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: GROUSE CREEK, UT **COOP ID: 423486**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 5,320 Feet** **Lat: 41˚43N** **Lon: 113˚53W**

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	36.5	8.9	22.7	58	1994	20	30.6	1994	-26	1963	12	15.2	1984	1311	0	.0	.0	1.6	9.8	30.8	5.4
Feb	41.5	14.1	27.8	65+	1986	26	35.6	1995	-18	1982	5	16.7	1984	1041	0	.0	.0	4.5	4.6	27.6	2.7
Mar	49.3	23.0	36.2	75	1966	31	42.6	1986	-6	1960	1	31.0	1985	894	0	.0	.0	13.9	.9	28.4	.2
Apr	57.9	27.9	42.9	84+	1961	29	48.9	1987	4	1967	1	35.6	1975	663	0	.0	.0	22.9	@	21.4	.0
May	66.9	35.8	51.4	91	1960	12	58.1	1992	15	1961	5	47.1	1977	424	1	.0	.0	29.3	.0	9.2	.0
Jun	77.5	42.7	60.1	100	1988	25	65.4	1977	24	1960	21	55.8	1998	183	35	@	2.6	29.9	.0	1.9	.0
Jul	87.4	48.7	68.1	102	1998	21	71.6	1989	30	1968	1	60.5	1993	48	141	.1	12.7	31.0	.0	.1	.0
Aug	86.6	46.6	66.6	101	1992	3	70.3	1994	25	1965	31	62.3	1976	55	105	.1	10.5	31.0	.0	.3	.0
Sep	76.5	37.7	57.1	94+	1967	5	65.0	1990	16	1985	29	51.8	1971	254	18	.0	1.4	29.8	.0	5.7	.0
Oct	63.4	27.6	45.5	87	1996	9	53.2	1988	0	1971	30	39.9	1984	605	0	.0	.0	27.1	.1	21.5	@
Nov	46.6	18.7	32.7	86	1966	4	39.1	1995	-12	1993	25	24.9	1994	972	0	.0	.0	11.1	2.5	28.9	.7
Dec	37.6	10.3	24.0	63	1995	2	30.8	1980	-25+	1990	23	14.4	1990	1273	0	.0	.0	1.6	8.6	30.9	4.0
Ann	60.6	28.5	44.6	102	Jul 1998	21	71.6	Jul 1989	-26	Jan 1963	12	14.4	Dec 1990	7723	300	.2	27.2	233.7	26.5	206.7	13.0

\+ 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: 1959-2001

(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: GROUSE CREEK, UT **COOP ID: 423486**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 5,320 Feet** **Lat: 41°43N** **Lon: 113°53W**

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	1.00	.98	2.00	2001	20	1.87	1979	.15	1992
Feb	.87	.81	.66	1998	15	2.49	1986	.07	1991
Mar	.92	.87	.76	1973	22	2.42	1995	.16	1994
Apr	1.01	.82	.94	1978	7	2.86	1991	.10	1979
May	1.54	1.15	1.79	1996	28	4.25	1995	.02	1972
Jun	1.00	.99	1.01	1977	9	2.46	1983	.06	1974
Jul	.92	.60	1.95	1960	31	3.80	1984	.04	1992
Aug	.67	.45	.95	1961	8	2.00	1993	.00	1985
Sep	.79	.55	2.15	1960	2	3.73	1982	.00+	1987
Oct	.90	.53	1.86	1972	5	4.32	1972	.00+	1988
Nov	.98	1.01	1.15	1965	24	1.96	1973	.05	1974
Dec	.98	.65	.70+	1973	29	3.51	1983	.00+	1986
Ann	11.58	11.81	2.15	Sep 1960	2	4.32	Oct 1972	.00+	Oct 1988

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.0	3.7	.1	@
Feb	6.2	3.1	.2	.0
Mar	6.9	3.4	.1	.0
Apr	7.4	3.1	.3	.0
May	9.1	4.6	.5	.1
Jun	6.0	3.1	.4	@
Jul	4.9	2.6	.4	.1
Aug	5.5	2.2	.2	.0
Sep	4.6	2.1	.4	.0
Oct	4.6	2.4	.2	.1
Nov	6.8	3.3	.3	@
Dec	6.4	3.3	.2	.0
Ann	75.4	36.9	3.3	.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	.25	.35	.49	.62	.75	.88	1.03	1.21	1.44	1.81	2.15
Feb	.14	.22	.35	.47	.59	.73	.88	1.07	1.32	1.72	2.11
Mar	.19	.28	.41	.54	.66	.79	.94	1.12	1.36	1.73	2.09
Apr	.18	.27	.41	.55	.69	.85	1.02	1.23	1.51	1.96	2.40
May	.11	.21	.41	.62	.86	1.13	1.46	1.87	2.45	3.42	4.38
Jun	.09	.16	.30	.44	.59	.76	.97	1.22	1.58	2.16	2.74
Jul	.03	.07	.17	.29	.43	.60	.81	1.10	1.50	2.21	2.92
Aug	.03	.08	.18	.28	.39	.50	.65	.82	1.07	1.47	1.86
Sep	.00	.03	.12	.23	.36	.51	.71	.96	1.31	1.93	2.55
Oct	.00	.08	.23	.37	.52	.69	.88	1.12	1.44	1.98	2.51
Nov	.17	.25	.40	.53	.67	.82	.99	1.19	1.47	1.91	2.34
Dec	.00	.05	.18	.32	.49	.68	.91	1.20	1.61	2.30	3.00
Ann	6.97	7.81	8.91	9.77	10.55	11.31	12.11	13.00	14.11	15.73	17.16

