U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ARCHER, WY **COOP ID: 480270**

Climate Division: WY 8 **NWS Call Sign:** **Elevation: 6,010 Feet** **Lat: 41˚09N** **Lon: 104˚39W**

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	38.5	12.2	25.4	69	1987	13	33.0	1986	-27+	1963	12	13.6	1979	1228	0	.0	.0	5.9	8.3	30.0	5.3
Feb	42.0	15.1	28.6	71+	1962	12	36.0	1992	-29	1951	1	17.4	1989	1021	0	.0	.0	9.5	5.8	26.8	2.8
Mar	48.1	21.2	34.7	77	1953	29	40.8	1986	-13+	1996	25	29.3	1980	940	0	.0	.0	15.3	3.4	28.2	.8
Apr	55.9	27.9	41.9	82+	1989	23	49.0	1981	-8	1975	2	34.4	1983	693	0	.0	.0	21.4	1.3	21.3	.1
May	65.3	37.1	51.2	95	1969	26	56.2+	2000	17+	1954	2	44.4	1995	430	2	.0	.1	28.5	.0	7.1	.0
Jun	76.8	46.3	61.6	104	1954	24	66.7	1977	26	1951	2	55.1	1982	157	52	.1	2.5	29.8	.0	.5	.0
Jul	84.1	51.9	68.0	102+	1989	8	72.7	2000	31	1949	15	63.8	1971	32	125	.2	8.7	31.0	.0	.0	.0
Aug	82.7	50.7	66.7	102	1988	15	71.9	2000	34	1956	31	63.7	1997	47	99	@	5.6	31.0	.0	.0	.0
Sep	74.0	41.4	57.7	99	1978	5	63.3	1998	8	1985	30	53.2	1985	237	18	.0	1.7	28.9	.1	3.8	.0
Oct	62.1	31.0	46.6	88	1956	8	50.7	1973	-4	1991	31	43.2	1984	572	0	.0	.0	26.6	.5	16.2	.1
Nov	46.8	19.5	33.2	78+	1999	16	44.0	1999	-17	1976	27	24.6	1985	956	0	.0	.0	13.3	4.4	26.8	1.2
Dec	40.1	13.6	26.9	69	1998	2	36.4	1980	-30	1990	22	14.5	1983	1182	0	.0	.0	7.5	7.7	29.6	4.1
Ann	59.7	30.7	45.2	104	Jun 1954	24	72.7	Jul 2000	-30	Dec 1990	22	13.6	Jan 1979	7495	296	.3	18.6	248.7	31.5	190.3	14.4

\+ 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/normals/usnormals.html

(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

Issue Date: February 2004

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ARCHER, WY

COOP ID: 480270

Climate Division: WY 8 **NWS Call Sign:** **Elevation: 6,010 Feet** **Lat: 41°09N** **Lon: 104°39W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	.41	.35	1.95	1949	4	2.15	1980	.00	1983
Feb	.44	.35	1.53	1987	27	2.18	1987	.00	1983
Mar	1.11	.84	1.85	1990	6	4.19	1990	.04	1982
Apr	1.60	1.31	1.77	1988	22	3.88	1984	.34	1992
May	2.72	2.76	1.98+	2000	18	5.75	1995	.28	1974
Jun	2.46	2.32	2.78	1974	8	5.82	1995	.05	1980
Jul	2.20	1.81	2.64	1973	19	5.83	1977	.47	1971
Aug	1.96	1.76	1.96	1953	2	5.81	1997	.60	1971
Sep	1.58	1.21	1.57	1973	11	4.48	1973	.07	1992
Oct	.87	.67	1.43	1963	21	2.43	1986	.00	1988
Nov	.66	.53	.81	1955	11	1.78	1983	.04	1971
Dec	.45	.38	.86	1979	27	1.43	1973	.01	1991
Ann	16.46	16.22	2.78	Jun 1974	8	5.83	Jul 1977	.00+	Oct 1988

