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: RUPERT 3 WSW, ID **COOP ID: 107968**

Climate Division: ID 7 **NWS Call Sign:** **Elevation: 4,200 Feet** **Lat: 42˚36N** **Lon: 113˚45W**

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	34.4	15.5	25.0	61+	1953	13	33.7	1998	-33	1937	21	13.0	1979	1242	0	.0	.0	1.8	10.7	29.9	3.1
Feb	40.5	19.8	30.2	70	1950	27	38.7	1992	-31	1933	9	17.7	1985	976	0	.0	.0	5.8	5.0	26.2	1.3
Mar	50.2	25.9	38.1	79	1986	29	44.2	1986	-8	1985	4	26.4	1985	836	0	.0	.0	16.8	.9	25.7	.1
Apr	59.9	31.6	45.8	89	1992	30	51.2	1990	5	1936	2	38.9	1975	578	0	.0	.0	25.1	.0	15.2	.0
May	68.2	38.8	53.5	99	1983	28	59.7	1992	22	1999	11	49.5	1975	361	4	.0	.2	30.0	.0	3.7	.0
Jun	77.7	45.5	61.6	103	1954	23	67.2	1988	30+	2000	2	57.3	1984	147	45	.1	3.5	30.0	.0	.3	.0
Jul	85.5	49.9	67.7	105+	1934	29	72.8	1998	35+	1988	7	60.9	1993	44	128	.2	10.6	31.0	.0	.0	.0
Aug	85.6	47.9	66.8	104+	1954	3	71.2	2000	30	1992	25	62.3	1976	63	118	.3	11.1	31.0	.0	@	.0
Sep	75.7	39.2	57.5	99+	1955	7	64.5	1990	23	1984	25	51.8	1985	250	24	.0	2.0	29.9	.0	3.8	.0
Oct	63.4	30.2	46.8	91	1992	1	53.7	1988	15+	1997	26	42.2	1984	564	0	.0	@	27.6	.1	17.3	.0
Nov	46.2	22.8	34.5	76	1937	1	42.0	1999	-11	1955	16	24.5	1985	915	0	.0	.0	10.3	3.7	26.1	.5
Dec	35.9	15.6	25.8	66	1939	6	32.0	1977	-25+	1990	23	12.5	1985	1217	0	.0	.0	2.2	9.7	29.7	2.7
Ann	60.3	31.9	46.1	105+	Jul 1934	29	72.8	Jul 1998	-33	Jan 1937	21	12.5	Dec 1985	7193	319	.6	27.4	241.5	30.1	177.9	7.7

\+ 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: 1931-2001

(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	1.14	.92	1.16	1950	18	3.47	1980	.00	1992
Feb	.76	.70	.73	1937	5	2.39	1986	.06	1990
Mar	1.10	.96	.98	1946	13	2.57+	1993	.03	1994
Apr	.79	.70	.91	1981	20	2.20	1981	.04	1987
May	1.15	.99	1.50+	1991	3	4.31	1998	.04	1992
Jun	1.00	.91	1.83	1944	8	2.86	1998	.01	2000
Jul	.36	.28	.70	1997	30	1.16	1997	.00+	1990
Aug	.35	.26	.80	1983	9	1.30	1983	.00+	2000
Sep	.56	.38	.94	1978	6	1.85	1997	.00+	1999
Oct	.63	.63	.84+	1992	3	1.68	1982	.00+	1999
Nov	.99	.85	.93	1983	18	2.78	1983	.00	1993
Dec	1.01	.69	.82	1995	17	4.57	1996	.00	2000
Ann	9.84	9.56	1.83	Jun 1944	8	4.57	Dec 1996	.00+	Dec 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.0	3.4	.4	.0
Feb	8.0	2.4	.1	@
Mar	9.2	3.7	.2	.0
Apr	8.0	2.6	.1	.0
May	8.5	3.5	.4	@
Jun	6.2	2.4	.3	.1
Jul	3.0	1.4	.1	.0
Aug	3.4	.9	@	.0
Sep	4.4	1.9	.2	.0
Oct	5.7	2.2	.1	.0
Nov	8.4	3.2	.3	.0
Dec	7.9	2.9	.3	.0
Ann	81.7	30.5	2.5	.1

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	.11	.24	.43	.60	.77	.95	1.16	1.41	1.75	2.29	2.81
Feb	.13	.20	.31	.41	.52	.63	.76	.92	1.14	1.48	1.81
Mar	.22	.32	.49	.63	.78	.94	1.12	1.34	1.63	2.08	2.52
Apr	.12	.19	.31	.41	.53	.65	.79	.96	1.19	1.56	1.92
May	.17	.26	.43	.59	.76	.94	1.15	1.41	1.76	2.33	2.87
Jun	.07	.13	.26	.39	.55	.73	.94	1.22	1.60	2.24	2.89
Jul	.00	.00	.05	.10	.16	.23	.32	.43	.59	.86	1.14
Aug	.00	.00	.06	.11	.17	.24	.33	.43	.58	.83	1.07
Sep	.00	.03	.10	.19	.28	.39	.52	.69	.92	1.32	1.72
Oct	.00	.00	.18	.29	.40	.52	.65	.81	1.01	1.35	1.68
Nov	.11	.22	.39	.53	.68	.83	1.01	1.22	1.50	1.95	2.38
Dec	.02	.07	.18	.32	.48	.67	.91	1.22	1.65	2.40	3.15
Ann	5.45	6.22	7.25	8.06	8.80	9.53	10.31	11.17	12.25	13.86	15.28

