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: RICHFIELD, ID **COOP ID: 107673**

Climate Division: ID 7 **NWS Call Sign:** **Elevation: 4,282 Feet** **Lat: 43˚03N** **Lon: 114˚09W**

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	30.2	14.1	22.2	55	1953	25	31.4	1981	-38	1949	25	13.4	1979	1328	0	.0	.0	.2	15.5	30.5	4.2
Feb	36.3	18.5	27.4	65	1992	29	37.7	1991	-28	1985	1	15.2	1985	1054	0	.0	.0	3.0	7.9	27.0	2.2
Mar	47.2	26.0	36.6	76	1986	29	44.0	1992	-10+	1964	3	26.0	1985	881	0	.0	.0	13.6	.9	26.0	.3
Apr	58.2	31.7	45.0	90	1992	30	50.2	1987	10	1977	19	38.9	1975	601	0	.0	@	25.4	.0	17.8	.0
May	67.0	39.3	53.2	93	1954	19	60.9	1992	17+	1972	1	49.5	1975	373	6	.0	.2	30.1	.0	6.4	.0
Jun	76.7	45.8	61.3	101+	1994	21	66.3	1992	26	1954	2	56.6	1998	157	44	.2	3.6	30.0	.0	.8	.0
Jul	85.4	51.6	68.5	105+	1994	29	72.9	1998	29	1981	8	60.8	1993	44	152	.6	11.6	31.0	.0	@	.0
Aug	85.0	50.5	67.8	105	1990	9	72.9	1991	31+	1992	24	63.0	1976	57	144	.7	10.6	31.0	.0	@	.0
Sep	74.9	41.9	58.4	99+	1995	2	66.4	1990	21	1965	17	51.8	1985	234	36	.0	2.1	29.8	.0	3.3	.0
Oct	61.9	32.0	47.0	90	1992	1	54.8	1988	7	1971	29	42.0	1984	561	0	.0	@	27.0	.1	15.8	.0
Nov	43.2	23.4	33.3	72	1965	1	40.9	1999	-20	1955	16	24.0	1985	952	0	.0	.0	8.5	4.3	26.2	.7
Dec	32.1	15.4	23.8	60	1999	1	31.6	1980	-36	1990	22	12.8	1985	1279	0	.0	.0	.6	13.7	30.3	3.2
Ann	58.2	32.5	45.4	105+	Jul 1994	29	72.9+	Jul 1998	-38	Jan 1949	25	12.8	Dec 1985	7521	382	1.5	28.1	230.2	42.4	184.1	10.6

\+ 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

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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	1.62	1.64	1.86	1963	31	3.97	1980	.05	1992
Feb	1.28	1.07	1.08	1986	18	4.64	1986	.02	1988
Mar	1.14	1.01	1.24	1991	5	2.78	1975	.03	1992
Apr	.73	.75	.75	1981	20	1.51	1990	.06	1977
May	1.07	1.07	1.11	1958	12	2.83	1995	.00	1992
Jun	.64	.54	1.27	1963	10	2.08	1998	.00+	2000
Jul	.37	.18	1.36	1984	28	1.54	1982	.00+	2000
Aug	.32	.20	1.33	1968	20	1.28	1976	.00+	2000
Sep	.58	.46	1.21	1948	18	1.75	1978	.00+	1999
Oct	.72	.71	.81	1956	11	2.03	1989	.00+	1988
Nov	1.32	1.05	1.15	1988	23	4.33	1988	.00	1976
Dec	1.38	.91	1.66	1964	22	4.03	1983	.00	1989
Ann	11.17	10.37	1.86	Jan 1963	31	4.64	Feb 1986	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.1	5.0	.7	.1
Feb	7.0	3.9	.5	@
Mar	7.0	3.7	.3	@
Apr	6.3	2.6	.2	.0
May	6.8	3.4	.3	.0
Jun	5.0	2.4	.1	.0
Jul	2.6	1.1	.1	@
Aug	2.6	.8	.1	@
Sep	3.0	1.5	.2	.1
Oct	4.3	2.4	.3	.0
Nov	7.8	4.3	.4	.1
Dec	7.5	4.4	.6	.0
Ann	68.0	35.5	3.8	.3

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	.26	.40	.64	.86	1.09	1.34	1.63	1.98	2.45	3.21	3.94
Feb	.12	.21	.39	.56	.76	.98	1.23	1.56	2.00	2.74	3.47
Mar	.13	.22	.38	.54	.71	.90	1.12	1.39	1.76	2.37	2.96
Apr	.11	.18	.28	.38	.49	.60	.73	.90	1.11	1.46	1.80
May	.11	.23	.41	.56	.72	.89	1.08	1.31	1.62	2.12	2.60
Jun	.00	.00	.15	.26	.37	.50	.64	.81	1.04	1.43	1.80
Jul	.00	.00	.02	.06	.12	.20	.30	.44	.63	.98	1.34
Aug	.00	.00	.02	.06	.11	.18	.26	.38	.54	.83	1.12
Sep	.00	.00	.04	.15	.26	.39	.54	.72	.98	1.41	1.85
Oct	.00	.08	.21	.32	.44	.57	.72	.89	1.14	1.53	1.92
Nov	.07	.19	.40	.59	.80	1.03	1.30	1.63	2.09	2.83	3.56
Dec	.04	.13	.31	.51	.73	.99	1.29	1.69	2.23	3.15	4.06
Ann	6.93	7.71	8.73	9.52	10.23	10.93	11.66	12.47	13.48	14.95	16.24

