

# Climatology of the United States

No. 20

1971-2000

Station: CLEARMONT 5 SW, WY

COOP ID: 481816

Climate Division: WY 5

NWS Call Sign:

Elevation: 3,995 Feet Lat: 44° 35N

Lon: 106° 27W

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	29.6	4.0	16.8	62	1966	8	27.8	1983	-46	1997	11	1.8	1979	1495	0	.0	.0	1.2	14.2	30.8	10.6
Feb	36.1	10.4	23.3	68	1995	24	33.7	1992	-37	1996	2	11.1	1989	1168	0	.0	.0	4.2	8.8	28.0	6.3
Mar	46.5	20.4	33.5	77	1960	26	40.8	1986	-28	1965	25	26.9	1996	979	0	.0	.0	13.8	3.4	29.1	1.4
Apr	56.6	28.8	42.7	86	1980	21	48.9	1987	1	1997	12	36.0	1997	669	0	.0	.0	22.4	.8	20.2	.0
May	65.7	37.9	51.8	94+	1969	27	57.0	1994	13	1967	4	47.1	1982	412	3	.0	.1	29.0	.0	7.0	.0
Jun	76.4	47.0	61.7	100	1961	29	71.1	1988	24	1984	2	56.1	1998	156	56	.0	2.6	29.8	.0	.6	.0
Jul	83.6	52.0	67.8	110	1960	19	72.1	2000	32+	1972	4	60.0	1993	52	139	.4	8.6	31.0	.0	.1	.0
Aug	82.3	49.5	65.9	104	1979	5	71.5	1983	30	1985	13	60.0	1980	97	125	.1	7.0	31.0	.0	.1	.0
Sep	70.7	39.3	55.0	98+	1983	1	62.4	1998	6	1984	25	51.0	1984	312	12	.0	1.3	29.0	.0	6.3	.0
Oct	59.3	28.4	43.9	90	1963	4	47.9	1979	-16	1991	30	38.9	1981	657	0	.0	.0	25.0	.7	21.2	@
Nov	42.1	16.0	29.1	83	1999	7	40.9	1999	-32	1959	16	12.3	1985	1079	0	.0	.0	9.4	6.1	28.9	2.5
Dec	31.6	6.0	18.8	67+	1973	1	27.8	1999	-48	1983	24	1.5	1983	1433	0	.0	.0	2.3	13.2	30.8	8.4
Ann	56.7	28.3	42.5	110	Jul 1960	19	72.1	Jul 2000	-48	Dec 1983	24	1.5	Dec 1983	8509	335	.5	19.6	228.1	47.2	203.1	29.2

+ 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](http://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: 1881-2001