\+ 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: 1931-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	2.5	.1	1	0	7.0	1985	21	8.5	1985	6	1979	31	4	1979	2.1	.9	.3	.2	.0	-9.9	-9.9	-9.9	-9.9
Feb	.9	.0	#	0	3.8	1983	7	4.6	1983	1	1978	16	#+	1999	.6	.4	.1	.0	.0	-9.9	-9.9	-9.9	-9.9
Mar	.2	.0	#	0	2.0	1988	16	2.0+	1988	2	1979	2	#+	2000	.3	.3	.0	.0	.0	.0	.0	.0	.0
Apr	#	.0	0	0	#	1984	25	#	1984	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.5	1988	1	.5	1988	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.8	1984	19	.8+	1984	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.7	.0	#	0	5.5	1979	23	5.5	1979	3	2000	16	#	2000	.8	.5	.2	.1	.0	-9.9	-9.9	-9.9	-9.9
Dec	1.3	-99.9	#	0	5.0	1994	5	5.0	1994	2	1988	21	#+	2000	.9	.7	.2	.1	.0	-9.9	-9.9	-9.9	-9.9
Ann	5.6	-9.9	N/A	N/A	7.0	Jan 1985	21	8.5	Jan 1985	6	Jan 1979	31	4	Jan 1979	4.9	2.8	.8	.4	.0	-9.9	-9.9	-9.9	-9.9

+ 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	7/01	6/25	6/21	6/17	6/14	6/10	6/07	6/03	5/28
32	6/08	6/02	5/28	5/25	5/21	5/17	5/13	5/09	5/02
28	5/16	5/12	5/08	5/05	5/02	4/29	4/26	4/23	4/18
24	5/03	4/27	4/22	4/19	4/15	4/12	4/08	4/03	3/28
20	4/16	4/09	4/04	3/31	3/27	3/23	3/18	3/13	3/06
16	3/29	3/21	3/16	3/11	3/06	3/02	2/25	2/19	2/11

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	8/25	8/30	9/02	9/05	9/08	9/11	9/14	9/18	9/23
32	9/04	9/09	9/13	9/16	9/19	9/21	9/25	9/28	10/03
28	9/17	9/22	9/26	9/30	10/03	10/06	10/09	10/13	10/18
24	10/05	10/10	10/14	10/17	10/20	10/23	10/26	10/29	11/03
20	10/15	10/21	10/25	10/28	10/31	11/04	11/07	11/11	11/17
16	10/21	10/28	11/01	11/06	11/09	11/13	11/17	11/22	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	107	100	95	90	86	82	77	72	64
32	145	136	130	125	120	115	110	104	95
28	174	167	161	157	153	148	144	139	131
24	211	203	197	192	187	182	177	171	163
20	245	236	229	223	218	212	207	200	190
16	280	269	261	254	248	241	234	226	215

***** 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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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	1242	976	836	578	361	147	44	63	250	564	915	1217	7193
60	1087	836	681	431	223	66	10	19	143	410	765	1062	5733
57	994	752	588	347	155	34	3	7	93	321	675	969	4938
55	932	696	527	293	117	20	1	4	67	264	615	907	4443
50	778	565	384	177	47	4	0	0	22	142	472	752	3343
32	295	177	49	4	0	0	0	0	0	1	96	265	887

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	76	124	236	416	667	888	1106	1078	764	461	171	71	6058
55	0	0	1	15	70	218	394	368	140	10	0	0	1216
57	0	0	0	9	46	172	334	310	107	5	0	0	983
60	0	0	0	3	22	114	248	229	66	1	0	0	683
65	0	0	0	0	4	45	128	118	24	0	0	0	319
70	0	0	0	0	0	12	49	45	6	0	0	0	112

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	76	213	443	670	888	866	556	260	44	4	0	17	93	306	749	1419	2307	3173	3729	3989	4033	4037
45	0	1	21	118	296	521	733	711	410	149	12	0	0	1	22	140	436	957	1690	2401	2811	2960	2972	2972
50	0	0	1	54	176	375	578	556	272	68	2	0	0	0	1	55	231	606	1184	1740	2012	2080	2082	2082
55	0	0	0	16	86	241	423	404	154	18	0	0	0	0	0	16	102	343	766	1170	1324	1342	1342	1342
60	0	0	0	3	35	137	277	257	72	2	0	0	0	0	0	3	38	175	452	709	781	783	783	783
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	16	66	167	295	424	560	552	390	226	40	2	0	16	82	249	544	968	1528	2080	2470	2696	2736	2738

(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