
2008	106	125	142	165	144	128	101	95	94	108	121	133
2009	100	119	144	157	108	96	96	88	94	106	87	145
2010	73	100	130	154	125	63	94	78	79	89	108	90
2011	78	113	130	159	127	107	82	78	79	85	102	74
2012	99	110	114	116	99	89	72	76	73	90	79	94
2013	83	106	122	137	98	73	81	71	76	88	84	82
2014	97	82	99	118	78	74	80	61	52	58	74	65
2015	57	67	76	90	68	56	61	57	38	49	66	56
2016	41	73	104	89	71	71	62	59	45	63	63	53
2017	58	59	89	84	81	77	65	58	61	63	40	38
2018	50	77	99	129	80	68	78	67	54	69	62	71
2019	68	77	85	102	69	74	46	46	50	67	66	42
2020	57	81	68	96	81	86	63	54	58	48	62	61
2021	72	71	79	101	82	72	70	59	39	68	46	45
Mean (MPD)	102	116	132	143	122	109	99	93	94	97	100	98
Mean (MPH)*	4	5	6	6	5	5	4	4	4	4	4	4

Blank cells represent three or more days of missing data.

*Mean miles per hour (MPH) = mean miles per day (MPD)/24 hours

Table 16. Average Solar Radiation in Langleys (Ly) at the NMSU Agricultural Science Center at Farmington, NM, 1977–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Mean
1977	204	305	386	552	438	530	501	464	396	360			4136	414
1978	157	168	334	459	490	586	641	491	401	292	185	166	4370	364
1979	166	261	302	423	445	527	489	477	459	267	165	155	4136	345
1980	141	192	300	429	459	529	595	501	436	342	280	145	4349	362
1981	190	296	292	473	499	607	550	489	422	314	248	200	4580	382
1982	129	207	369	536	594	707	651	565	470	393	227	208	5056	421
1983	188	294	345	518	654	734	793	725	583	332	230	176	5572	464
1984	250	345	486	540	688	494	736	744	595	317	226	188	5609	467
1985	242			499	618	816	843	801	557	410	256	184	5226	523
1986	243	304	505	584	837	736	1028	1223	918	513	282	205	7378	615
1987	229	289	506	566	551	665	638	542	483	352	246	197	5264	439
1988	220	305	474	496	626	623	621	555	486	470	251	216	5343	445
1989	224	280	419	550	628	633	619	570	498	361	277	219	5278	440
1990	222	282	316	479	593	662	620	541	462	361	234	203	4975	415
1991	212	309	356	554	651	556	613	537	450	340	249	146	4973	414
1992	189	268	358	509	530	616	560	501	451	324	238	167	4711	393
1993	160	230	374	514	532	599	614	464	456	331	240	187	4701	392
1994	223	262	371	439	482	564	555	496	411	300	225	178	4506	376
1995	189	288	358	438	481	552	520	459	373	324	212	157	4351	363
1996	240	309	463	580	651	609	676	604	458	357	250	226	5423	452
1997	215	314	516	513	613	657	640	567	491	390	267	220	5403	450
1998	236	260	443	563	661	725	604	565	506	331	266	244	5404	450
1999	263	363	458	527	624	702	584	515	505	438	320	241	5540	462
2000	251	305	399	581	689	696	673	579	479	325	255	213	5445	454
2001	241	322	424	508	672	766	633	580	541	396	286	248	5617	468
2002	251	383	492	593	710	742	663	601	479	372	294	219	5799	483
2003	249	315	452	596	640	719	692	604	510	401	200	203	5581	465
2004	186	264	418	451	656	703	646	531	468	346	214	201	5084	424
2005	206	272	402	526	624	639	664	539	442	347	277	232	5170	431
2006	258	362	375	539	644	616	533	472	426	308	249	188	4970	414
2007	228	284	396	539	562	676	535	455	407	406	310	220	5018	418
2008	287	341	514	617	673	729	641	587	504	405	286	223	5807	484
2009	262	352	431	541	608	589	637	581	473	358	276	200	5308	442
2010	232	293	451	553	677	695	624	547	501	375	286	175	5409	451
2011	264	354	465	562	668	712	652	570	465	374	260	202	5548	462
2012	260	333	458	544	656	706	601	551	491	415	303	244	5562	464
2013	269	360	468	571	636	688	599	547	464	425	260	221	5508	459
2014	265	313		523	614	698		539	474	376		204	4006	445
2015	218	326	474	572	517	602	575	556	481	362	289	206	5178	432
2016	240	354	458	524	618	694	658	551	489	408	258	216	5469	456