\+ 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: 1959-2001
(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: GROUSE CREEK, UT **COOP ID: 423486**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 5,320 Feet** **Lat: 41°43N** **Lon: 113°53W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	9.9	8.0	7	6
Feb	8.9	8.5	6	4
Mar	3.8	3.0	1	#
Apr	.8	.0	#	0
May	#	.0	#	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.3	.0	#	0
Nov	7.1	4.8	1	#
Dec	9.7	5.6	3	2
Ann	40.5	29.9	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	6.0	1971	9	25.0	1971	23	1984	3	21	1984
Feb	7.0	1975	20	18.0	1993	26+	1993	25	22	1984
Mar	8.0	1973	22	14.0	1985	23	1984	2	14	1984
Apr	5.0	1978	7	5.0+	1986	3	1991	27	#+	1999
May	#	2000	12	#+	2000	3	1988	7	#+	2000
Jun	1.0	1995	8	1.0	1995	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	2.0	1975	26	3.0	1984	2	1984	17	#+	2000
Nov	10.5	1983	20	30.0	1985	11+	1985	29	9	1979
Dec	10.0	1996	21	53.0	1983	25	1983	28	17	1983
Ann	10.5	Nov 1983	20	53.0	Dec 1983	26+	Feb 1993	25	22	Feb 1984

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.3	4.1	1.1	.3	.0
Feb	3.2	3.2	1.1	.5	.0
Mar	1.4	1.3	.3	@	.0
Apr	.6	.5	@	@	.0
May	.0	.0	.0	.0	.0
Jun	@	@	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.2	.1	.0	.0	.0
Nov	2.4	2.2	.7	.3	@
Dec	3.6	3.3	1.4	.4	@
Ann	15.7	14.7	4.6	1.5	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	-9.9	-9.9	-9.9	-9.9
Feb	14.0	9.4	6.4	3.5
Mar	4.0	2.5	1.6	.9
Apr	.7	@	.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	.1	.0	.0	.0
Nov	5.1	4.2	2.2	.5
Dec	10.8	8.5	4.7	2.6
Ann	-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

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: GROUSE CREEK, UT **COOP ID: 423486**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 5,320 Feet** **Lat: 41˚43N** **Lon: 113˚53W**

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

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	8/12	8/19	8/24	8/28	8/31	9/04	9/08	9/13	9/19
32	8/26	9/01	9/05	9/08	9/11	9/15	9/18	9/22	9/28
28	9/08	9/13	9/17	9/20	9/23	9/26	9/29	10/02	10/07
24	9/16	9/22	9/25	9/29	10/02	10/05	10/08	10/12	10/18
20	9/24	10/01	10/06	10/10	10/14	10/18	10/23	10/28	11/04
16	10/14	10/19	10/23	10/26	10/30	11/02	11/05	11/09	11/14

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	96	86	78	72	66	60	54	47	36
32	115	105	99	93	88	82	76	70	60
28	147	138	131	125	120	115	109	102	93
24	176	167	160	155	149	144	138	132	122
20	198	190	183	178	173	168	162	156	147
16	238	229	222	215	210	204	198	191	181

***** 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: GROUSE CREEK, UT **COOP ID: 423486**

Climate Division: UT 1 **NWS Call Sign:** **Elevation: 5,320 Feet** **Lat: 41˚43N** **Lon: 113˚53W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1311	1041	894	663	424	183	48	55	254	605	972	1273	7723
60	1156	901	739	513	279	91	13	14	144	452	822	1118	6242
57	1063	817	646	427	202	52	4	4	93	363	732	1025	5428
55	1001	761	584	370	157	33	2	2	67	307	672	963	4919
50	846	621	432	240	72	8	0	0	23	184	523	808	3757
32	320	189	53	11	0	0	0	0	0	4	108	296	981

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	32	71	182	338	601	842	1117	1073	754	422	127	45	5604
55	0	0	0	7	45	186	405	362	130	12	0	0	1147
57	0	0	0	4	28	145	346	302	97	6	0	0	928
60	0	0	0	0	12	93	261	219	57	2	0	0	644
65	0	0	0	0	1	35	141	105	18	0	0	0	300
70	0	0	0	0	0	9	60	35	3	0	0	0	107

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	6	45	153	368	615	888	857	539	235	28	0	0	6	51	204	572	1187	2075	2932	3471	3706	3734	3734
45	0	0	10	75	235	469	733	702	395	128	4	0	0	0	10	85	320	789	1522	2224	2619	2747	2751	2751
50	0	0	0	26	129	326	578	547	263	50	0	0	0	0	0	26	155	481	1059	1606	1869	1919	1919	1919
55	0	0	0	5	55	200	425	393	150	15	0	0	0	0	0	5	60	260	685	1078	1228	1243	1243	1243
60	0	0	0	0	14	101	277	245	66	0	0	0	0	0	0	0	14	115	392	637	703	703	703	703
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	10	56	142	269	412	566	556	398	232	40	0	0	10	66	208	477	889	1455	2011	2409	2641	2681	2681

(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