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	4.2	1.5	@	.0
Feb	4.1	1.4	.1	@
Mar	6.6	3.3	.5	.1
Apr	8.0	4.4	.9	.1
May	10.9	6.0	1.6	.5
Jun	9.5	5.4	1.5	.4
Jul	10.0	5.3	1.1	.4
Aug	9.3	5.0	1.0	.2
Sep	6.9	3.9	1.0	.3
Oct	5.2	2.5	.4	@
Nov	5.0	2.5	.1	.0
Dec	4.4	1.7	.1	.0
Ann	84.1	42.9	8.3	2.0

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.04	.08	.15	.21	.27	.34	.41	.50	.63	.83	1.02
Feb	.01	.02	.07	.13	.20	.29	.39	.53	.73	1.07	1.41
Mar	.14	.23	.39	.54	.70	.89	1.10	1.36	1.71	2.29	2.85
Apr	.42	.57	.80	1.01	1.21	1.42	1.66	1.93	2.30	2.87	3.41
May	.66	.92	1.32	1.67	2.02	2.39	2.80	3.29	3.94	4.95	5.91
Jun	.33	.53	.88	1.23	1.59	1.98	2.44	3.01	3.77	5.02	6.23
Jul	.57	.78	1.10	1.38	1.66	1.95	2.27	2.66	3.16	3.95	4.69
Aug	.57	.76	1.04	1.28	1.52	1.77	2.04	2.36	2.77	3.42	4.02
Sep	.21	.34	.56	.78	1.01	1.27	1.56	1.92	2.42	3.22	3.99
Oct	.04	.12	.26	.38	.52	.67	.85	1.08	1.38	1.88	2.37
Nov	.11	.17	.26	.35	.45	.55	.66	.80	.98	1.28	1.57
Dec	.04	.07	.13	.19	.26	.34	.43	.55	.71	.99	1.26
Ann	10.54	11.64	13.08	14.19	15.18	16.15	17.16	18.29	19.67	21.69	23.47

\+ 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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: ARCHER, WY **COOP ID: 480270**

Climate Division: WY 8 **NWS Call Sign:** **Elevation: 6,010 Feet** **Lat: 41°09N** **Lon: 104°39W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.4	7.2	2	1
Feb	6.4	5.5	2	1
Mar	9.0	6.1	1	1
Apr	6.9	5.7	1	#
May	1.4	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	1.1	.0	#	0
Oct	3.8	2.9	#	#
Nov	8.3	6.2	1	1
Dec	6.7	5.9	2	1
Ann	51.0	39.5	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	7.0	1972	12	31.5	1980	23	1980	28	9	1974
Feb	7.0	1984	26	20.3	1984	15	1980	8	9	1980
Mar	14.0	1973	14	37.0	1990	16	1990	8	6	1990
Apr	10.0	1984	21	27.5	1984	15	1984	22	3	1984
May	16.0	1978	6	18.5	1978	11	1978	6	1	1978
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	5.2	2000	24	7.0	1985	6	2000	24	1	1985
Oct	14.0	1997	25	17.2	1997	16	1997	26	2	1997
Nov	12.0	1979	20	23.7	1983	18	1979	30	9	1979
Dec	11.0	1973	30	21.5	1973	17	1979	1	7	1985
Ann	16.0	May 1978	6	37.0	Mar 1990	23	Jan 1980	28	9+	Feb 1980

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.0	2.6	.7	.4	.0
Feb	4.1	2.3	.6	.2	.0
Mar	4.9	3.1	1.1	.6	.1
Apr	3.4	1.8	.9	.4	@
May	.6	.5	.1	@	@
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.5	.4	.2	.1	.0
Oct	1.6	1.1	.4	.1	@
Nov	3.9	2.7	.8	.2	@
Dec	4.1	2.3	.7	.2	@
Ann	27.1	16.8	5.5	2.2	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	10.4	6.4	3.7	.6
Feb	9.8	4.3	1.9	.3
Mar	7.8	4.2	2.3	.4
Apr	3.5	1.9	1.0	.2
May	.3	.1	@	@
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.4	.3	.1	.0
Oct	1.4	.6	.3	.1
Nov	7.6	3.1	1.3	.6
Dec	11.5	5.6	3.0	.6
Ann	52.7	26.5	13.6	2.8

+ 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

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ARCHER, WY **COOP ID: 480270**

Climate Division: WY 8 **NWS Call Sign:** **Elevation: 6,010 Feet** **Lat: 41˚09N** **Lon: 104˚39W**

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	6/21	6/17	6/13	6/10	6/08	6/05	6/02	5/30	5/25
32	6/12	6/06	6/02	5/29	5/26	5/22	5/18	5/14	5/08
28	5/19	5/16	5/13	5/10	5/08	5/06	5/04	5/01	4/27
24	5/13	5/09	5/05	5/03	4/30	4/28	4/25	4/22	4/17
20	5/08	5/03	4/29	4/26	4/23	4/19	4/16	4/12	4/07
16	4/25	4/19	4/14	4/11	4/07	4/04	3/31	3/27	3/21

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	9/03	9/06	9/09	9/11	9/13	9/16	9/18	9/21	9/24
32	9/12	9/15	9/17	9/19	9/21	9/23	9/25	9/27	9/30
28	9/16	9/20	9/23	9/26	9/28	10/01	10/03	10/06	10/10
24	9/19	9/25	9/29	10/03	10/07	10/10	10/14	10/18	10/24
20	9/29	10/05	10/09	10/12	10/15	10/18	10/22	10/26	10/31
16	10/09	10/14	10/18	10/22	10/25	10/28	10/31	11/04	11/10

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	117	110	105	101	97	93	89	84	78
32	139	131	126	122	118	114	109	104	97
28	161	155	150	146	142	138	134	130	123
24	182	174	168	163	159	154	149	143	135
20	201	192	186	180	175	170	164	158	149
16	227	218	211	205	200	195	189	182	173

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ARCHER, WY **COOP ID: 480270**

Climate Division: WY 8 **NWS Call Sign:** **Elevation: 6,010 Feet** **Lat: 41˚09N** **Lon: 104˚39W**

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	1228	1021	940	693	430	157	32	47	237	572	956	1182	7495
60	1073	881	785	544	287	75	5	10	127	418	806	1027	6038
57	980	797	692	458	211	43	1	3	78	327	716	934	5240
55	918	741	630	402	167	27	0	1	53	269	656	872	4736
50	763	601	476	272	81	7	0	0	14	146	512	717	3589
32	269	178	63	20	0	0	0	0	0	2	117	232	881

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	63	80	146	317	596	885	1115	1075	771	453	151	72	5724
55	0	0	0	9	49	222	403	364	134	7	0	0	1188
57	0	0	0	5	32	178	342	303	99	3	0	0	962
60	0	0	0	1	15	121	253	217	58	1	0	0	666
65	0	0	0	0	2	52	125	99	18	0	0	0	296
70	0	0	0	0	0	15	42	28	3	0	0	0	88

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	7	23	64	161	376	655	885	842	556	264	62	19	7	30	94	255	631	1286	2171	3013	3569	3833	3895	3914
45	0	0	22	79	243	506	730	687	414	154	23	4	0	0	22	101	344	850	1580	2267	2681	2835	2858	2862
50	0	0	2	33	131	362	575	532	282	74	4	0	0	0	2	35	166	528	1103	1635	1917	1991	1995	1995
55	0	0	0	8	58	231	420	378	163	24	0	0	0	0	0	8	66	297	717	1095	1258	1282	1282	1282
60	0	0	0	0	13	120	270	231	78	3	0	0	0	0	0	0	13	133	403	634	712	715	715	715
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	16	32	75	144	262	416	556	534	375	221	73	28	16	48	123	267	529	945	1501	2035	2410	2631	2704	2732

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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