Table 16 (continued). Average Solar Radiation in Langleys (Ly) at the NMSU Agricultural Science Center at Farmington, NM, 1977–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Mean
2017	194	292	442	532	608	721	639	557	479	412	271	254	5401	450
2018	277	322	438	556	650	698	644	560	504	314	300	210	5473	456
2019	245	295	410	515	551	650	639	580	486	423	280	208	5281	440
2020	238	343	394	581	668	666	594	575	480	400	272	224	5436	453
2021	246	344	416	559	608	630	582	518	448	362	281	197	5190	432
Mean	224	301	416	529	607	655	632	568	484	367	258	203	5245	437

2010–2016 NMSU data (not including missing values) on the aWhere Weather database (<https://www.fsnnetwork.org/resource/awher-weather-weather-data-agricultural-development>) as $y = 3.025 + 0.816x$ ($n = 2018$, $R^2 = 0.695$), where y = NMSU values and x = aWhere values (2015 May and June; 2016 August, September, October).

Blank cells represent three or more days of missing data.

Table 17. Total Monthly Corn Growing Degree Days* (GDD) at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

	May	Jun	Jul	Aug	Sep	Total May–Sep	Total to 1st Frost (32°F)	Date of 1st Frost
1969	434	510	729	744	570	2987	3017	5-Oct
1970	434	555	744	744	420	2897	2949	8-Oct
1971	372	600	729	713	450	2864	2684	18-Sep
1972	434	615	744	713	495	3001	3201	30-Oct
1973	372	640	713	713	435	2873	2990	11-Oct
1974	465	645	729	698	450	2987	3227	30-Oct
1975	326	525	713	667	435	2666	2806	14-Oct
1976	403	585	744	698	495	2925	2978	7-Oct
1977	372	675	744	729	540	3060	3386	31-Oct
1978	310	570	729	667	450	2726	2576	20-Sep
1979	341	510	682	667	555	2755	2986	22-Oct
1980	341	570	698	682	450	2741	2869	16-Oct
1981	372	600	682	651	450	2755	2875	16-Oct
1982	341	525	682	698	450	2696	2741	6-Oct
1983	341	495	682	729	525	2772	2615	21-Sep
1984	465	555	729	713	480	2942	3017	15-Oct
1985	397	600	710	692	416	2815	2926	30-Sep
1986	377	574	661	693	395	2700	2790	12-Oct
1987	366	592	674	646	473	2751	2873	19-Oct
1988	396	607	722	697	476	2898	2981	12-Nov
1989	468	565	731	670	540	2974	3131	18-Oct
1990	378	635	729	673	532	2947	3029	9-Oct
1991	409	557	704	701	471	2842	3153	28-Oct
1992	385	536	630	639	484	2674	2763	8-Oct
1993	416	538	652	615	454	2675	2854	19-Oct
1994	426	628	729	746	495	3024	3169	17-Oct
1995	330	516	676	729	494	2745	2782	6-Oct
1996	477	612	730	695	410	2924	2785	19-Sep
1997	441	563	685	670	568	2927	3081	13-Oct
1998	417	499	746	716	560	2938	2984	6-Oct
1999	364	554	710	655	451	2734	2702	28-Sep
2000	479	640	665	663	536	2983	3117	14-Oct
2001	465	591	751	691	578	3076	3214	11-Oct
2002	446	625	739	674	486	2973	3004	4-Oct
2003	453	586	763	730	485	3017	3329	27-Oct
2004	456	588	688	667	452	2851	3057	23-Oct
2005	428	555	745	683	542	2953	3228	31-Oct
2006	477	631	743	674	395	2920	2826	23-Sep
2007	388	581	711	720	509	2909	2981	7-Oct
2008	370	570	720	691	501	2852	2980	12-Oct
2009	450	515	738	660	515	2878	2753	22-Sep
2010	373	584	728	662	519	2866	3139	26-Oct

Table 17 (continued). Total Monthly Corn Growing Degree Days* (GDD) at the NMSU Agricultural Science Center at Farmington, NM, 1969–2021

