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: RIVERTON, WY **COOP ID: 487760**

Climate Division: WY 9 **NWS Call Sign:** **Elevation: 4,955 Feet** **Lat: 43˚02N** **Lon: 108˚22W**

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	30.0	-.3	14.9	63	1953	10	26.3	1990	-46+	1979	1	-4.7	1979	1557	0	.0	.0	1.5	17.0	30.9	15.7
Feb	37.6	6.5	22.1	71	1951	11	30.4	2000	-45	1936	8	5.1	1993	1202	0	.0	.0	4.9	9.6	28.2	8.8
Mar	50.2	19.5	34.9	78	1986	29	43.8	1986	-24	1920	6	24.1	1973	935	0	.0	.0	16.4	2.6	29.8	1.4
Apr	59.8	28.4	44.1	87	1987	29	49.2	1981	-18	1936	2	36.1	1973	626	0	.0	.0	23.3	.6	21.1	.1
May	69.5	38.1	53.8	96	1984	31	60.1	1994	18	1954	1	49.1	1983	352	5	.0	.1	29.2	.0	6.1	.0
Jun	81.1	46.2	63.7	102	1970	28	72.2	1988	26	1951	3	57.3	1998	126	86	.2	6.0	29.8	.0	.5	.0
Jul	89.0	51.5	70.3	104+	1990	1	73.7	1976	30	1986	7	64.4	1993	22	184	.8	15.6	31.0	.0	@	.0
Aug	87.5	48.8	68.2	103	1988	1	73.0	2000	30	1932	31	64.4	1974	40	138	.2	13.0	31.0	.0	.1	.0
Sep	75.8	38.7	57.3	98	1990	8	63.5	1998	9	1926	25	52.2	1984	253	20	.0	2.1	28.9	.1	6.3	.0
Oct	62.0	27.6	44.8	90	1980	1	50.1	1988	-7	1971	30	40.9	1984	626	0	.0	@	26.1	.4	23.7	.1
Nov	43.0	13.3	28.2	73+	1999	1	37.8	1999	-28	1985	23	14.9	2000	1104	0	.0	.0	9.9	6.5	29.7	4.4
Dec	30.7	1.1	15.9	65+	1995	2	29.8	1980	-46+	1983	23	-1.4	1983	1522	0	.0	.0	2.3	16.9	31.0	13.4
Ann	59.7	26.6	43.2	104+	Jul 1990	1	73.7	Jul 1976	-46+	Dec 1983	23	-4.7	Jan 1979	8365	433	1.2	36.8	234.3	53.7	207.4	43.9

\+ 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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1918-2001

(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: RIVERTON, WY **COOP ID: 487760**

Climate Division: WY 9 **NWS Call Sign:** **Elevation: 4,955 Feet** **Lat: 43˚02N** **Lon: 108˚22W**

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	.28	.18	.85	1995	16	1.44	1995	.00+	1992
Feb	.25	.21	.59	1935	24	.97	1986	.00+	1991
Mar	.48	.27	1.08	1998	7	2.95	1998	.01	1999
Apr	1.01	.87	1.53	1971	26	3.69	1999	.06	1992
May	1.78	1.67	3.53	1921	8	4.44	1978	.17	1994
Jun	1.14	.88	2.20	1993	3	5.95	1993	.00	1973
Jul	.73	.51	1.90+	1977	25	2.91	1977	.04	1999
Aug	.49	.42	1.54	1933	26	1.56	1976	.00	1985
Sep	.88	.60	2.14	1923	27	4.45	1973	.00+	1992
Oct	.81	.58	1.65	1924	19	3.60	1994	.00	1985
Nov	.47	.30	1.20	1996	29	2.13	1996	.00+	1989
Dec	.36	.17	2.05	1997	19	3.59	1997	.00+	1984
Ann	8.68	8.20	3.53	May 1921	8	5.95	Jun 1993	.00+	Sep 1992

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.1	.9	.1	.0
Feb	2.4	.8	.0	.0
Mar	3.6	1.4	.2	@
Apr	5.7	3.2	.4	.1
May	7.4	4.4	1.0	.2
Jun	5.6	2.6	.5	.2
Jul	4.6	1.9	.3	.1
Aug	4.1	1.4	.1	@
Sep	4.4	2.0	.4	.2
Oct	4.0	2.3	.4	.0
Nov	2.9	1.4	.1	@
Dec	2.3	.8	.1	.1
Ann	50.1	23.1	3.6	.9

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	.00	.00	.03	.09	.15	.21	.28	.36	.47	.65	.84
Feb	.00	.02	.06	.10	.14	.19	.24	.31	.40	.55	.69
Mar	.02	.05	.10	.16	.24	.32	.43	.57	.77	1.11	1.45
Apr	.12	.20	.34	.48	.63	.80	.99	1.23	1.55	2.09	2.61
May	.23	.37	.63	.88	1.14	1.43	1.76	2.18	2.74	3.66	4.55
Jun	.03	.10	.24	.40	.58	.80	1.06	1.39	1.85	2.64	3.42
Jul	.06	.11	.20	.30	.41	.54	.69	.89	1.15	1.60	2.04
Aug	.05	.11	.19	.26	.33	.41	.50	.60	.74	.96	1.18
Sep	.00	.03	.14	.27	.41	.59	.80	1.06	1.44	2.10	2.75
Oct	.02	.07	.18	.30	.42	.57	.75	.98	1.30	1.84	2.38
Nov	.00	.01	.06	.13	.20	.30	.41	.56	.78	1.16	1.54
Dec	.00	.01	.04	.09	.14	.21	.31	.43	.60	.91	1.23
Ann	4.68	5.37	6.30	7.03	7.71	8.37	9.08	9.88	10.86	12.34	13.65

\+ 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: 1918-2001
(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: RIVERTON, WY **COOP ID: 487760**

Climate Division: WY 9 **NWS Call Sign:** **Elevation: 4,955 Feet** **Lat: 43°02N** **Lon: 108°22W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	4.2	3.4	2	0
Feb	4.7	3.6	1	0
Mar	4.7	2.8	#	0
Apr	4.7	1.1	#	0
May	.4	.0	#	0
Jun	#	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.8	.0	#	0
Oct	2.6	.3	#	0
Nov	5.1	3.6	#	0
Dec	5.3	3.5	1	0
Ann	32.5	18.3	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	10.0	1984	14	15.9	1995	16+	1993	21	12	1993
Feb	10.0	1987	24	22.5	1987	14+	1993	28	13	1993
Mar	5.6	1997	4	21.7	1998	15+	1993	5	5	1993
Apr	17.0	1979	1	31.7	1999	9	1971	26	2	1999
May	5.0	1975	20	5.3	1975	12	1983	11	#	2000
Jun	#	1999	1	#	1999	#+	2000	24	#	2000
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	10.0	1982	14	13.0	1982	5	1984	24	#	2000
Oct	12.0	1971	30	23.0	1971	18+	1971	31	2	1971
Nov	8.0	1972	27	15.2	1985	6	1994	3	2	2000
Dec	15.0	1985	9	19.0+	1985	12+	1987	27	5	1997
Ann	17.0	Apr 1979	1	31.7	Apr 1999	18+	Oct 1971	31	13	Feb 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.9	1.5	.4	.1	@
Feb	2.9	1.6	.6	.2	@
Mar	2.6	1.7	.6	@	.0
Apr	2.0	1.3	.4	.2	@
May	.3	.2	.1	@	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.3	.2	.1	@	@
Oct	.9	.7	.2	.2	.1
Nov	2.6	1.5	.7	.2	.0
Dec	2.7	1.6	.4	.2	@
Ann	17.2	10.3	3.5	1.1	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	11.2	6.1	4.4	1.3
Feb	7.7	4.8	3.2	1.5
Mar	3.9	2.0	.9	.4
Apr	1.8	.7	.4	.0
May	.2	.1	.1	@
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.1	@	@	.0
Oct	.9	.4	.2	.1
Nov	3.8	1.4	.2	.0
Dec	9.9	4.6	2.1	.4
Ann	39.5	20.1	11.5	3.7

+ 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: RIVERTON, WY **COOP ID: 487760**

Climate Division: WY 9 **NWS Call Sign:** **Elevation: 4,955 Feet** **Lat: 43˚02N** **Lon: 108˚22W**

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	7/02	6/26	6/21	6/16	6/12	6/08	6/04	5/30	5/23
32	6/18	6/10	6/04	5/30	5/26	5/21	5/16	5/11	5/03
28	5/23	5/18	5/14	5/11	5/08	5/06	5/03	4/29	4/24
24	5/09	5/05	5/02	4/29	4/27	4/24	4/21	4/18	4/14
20	4/30	4/25	4/22	4/19	4/16	4/13	4/10	4/07	4/02
16	4/24	4/18	4/13	4/09	4/06	4/02	3/29	3/24	3/18

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	8/22	8/27	8/31	9/03	9/06	9/09	9/12	9/16	9/21
32	9/03	9/07	9/10	9/13	9/15	9/18	9/20	9/24	9/28
28	9/14	9/18	9/20	9/23	9/25	9/27	9/30	10/03	10/06
24	9/21	9/26	9/30	10/03	10/06	10/09	10/12	10/15	10/20
20	9/29	10/04	10/08	10/12	10/15	10/18	10/21	10/25	10/31
16	10/14	10/18	10/22	10/24	10/27	10/30	11/02	11/05	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	112	103	96	90	85	80	74	68	58
32	141	131	124	118	112	106	100	92	82
28	156	150	146	142	139	135	132	127	121
24	183	175	170	166	162	157	153	148	140
20	206	198	191	186	181	176	171	164	156
16	229	220	214	209	204	199	193	187	178

***** 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: RIVERTON, WY **COOP ID: 487760**

Climate Division: WY 9 **NWS Call Sign:** **Elevation: 4,955 Feet** **Lat: 43˚02N** **Lon: 108˚22W**

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	1557	1202	935	626	352	126	22	40	253	626	1104	1522	8365
60	1402	1062	780	478	217	57	4	9	143	471	954	1367	6944
57	1309	978	687	393	150	31	1	3	91	379	864	1274	6160
55	1247	922	625	338	112	19	0	2	64	319	804	1212	5664
50	1092	791	481	215	45	5	0	0	20	186	665	1060	4560
32	583	361	101	9	0	0	0	0	0	6	242	558	1860

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	49	83	189	373	676	950	1185	1121	757	403	127	59	5972
55	0	0	0	12	75	279	472	410	131	3	0	0	1382
57	0	0	0	7	51	231	411	349	98	1	0	0	1148
60	0	0	0	2	26	167	321	262	60	0	0	0	838
65	0	0	0	0	5	86	184	138	20	0	0	0	433
70	0	0	0	0	1	33	85	53	5	0	0	0	177

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	3	48	187	437	711	936	876	523	198	18	1	0	3	51	238	675	1386	2322	3198	3721	3919	3937	3938
45	0	0	15	101	297	561	781	721	385	102	1	0	0	0	15	116	413	974	1755	2476	2861	2963	2964	2964
50	0	0	1	44	177	414	626	566	257	36	0	0	0	0	1	45	222	636	1262	1828	2085	2121	2121	2121
55	0	0	0	13	91	279	471	411	145	10	0	0	0	0	0	13	104	383	854	1265	1410	1420	1420	1420
60	0	0	0	2	28	157	318	261	62	0	0	0	0	0	0	2	30	187	505	766	828	828	828	828
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	17	75	174	310	457	582	558	381	206	39	2	0	17	92	266	576	1033	1615	2173	2554	2760	2799	2801

(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