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

024-A

# 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: CLEARMONT 5 SW, WY**

**COOP ID: 481816**

**Climate Division: WY 5**

**NWS Call Sign:**

**Elevation: 3,995 Feet Lat: 44°35N**

**Lon: 106°27W**

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days <sup>(3)</sup>				Precipitation Probabilities <sup>(1)</sup> Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians <sup>(1)</sup>		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily <sup>(2)</sup>	Year	Day	Highest Monthly <sup>(1)</sup>	Year	Lowest Monthly <sup>(1)</sup>	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.62	.42	.85	1969	6	2.20	1997	.00	1983	4.5	2.2	.1	.0	.05	.12	.22	.31	.40	.51	.62	.76	.95	1.25	1.55
Feb	.42	.34	.67	1986	23	1.29	1986	.00+	1999	3.1	1.7	.1	.0	.00	.03	.10	.16	.23	.31	.40	.52	.68	.95	1.21
Mar	.83	.82	.95	1970	17	2.28	1977	.00	1997	5.6	2.9	.2	.0	.13	.24	.39	.50	.61	.73	.86	1.01	1.22	1.53	1.83
Apr	1.62	1.52	1.25	1955	3	4.19	1973	.19	1987	8.9	4.6	.8	.1	.28	.43	.66	.89	1.11	1.36	1.64	1.98	2.43	3.16	3.86
May	2.25	1.99	2.18	1978	18	8.03	1978	.10	1998	8.9	5.6	1.3	.3	.44	.64	.97	1.27	1.58	1.91	2.29	2.74	3.35	4.31	5.23
Jun	2.09	2.11	2.72	1962	16	5.43	1993	.63	1996	8.4	5.3	1.0	.3	.57	.77	1.07	1.34	1.59	1.86	2.16	2.52	2.98	3.70	4.37
Jul	1.56	1.21	3.62	1985	30	4.66	1985	.18	1988	5.9	3.5	.7	.3	.20	.32	.54	.76	.99	1.25	1.54	1.91	2.41	3.22	4.01
Aug	1.15	.82	2.54	1980	14	3.68	1980	.00	1975	4.5	2.8	.5	.1	.04	.13	.29	.46	.64	.85	1.10	1.41	1.84	2.57	3.28
Sep	1.38	1.16	1.65	1986	1	4.71	1986	.10	1975	4.9	3.6	.9	.2	.24	.37	.57	.75	.95	1.15	1.39	1.68	2.06	2.68	3.27
Oct	1.18	.95	.97	1998	3	3.73	1994	.03	1984	4.6	3.3	.8	.0	.15	.25	.42	.58	.75	.94	1.16	1.44	1.80	2.41	2.99
Nov	.67	.60	1.60	1881	15	1.66	1991	.00+	1996	3.8	2.3	.2	.0	.00	.16	.30	.40	.50	.60	.71	.83	1.00	1.27	1.51
Dec	.48	.40	.58	2000	23	1.60	1977	.00+	1997	4.1	1.7	@	.0	.00	.00	.11	.19	.28	.37	.47	.60	.78	1.06	1.34
Ann	14.25	13.67	3.62	Jul 1985	30	8.03	May 1978	.00+	Feb 1999	67.2	39.5	6.6	1.3	9.93	10.76	11.82	12.63	13.35	14.05	14.78	15.58	16.55	17.96	19.18

+ 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: 1881-2001

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

Complete documentation available from:

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**Station: CLEARMONT 5 SW, WY**

**COOP ID: 481816**

**Climate Division: WY 5**

**NWS Call Sign:**

**Elevation: 3,995 Feet**

**Lat: 44° 35N**

**Lon: 106° 27W**

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	8.0	5.5	4	3	9.5	1972	2	24.4	1994	20+	1979	14	17	1979	3.7	3.1	.7	.3	.0	21.7	14.5	10.0	3.7
Feb	5.6	6.1	3	2	6.7	1987	24	13.0	1978	20	1978	2	17	1979	2.6	2.3	.5	.1	.0	16.3	10.3	7.7	2.8
Mar	7.2	6.9	1	1	9.5	1977	29	29.3	1977	17	1978	4	11	1978	2.9	2.5	.7	.2	.0	8.6	4.3	2.5	.9
Apr	5.9	3.9	1	#	12.1	1984	26	29.7	1984	19	1984	27	4	1997	2.1	1.7	.6	.2	.1	1.8	.9	.4	.2
May	.6	.0	#	0	6.2	1983	12	8.1	1983	8	1984	1	1	1984	.2	.2	.1	@	.0	.2	.1	.1	.0
Jun	#	.0	0	0	#	1973	18	#	1973	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	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.9	.0	#	0	5.4	1984	23	14.8	1984	5	1984	24	#+	2000	.3	.3	.1	@	.0	.2	.1	@	.0
Oct	2.5	2.1	#	#	8.0	1996	26	10.0	1971	8	1996	26	1+	1996	.9	.8	.4	.1	.0	1.1	.6	.4	.0
Nov	6.7	5.8	1	1	9.3	1986	7	17.8	1986	12	1986	7	4	1986	2.5	2.2	.8	.1	.0	7.3	2.9	1.5	.1
Dec	9.0	7.6	3	2	8.6	1980	1	27.9	1989	21	1989	17	14	1978	3.2	2.8	.8	.3	.0	17.2	11.7	7.0	1.9
Ann	46.4	37.9	N/A	N/A	12.1	Apr 1984	26	29.7	Apr 1984	21	Dec 1989	17	17+	Feb 1979	18.4	15.9	4.7	1.3	.1	74.4	45.4	29.6	9.6