Year	May	Jun	Jul	Aug	Sep	Total May–Sep	Total to 1st Frost (32°F)	Date of 1st Frost
2011	352	584	729	722	476	2863	2929	8-Oct
2012	459	650	729	722	514	3074	3343	25-Oct
2013	396	627	758		528	2999	3051	5-Oct
2014	390	596	757	658	565	2966	3288	3-Nov
2015	316	597	695	699	549	2856	3176	28-Oct
2016	343	689	710	648	488	2878	3092	20-Oct
2017	363	627	760	695	522	2967	2919	25-Sep
2018	475	641	801	738	573	3229	3357	15-Oct
2019	276	529	691	704	534	2733	2862	11-Oct
2020	477	580	692	714	489	2951	2929	29-Sep
2021	433	630	754	664	483	2964	3084	13-Oct
Mean	401	584	718	691	493	2886	2992	12-Oct
Mean Accumulation	401	985	1702	2394	2886			

*Temperature parameters used for calculating corn GDD units are 86°F and 50°F.

Table 18. Average Monthly Soil Temperature in °F at 4 in. Below the Bare Soil Surface at the NMSU Agricultural Science Center at Farmington, NM, 2001–2021

Month	Maximum	Minimum	Average*	Extreme Maximum	Extreme Minimum
Jan	33	29	31	39	23
Feb	40	33	36	49	28
Mar	54	40	47	64	33
Apr	66	50	58	76	40
May	77	60	68	85	49
Jun	87	71	79	94	64
Jul	94	77	85	99	69
Aug	91	75	83	97	68
Sep	82	66	74	91	56
Oct	65	52	58	78	41
Nov	48	39	44	60	30
Dec	35	30	33	44	23
Mean	64	52	58	73	44

* $[(\text{maximum} + \text{minimum})/2]$

Table 19. Average Maximum Soil Temperature in °F at 4 in. Below the Bare Soil Surface at the NMSU Agricultural Science Center at Farmington, NM, 2001–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2001	30	37	51	65	78	88	93	90	84	67	52	34
2002	32	38	52	70	79	91	96	91	80	63	46	35
2003	38	41	52	66	76	87	96	95	81	69	46	36
2004	31	36	60	66	81	86	92	93	81	64	47	32
2005	39	44	55	69	82	89	101	93	82	63	48	36
2006	37	44	54	72	83	94	96	92	79	62	51	33
2007	30	40	57	68	80	92	101	99	88	67	47	33
2008	30	35	53	64	75	88	97	93	84	66	49	35
2009	32	40	54	63	79	84	98	93	85	62	46	29
2010	28	38	50	63	73	85	92	86	77	66	46	40
2011	30	36	53	62	69	84	90	90	77	61	45	33
2012	32	32	53	67	78	88	92	90	82	65	49	36
2013	28	35	48	64	76	88	94	87	80	60	47	31
2014	31	42	53	62	73	84	90	87	81	65	48	39
2015	34	45	56	66	72	86	89	89	83	68	47	35
2016	31	40	55	65	76	89	93	89	80	69	51	35
2017	36	45	56	64	74	73	89	89	83	65	56	39
2018	38	46	55	68	80	91	96	93	86	65	48	38
2019	34	36	54	65	70	85	91	89	81	62	46	35
2020	32	40	54	67	77	85	90	91	81	66	50	33
2021	33	42	51	67	77	89	96	92	85	65	52	37
Mean	33	40	54	66	77	87	94	91	82	65	48	35

Table 20. Soil Extreme Maximum Temperature in °F at 4 in. Below the Bare Soil Surface at the NMSU Agricultural Science Center at Farmington, NM, 2001–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2001	32	47	63	78	86	93	100	96	90	83	62	47
2002	39	48	67	75	90	95	99	97	90	75	56	45
2003	45	49	63	74	90	91	100	99	95	79	59	45
2004	35	50	73	79	85	90	101	98	94	78	57	42
2005	45	50	64	79	93	99	106	103	89	76	59	46
2006	46	56	64	81	91	99	103	98	92	78	60	42
2007	34	52	68	82	88	102	105	102	100	79	63	45
2008	32	47	63	72	87	99	100	100	93	82	63	46
2009	44	53	65	74	86	94	101	99	94	76	58	40
2010	33	43	60	71	87	90	97	91	82	80	57	44
2011	38	45	64	71	78	87	98	97	86	75	55	42
2012	38	48	66	77	82	94	96	93	90	76	57	48
2013	40	40	62	74	82	95	97	95	94	70	55	40
2014	40	50	61	77	84	88	93	92	90	78	63	48
2015	44	52	70	75	82	96	97	95	89	82	60	42
2016	33	51	60	75	83	95	98	98	92	76	65	43
2017	44	53	67	75	84	94	98	96	93	75	79	52
2018	46	52	64	77	85	97	100	98	92	85	57	43
2019	40	49	68	78	81	93	95	97	91	75	53	43
2020	39	47	60	77	84	90	96	95	89	74	60	38
2021	40	48	61	75	84	96	100	99	94	77	61	47
Maximum	46	56	73	82	93	102	106	103	100	85	79	52
Year(s) Recorded	2006 2018	2006	2004	2007	2005	2007	2005	2005	2007	2018	2017	2017

Table 21. Average Minimum Soil Temperature in °F at 4 in. Below the Bare Soil Surface at the NMSU Agricultural Science Center at Farmington, NM, 2001–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2001	29	33	41	49	60	70	76	73	69	55	43	29
2002	29	31	36	52	61	72	77	73	63	48	36	32
2003	32	34	39	49	60	70	78	76	63	54	38	31
2004	28	30	43	48	61	71	75	74	62	48	36	27
2005	34	35	38	47	58	68	75	71	67	50	39	26
2006	29	32	37	48	61	70	74	72	58	46	37	28
2007	26	33	40	47	58	70	78	76	65	50	41	29
2008	28	31	38	46	57	68	74	73	66	49	38	32
2009	31	34	41	46	61	69	81	75	71	52	38	26
2010	26	33	37	49	58	73	79	73	66	55	38	36
2011	29	29	43	52	59	73	81	82	69	52	38	30
2012	30	30	42	56	65	76	78	79	70	54	41	32
2013	21	33	40	50	62	74	80	74	66	49	39	28
2014	29	34	42	50	60	71	80	75	69	54	40	35
2015	30	36	45	51	56	68	73	74	67	56	37	32
2016	28	33	42	49	58	75	77	73	65	54	42	32
2017	34	37	44	48	56	73	78	74	67	49	42	32
2018	31	34	40	52	62	71	77	74	68	52	34	30
2019	31	33	42	51	54	67	77	77	69	52	39	32
2020	29	34	42	51	64	72	76	78	66	53	40	27
2021	28	34	39	50	62	74	78	73	67	49	41	32
Mean	29	33	40	50	60	71	77	75	66	52	39	30

Table 22. Soil Extreme Minimum Temperature in °F at 4 in. Below the Bare Soil Surface at the NMSU Agricultural Science Center at Farmington, NM, 2001–2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2001	24	25	35	41	46	62	69	66	63	46	27	24
2002	23	25	28	41	51	69	72	66	51	39	32	30
2003	27	30	33	40	50	65	73	70	54	45	26	24
2004	22	24	32	41	49	63	69	69	48	37	26	16
2005	31	31	35	35	44	60	69	64	56	44	27	12
2006	24	28	31	39	52	63	63	67	42	35	31	21
2007	19	28	30	36	44	61	71	64	50	40	30	19
2008	16	29	33	37	48	58	65	70	58	40	31	29
2009	29	29	31	35	51	64	73	71	62	35	32	16
2010	20	31	29	38	42	66	73	61	59	38	30	26
2011	25	18	34	35	47	68	77	78	61	41	34	26
2012	24	31	32	46	58	69	68	71	60	38	32	19
2013	9	31	31	32	55	65	70	60	50	37	29	20
2014	25	25	35	44	48	61	76	64	59	48	30	29
2015	23	30	34	44	50	58	67	69	60	46	33	26
2016	22	26	38	41	44	66	62	65	51	48	29	29
2017	29	30	31	36	45	64	70	69	51	44	34	29
2018	26	31	31	44	49	64	60	68	62	44	23	23
2019	23	29	36	43	45	58	70	72	58	34	32	27
2020	22	31	35	44	59	64	64	74	53	37	29	22
2021	23	31	32	40	57	66	66	68	61	42	30	26
Minimum	9	18	28	32	42	58	60	60	42	34	23	12
Year(s) Recorded	2013	2011	2002	2013	2010	2008 2015 2019	2018	2013	2006	2019	2018	2005



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