

Climatography of the United States

No. 20

1971-2000

Station: MESA VERDE NP, CO

COOP ID: 055531

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,115 Feet Lat: 37° 12N

Lon: 108° 29W

Temperature (°F)

Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	37.9	17.2	27.6	62	1956	11	34.6	1981	-20	1963	13	19.2	1979	1162	0	.0	.0	3.5	6.7	30.5	.8
Feb	42.4	21.2	31.8	66	1986	26	38.9	1995	-15	1989	6	27.4	1974	929	0	.0	.0	7.2	3.1	26.6	.4
Mar	48.8	26.8	37.8	73+	1971	26	44.8	1972	3+	1987	30	32.2	1973	843	0	.0	.0	16.2	.5	24.9	.0
Apr	57.2	32.2	44.7	80+	1965	22	50.7	1989	4	1997	12	39.0	1973	609	0	.0	.0	24.0	.1	15.5	.0
May	67.4	40.5	54.0	90+	1956	31	60.5	1984	21+	1975	6	49.3	1995	350	8	.0	.0	30.0	.0	4.1	.0
Jun	79.0	50.0	64.5	99+	1990	25	69.7	1974	27+	1999	7	59.9	1992	102	87	.0	2.5	30.0	.0	.3	.0
Jul	83.9	55.9	69.9	100	1971	13	72.9	1996	38	1995	4	65.2	1992	17	169	@	7.3	31.0	.0	.0	.0
Aug	81.5	54.4	68.0	96+	1972	3	70.9	1995	38	1998	28	64.9	1987	22	114	.0	2.9	31.0	.0	.0	.0
Sep	74.2	47.3	60.8	94	1948	2	65.6	1979	26	1971	18	54.9	1985	161	33	.0	.2	29.9	.0	.7	.0
Oct	62.4	36.8	49.6	85+	1963	1	55.0	1979	10	1991	31	43.1	1984	478	1	.0	.0	28.0	.1	8.3	.0
Nov	47.6	25.7	36.7	72+	1973	10	44.1	1999	-2	1976	28	30.8	2000	850	0	.0	.0	13.7	1.8	23.8	@
Dec	39.5	18.6	29.1	67	1963	25	37.3	1980	-15	1990	24	21.0	1990	1114	0	.0	.0	4.8	5.3	30.2	.7
Ann	60.2	35.6	47.9	100	Jul 1971	13	72.9	Jul 1996	-20	Jan 1963	13	19.2	Jan 1979	6637	412	@	12.9	249.3	17.6	164.9	1.9

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

(3) Derived from 1971-2000 serially complete daily data

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Climatography of the United States