+ 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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**Lon: 106° 27W**

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	7/07	6/30	6/25	6/20	6/16	6/12	6/08	6/02	5/26
32	6/24	6/15	6/09	6/04	5/31	5/26	5/21	5/15	5/06
28	5/26	5/21	5/18	5/16	5/13	5/11	5/08	5/05	5/01
24	5/20	5/14	5/10	5/06	5/03	4/29	4/25	4/21	4/15
20	5/02	4/26	4/23	4/19	4/16	4/13	4/10	4/06	4/01
16	4/24	4/17	4/12	4/08	4/04	4/01	3/27	3/23	3/16
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	8/19	8/24	8/27	8/31	9/03	9/06	9/09	9/13	9/18
32	8/27	9/02	9/06	9/09	9/12	9/15	9/18	9/22	9/27
28	9/10	9/14	9/17	9/19	9/21	9/24	9/26	9/29	10/03
24	9/16	9/21	9/25	9/28	10/02	10/05	10/08	10/12	10/18
20	9/23	9/30	10/04	10/08	10/12	10/15	10/19	10/24	10/30
16	10/05	10/11	10/16	10/19	10/23	10/26	10/30	11/03	11/09
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	103	94	88	83	78	73	67	61	52
32	132	122	115	109	104	98	92	85	75
28	149	143	138	134	130	127	123	118	112
24	176	168	161	156	151	146	141	135	127
20	203	195	188	183	178	173	167	161	152
16	230	220	212	206	200	195	189	181	171

\* 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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**NWS Call Sign:**

**Elevation: 3,995 Feet    Lat: 44° 35N**

**Lon: 106° 27W**

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	1495	1168	979	669	412	156	52	97	312	657	1079	1433	8509
60	1340	1028	824	520	272	76	14	40	189	502	929	1278	7012
57	1247	944	731	433	198	43	6	21	127	409	839	1185	6183
55	1185	888	669	377	156	28	1	13	93	349	779	1123	5661
50	1030	757	515	247	74	7	0	2	33	211	637	968	4481
32	511	330	95	11	0	0	0	0	0	8	213	463	1631

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	39	86	139	332	614	890	1110	1051	690	374	125	53	5503
55	0	0	0	8	57	227	398	350	93	2	0	0	1135
57	0	0	0	4	38	183	341	296	67	1	0	0	930
60	0	0	0	1	18	126	256	222	38	0	0	0	661
65	0	0	0	0	3	56	139	125	12	0	0	0	335
70	0	0	0	0	0	18	60	56	3	0	0	0	137

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	2	43	164	400	665	883	831	481	197	21	0	0	2	45	209	609	1274	2157	2988	3469	3666	3687	3687
45	0	0	9	80	263	516	728	676	343	100	4	0	0	0	9	89	352	868	1596	2272	2615	2715	2719	2719
50	0	0	0	30	143	370	573	521	214	33	0	0	0	0	0	30	173	543	1116	1637	1851	1884	1884	1884
55	0	0	0	10	65	236	419	367	113	8	0	0	0	0	0	10	75	311	730	1097	1210	1218	1218	1218
60	0	0	0	1	17	121	269	223	44	0	0	0	0	0	0	1	18	139	408	631	675	675	675	675
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	11	59	152	280	424	557	531	341	189	38	3	0	11	70	222	502	926	1483	2014	2355	2544	2582	2585

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)