\+ 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:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	8.0	7.6	6	5
Feb	6.8	5.3	6	4
Mar	3.0	2.5	2	#
Apr	.1	.0	#	0
May	.6	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.2	.0	#	0
Nov	6.1	5.9	1	#
Dec	9.9	8.3	3	2
Ann	34.7	29.6	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	1980	12	16.0	1976	23+	1989	9	17	1986
Feb	6.0	1986	13	20.3	1976	29	1985	12	24	1985
Mar	5.3	1975	22	12.7	1975	25	1985	7	16	1985
Apr	1.2	1975	5	1.2+	1975	2	1985	1	#+	1985
May	5.3	1983	11	5.3	1983	0	0	0	0	0
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	.0	0	0	.0	0	0	0	0	0	0
Oct	3.2	1971	31	3.2	1971	2	1971	31	#+	1997
Nov	12.0	1977	22	16.7	1977	21	1985	30	6	1985
Dec	9.2	1971	12	33.2	1983	26	1985	2	20	1985
Ann	12.0	Nov 1977	22	33.2	Dec 1983	29	Feb 1985	12	24	Feb 1985

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.1	3.2	1.0	.3	.1
Feb	3.1	2.4	.9	.2	.0
Mar	1.1	.9	.3	.1	.0
Apr	.1	.1	.0	.0	.0
May	.1	.1	.1	@	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.1	.1	@	.0	.0
Nov	2.7	1.7	.8	.3	@
Dec	3.4	2.7	1.1	.3	.0
Ann	14.7	11.2	4.2	1.2	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	24.6	21.5	17.2	5.1
Feb	15.9	13.1	10.9	3.7
Mar	5.2	3.6	2.6	1.0
Apr	@	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	@	.0	.0	.0
Nov	3.8	2.8	1.4	.1
Dec	10.5	6.7	3.5	1.5
Ann	60.0	47.7	35.6	11.4

+ 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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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	7/06	6/30	6/26	6/22	6/19	6/15	6/12	6/07	6/01
32	6/21	6/15	6/11	6/07	6/03	5/31	5/27	5/22	5/16
28	6/02	5/27	5/22	5/18	5/14	5/10	5/06	5/01	4/25
24	5/13	5/07	5/03	4/30	4/27	4/23	4/20	4/16	4/11
20	5/03	4/25	4/19	4/14	4/09	4/05	3/31	3/25	3/17
16	4/16	4/08	4/01	3/27	3/22	3/17	3/12	3/05	2/25

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	8/23	8/28	8/31	9/03	9/06	9/09	9/12	9/15	9/20
32	9/06	9/11	9/14	9/17	9/20	9/23	9/26	9/29	10/04
28	9/18	9/22	9/26	9/28	10/01	10/03	10/06	10/09	10/14
24	9/27	10/02	10/06	10/09	10/12	10/15	10/19	10/23	10/28
20	10/10	10/16	10/19	10/22	10/25	10/28	10/31	11/04	11/09
16	10/25	10/29	11/02	11/04	11/07	11/09	11/12	11/15	11/20

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	98	91	86	82	78	74	70	65	58
32	129	122	117	112	108	104	99	94	87
28	164	156	149	144	139	134	129	123	114
24	191	183	178	173	168	163	158	153	145
20	225	216	209	204	198	193	187	180	171
16	257	247	240	235	229	224	218	211	201

***** 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

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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	1328	1054	881	601	373	157	44	57	234	561	952	1279	7521
60	1173	914	726	452	237	74	11	18	135	409	802	1124	6075
57	1080	830	633	365	168	40	3	7	89	322	712	1031	5280
55	1018	774	572	311	130	25	1	4	64	267	652	969	4787
50	863	640	429	187	56	5	0	0	23	151	505	814	3673
32	344	229	75	4	0	0	0	0	0	2	109	313	1076

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	39	100	216	393	656	877	1131	1109	792	465	147	57	5982
55	0	0	0	10	72	212	419	400	166	17	0	0	1296
57	0	0	0	5	49	167	360	342	130	9	0	0	1062
60	0	0	0	1	24	111	275	259	86	3	0	0	759
65	0	0	0	0	6	44	152	144	36	0	0	0	382
70	0	0	0	0	0	12	68	64	11	0	0	0	155

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	5	53	197	426	661	913	891	574	269	31	1	0	5	58	255	681	1342	2255	3146	3720	3989	4020	4021
45	0	1	15	101	285	511	758	736	427	154	8	0	0	1	16	117	402	913	1671	2407	2834	2988	2996	2996
50	0	0	0	43	167	366	603	581	293	74	0	0	0	0	0	43	210	576	1179	1760	2053	2127	2127	2127
55	0	0	0	15	79	231	449	428	177	24	0	0	0	0	0	15	94	325	774	1202	1379	1403	1403	1403
60	0	0	0	2	31	125	300	280	85	5	0	0	0	0	0	2	33	158	458	738	823	828	828	828
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	6	51	164	295	429	581	569	397	215	26	0	0	6	57	221	516	945	1526	2095	2492	2707	2733	2733

(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

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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