No. 20

1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: MESA VERDE NP, CO

COOP ID: 055531

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,115 Feet Lat: 37°12N

Lon: 108°29W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.87	1.42	1.31	1978	17	5.29	1993	.00	1972	7.5	5.0	1.2	.1	.12	.31	.61	.88	1.17	1.49	1.86	2.31	2.92	3.91	4.87
Feb	1.52	1.42	1.48	1997	28	4.54	1993	.00	1972	7.5	4.0	.7	.2	.09	.24	.47	.70	.94	1.20	1.50	1.88	2.39	3.23	4.04
Mar	1.91	1.69	2.20	1995	6	4.57	1995	.03	1997	8.5	5.5	.9	.1	.12	.24	.48	.74	1.03	1.37	1.78	2.31	3.05	4.29	5.53
Apr	1.24	1.17	1.70	1986	3	3.91	1986	.00	1989	6.3	3.6	.5	.1	.13	.28	.48	.66	.85	1.04	1.27	1.54	1.89	2.47	3.02
May	1.23	1.28	1.15	1965	13	4.75	1992	.00	1974	7.2	3.7	.5	.0	.04	.12	.29	.46	.66	.88	1.15	1.50	1.97	2.77	3.56
Jun	.55	.29	2.05	1949	18	2.17	1988	.00+	1982	4.3	1.6	.2	@	.00	.00	.08	.16	.25	.37	.50	.68	.92	1.33	1.75
Jul	1.66	1.62	1.92	1957	26	3.77	1974	.00	1993	9.5	4.6	.9	.1	.20	.40	.68	.92	1.16	1.42	1.70	2.05	2.50	3.23	3.92
Aug	2.00	1.84	2.01	1982	25	4.17	1987	.13	1978	10.1	4.8	1.1	.3	.45	.63	.93	1.19	1.45	1.73	2.05	2.42	2.92	3.71	4.45
Sep	1.61	1.54	1.67	1970	6	4.05	1985	.00	1979	7.4	4.0	1.0	.3	.20	.41	.68	.91	1.14	1.38	1.66	1.99	2.42	3.12	3.77
Oct	1.85	1.78	1.54	1961	9	7.42	1972	.00	1995	6.5	4.1	1.3	.3	.05	.17	.41	.67	.96	1.31	1.72	2.25	2.99	4.24	5.48
Nov	1.67	1.52	1.62	1998	9	4.56	1986	.00	1976	6.6	3.9	1.0	.3	.10	.26	.51	.76	1.02	1.31	1.64	2.06	2.62	3.55	4.44
Dec	1.33	1.22	1.53	1966	6	3.57	1978	.01	1989	6.6	3.7	.7	.1	.10	.19	.36	.54	.74	.98	1.26	1.62	2.11	2.94	3.76
Ann	18.44	18.88	2.20	Mar 1995	6	7.42	Oct 1972	.00+	Oct 1995	88.0	48.5	10.0	1.9	11.94	13.15	14.73	15.95	17.04	18.10	19.21	20.44	21.95	24.16	26.09

+ Also occurred on an earlier date(s)

Denotes amounts of a trace

@ Denotes mean number of days greater than 0 but less than .05

** Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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No. 20 1971-2000

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151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: MESA VERDE NP, CO

COOP ID: 055531

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,115 Feet

Lat: 37°12N

Lon: 108°29W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	21.4	17.7	9	9	16.0	1988	18	59.0	1980	36	1993	20	23+	1993	7.4	5.8	2.9	1.5	.2	23.0	19.6	17.2	9.3
Feb	14.2	12.4	10	8	15.0	1997	28	29.6	1979	34	1979	2	25	1993	6.6	4.5	2.0	.8	.1	18.4	14.2	11.8	4.8
Mar	13.0	9.7	4	2	12.0	1975	15	45.6	1975	27	1997	1	18	1978	6.5	4.6	1.9	.8	@	9.9	6.1	3.2	.9
Apr	6.9	5.0	1	#	12.5	1997	5	17.5	1973	18	1973	3	4	1973	3.1	1.9	.8	.3	@	2.3	1.0	.3	@
May	.9	.0	#	0	6.0	1978	7	12.5	1978	3	1979	9	#+	1999	.5	.3	.1	.1	.0	.2	@	.0	.0
Jun	#	.0	0	0	#	1974	8	#	1974	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	#	0	.0	0	0	.0	0	#	1975	10	#	1975	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	2.0	.1	#	#	5.0	1991	30	10.6	1991	8	1991	31	1	1991	1.1	.8	.2	@	.0	1.1	.3	.1	.0
Nov	9.3	9.2	1	1	9.0	1973	26	21.9	1973	14	1973	26	5	1972	3.9	2.7	1.4	.7	.0	7.9	5.4	3.5	.4
Dec	15.9	17.3	4	3	11.0	1982	2	32.8	1971	23	1982	2	12	1972	5.4	4.0	1.6	.9	.1	16.7	11.3	8.7	3.0
Ann	83.6	71.4	N/A	N/A	16.0	Jan 1988	18	59.0	Jan 1980	36	Jan 1993	20	25	Feb 1993	34.5	24.6	10.9	5.1	.4	79.5	57.9	44.8	18.4

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

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Climate Division: CO 2

NWS Call Sign:

Elevation: 7,115 Feet

Lat: 37° 12N

Lon: 108° 29W

Freeze Data									
Spring Freeze Dates (Month/Day)									
Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	6/14	6/08	6/05	6/01	5/29	5/26	5/23	5/19	5/14
32	6/06	5/31	5/27	5/23	5/20	5/17	5/13	5/09	5/03
28	5/26	5/19	5/15	5/11	5/07	5/03	4/29	4/24	4/18
24	5/01	4/26	4/22	4/18	4/15	4/12	4/09	4/05	3/30
20	4/19	4/12	4/07	4/03	3/30	3/26	3/22	3/17	3/10
16	4/10	4/01	3/25	3/20	3/15	3/10	3/04	2/25	2/17
Fall Freeze Dates (Month/Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/13	9/19	9/23	9/26	9/29	10/02	10/06	10/10	10/15
32	9/21	9/27	10/02	10/06	10/09	10/13	10/16	10/21	10/27
28	10/02	10/08	10/13	10/16	10/20	10/23	10/27	10/31	11/06
24	10/17	10/21	10/25	10/28	10/30	11/02	11/05	11/08	11/13
20	10/25	10/30	11/03	11/06	11/09	11/11	11/14	11/18	11/23
16	10/31	11/05	11/08	11/11	11/14	11/17	11/20	11/24	11/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	144	137	131	127	122	118	113	108	100
32	167	158	152	146	141	136	131	125	116
28	190	181	175	170	165	160	155	149	141
24	222	213	207	202	197	192	187	181	173
20	242	236	231	226	223	219	215	210	203
16	272	263	256	250	244	238	232	225	216

* Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Elevation: 7,115 Feet Lat: 37°12N

Lon: 108°29W

Degree Days to Selected Base Temperatures (°F)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1162	929	843	609	350	102	17	22	161	478	850	1114	6637
60	1007	789	688	460	219	41	2	2	74	331	700	959	5272
57	914	705	595	375	154	20	0	0	40	251	610	866	4530
55	852	649	534	320	117	11	0	0	25	203	551	804	4066
50	697	509	386	196	50	2	0	0	5	106	406	649	3006
32	194	89	38	5	0	0	0	0	0	1	52	164	543

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	55	83	218	386	681	975	1175	1115	862	547	192	73	6362
55	0	0	1	11	85	296	462	402	196	37	0	0	1490
57	0	0	0	5	60	245	400	340	152	23	0	0	1225
60	0	0	0	1	32	176	309	249	95	9	0	0	871
65	0	0	0	0	8	87	169	114	33	1	0	0	412
70	0	0	0	0	1	31	69	29	6	0	0	0	136

Growing Degree Units (2)																								
Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	0	17	74	217	468	767	960	901	652	339	74	2	0	17	91	308	776	1543	2503	3404	4056	4395	4469	4471
45	0	0	25	113	323	617	805	746	503	210	25	0	0	0	25	138	461	1078	1883	2629	3132	3342	3367	3367
50	0	0	2	46	191	469	650	591	356	105	5	0	0	0	2	48	239	708	1358	1949	2305	2410	2415	2415
55	0	0	0	12	90	325	495	436	221	40	0	0	0	0	0	12	102	427	922	1358	1579	1619	1619	1619
60	0	0	0	0	30	191	341	281	103	6	0	0	0	0	0	0	30	221	562	843	946	952	952	952
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	16	65	158	306	496	626	583	409	225	57	2	0	16	81	239	545	1041	1667	2250	2659	2884	2941	2943

(1) Derived from the 1971-2000 Monthly Normals

(2) Derived from 1971-2000 serially complete daily data

Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Notes

- a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.
- b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.
- c. Only observed validated values were used to select the extreme daily values.
- d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.
- e. Degree Days were derived using the same techniques as the 1971-2000 normals.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/usnormals.html
- f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set.
Documentation of the serially complete data set is available from the link below:
- g. Snowfall and snow depth statistics were derived from the Snow Climatology.
Documentation for the Snow Climatology project is available from the link under references.

Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html
Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,
www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf