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: NATURAL BRIDGES NATL MON, UT **COOP ID: 426053**

Climate Division: UT 7 **NWS Call Sign:** **Elevation: 6,500 Feet** **Lat: 37˚37N** **Lon: 109˚59W**

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	38.8	17.8	28.3	60+	1971	31	36.3	1986	-11+	1971	5	20.2	1979	1138	0	.0	.0	3.4	5.2	30.1	.8
Feb	43.9	22.6	33.3	68	1986	26	41.8	1995	-13	1989	5	28.1	1979	889	0	.0	.0	7.7	1.9	26.0	.4
Mar	50.9	28.0	39.5	77	1990	23	45.5	1999	6+	1975	28	32.5	1973	792	0	.0	.0	18.6	.3	21.7	.0
Apr	60.0	33.9	47.0	85	1981	30	54.2+	1992	6	1975	2	39.4	1975	543	1	.0	.0	25.9	.1	12.4	.0
May	70.5	42.6	56.6	92+	1969	29	62.3	2000	22	1975	6	51.1	1995	285	21	.0	.2	30.6	.0	3.1	.0
Jun	82.3	52.0	67.2	101	1970	24	73.3	1994	30	2001	14	62.6	1975	63	127	.0	6.3	30.0	.0	.1	.0
Jul	87.7	58.4	73.1	103+	1971	13	77.0	1996	41	1982	6	70.5	1983	2	251	.3	15.4	31.0	.0	.0	.0
Aug	85.0	56.9	71.0	99+	1969	10	75.0	2000	40	1968	23	68.6	1979	8	194	.0	8.6	31.0	.0	.0	.0
Sep	76.5	49.6	63.1	95	1995	1	66.8	1979	22	1985	4	58.2	1986	105	47	.0	1.2	30.0	.0	.5	.0
Oct	63.7	38.4	51.1	86	1980	1	57.6	1988	6	1971	30	44.9	1984	437	4	.0	.0	28.4	.1	6.8	.0
Nov	48.6	26.8	37.7	78	1973	8	45.7	1999	-2+	1975	29	31.4	2000	820	0	.0	.0	14.9	1.0	21.3	.1
Dec	40.0	19.1	29.6	61	1995	1	37.2	1980	-14	1990	22	21.5	1978	1098	0	.0	.0	4.4	4.7	29.9	.5
Ann	62.3	37.2	49.8	103+	Jul 1971	13	77.0	Jul 1996	-14	Dec 1990	22	20.2	Jan 1979	6180	645	.3	31.7	255.9	13.3	151.9	1.8

\+ 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: 1965-2001

(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	1.04	.93	.87	1978	15	2.76	1979	.02	1972
Feb	.75	.64	.82	1997	27	2.83	1980	.00	1972
Mar	1.14	.97	1.05	1995	6	3.23	1983	.00+	1997
Apr	.83	.82	.80	1994	27	2.25+	1999	.00	1989
May	.81	.72	1.15	1992	25	3.02	1992	.00	1974
Jun	.45	.15	.80	1999	5	1.59	1983	.00+	1989
Jul	1.16	.95	1.27	1969	18	3.12	1975	.00+	1993
Aug	1.48	1.12	1.39+	1984	16	4.81	1984	.00	1985
Sep	1.24	1.04	1.45	1965	18	4.40	1985	.08	1979
Oct	1.52	1.29	1.52	1972	19	8.02	1972	.00	1999
Nov	.97	.93	1.20	1966	8	2.66	1983	.00+	1992
Dec	.80	.51	1.16	1978	18	2.95	1992	.00+	1989
Ann	12.19	12.13	1.52	Oct 1972	19	8.02	Oct 1972	.00+	Oct 1999

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.5	3.4	.4	.0
Feb	5.1	2.7	.2	.0
Mar	7.3	3.8	.4	@
Apr	4.9	2.8	.3	.0
May	5.5	2.7	.4	@
Jun	2.9	1.3	.2	.0
Jul	6.9	3.5	.5	.1
Aug	6.8	3.9	.8	.3
Sep	5.8	3.3	.8	.1
Oct	5.5	3.5	1.1	.3
Nov	4.9	2.5	.7	.0
Dec	5.0	2.5	.4	@
Ann	67.1	35.9	6.2	.8

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	.07	.14	.27	.41	.57	.76	.98	1.26	1.66	2.32	2.98
Feb	.07	.15	.27	.38	.49	.62	.75	.92	1.15	1.51	1.86
Mar	.00	.11	.30	.48	.67	.88	1.13	1.42	1.83	2.50	3.16
Apr	.01	.06	.16	.27	.40	.56	.75	1.00	1.35	1.95	2.55
May	.03	.09	.20	.32	.45	.59	.77	.99	1.29	1.81	2.31
Jun	.00	.00	.01	.07	.14	.24	.36	.53	.77	1.20	1.64
Jul	.00	.15	.37	.56	.75	.95	1.18	1.45	1.82	2.42	2.99
Aug	.05	.16	.36	.58	.81	1.08	1.40	1.81	2.38	3.33	4.26
Sep	.12	.21	.38	.56	.74	.96	1.21	1.52	1.95	2.65	3.35
Oct	.05	.17	.38	.60	.84	1.12	1.45	1.86	2.43	3.39	4.34
Nov	.00	.11	.28	.44	.59	.77	.97	1.20	1.53	2.07	2.59
Dec	.00	.04	.15	.27	.41	.56	.75	.98	1.32	1.88	2.44
Ann	7.66	8.49	9.59	10.43	11.19	11.94	12.71	13.58	14.65	16.21	17.58

+ 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: 1965-2001
(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	11.4	8.9	4	3
Feb	4.6	3.0	3	2
Mar	6.0	4.0	1	#
Apr	2.6	.9	#	0
May	.1	.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	5.8	4.6	#	#
Dec	6.9	3.6	2	#
Ann	38.4	25.0	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	14.0	1987	16	34.5	1979	25	1973	20	18	1973
Feb	12.0	1997	27	12.0+	1978	24	1979	1	19	1979
Mar	10.5	1980	25	23.0	1981	20	1979	1	8	1979
Apr	7.6	1999	2	14.3	1975	8	1999	2	1+	1999
May	2.5	1993	5	2.5	1993	3	1993	5	#+	1993
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	5.0	1971	29	8.0	1971	4	1971	30	1	1998
Nov	8.0	1979	20	20.0	1979	12	1979	20	3	1979
Dec	14.0	1972	29	31.0	1972	21	1972	29	7	1978
Ann	14.0+	Jan 1987	16	34.5	Jan 1979	25	Jan 1973	20	19	Feb 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	4.6	3.5	1.6	.8	.1
Feb	2.1	1.6	.9	.3	@
Mar	3.0	2.1	.7	.2	@
Apr	1.1	.8	.4	.2	.0
May	.2	.1	.0	.0	.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	.6	.5	.1	@	.0
Nov	2.1	1.6	.8	.3	.0
Dec	3.2	2.1	1.1	.4	@
Ann	16.9	12.3	5.6	2.2	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	18.2	13.4	9.1	2.9
Feb	11.1	7.0	4.9	.2
Mar	2.4	.6	.2	.0
Apr	.6	.2	.1	.0
May	.1	@	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.3	.1	.0	.0
Nov	2.8	1.5	.6	.1
Dec	9.2	6.6	3.3	.9
Ann	44.7	29.4	18.2	4.1

+ 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	6/13	6/07	6/03	5/30	5/27	5/23	5/20	5/15	5/10
32	6/01	5/26	5/21	5/17	5/14	5/10	5/06	5/02	4/26
28	5/14	5/08	5/04	4/30	4/27	4/23	4/20	4/15	4/10
24	4/30	4/22	4/17	4/13	4/09	4/04	3/31	3/26	3/19
20	4/18	4/10	4/04	3/30	3/26	3/21	3/16	3/10	3/02
16	4/09	3/30	3/23	3/17	3/12	3/06	2/28	2/21	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	9/15	9/20	9/25	9/28	10/01	10/05	10/08	10/13	10/18
32	9/21	9/27	10/02	10/06	10/09	10/13	10/17	10/21	10/28
28	10/03	10/09	10/14	10/18	10/22	10/25	10/29	11/03	11/09
24	10/11	10/18	10/23	10/27	10/31	11/04	11/08	11/13	11/20
20	10/28	11/02	11/05	11/08	11/10	11/13	11/16	11/19	11/24
16	11/08	11/13	11/16	11/19	11/22	11/25	11/27	12/01	12/06

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	155	145	139	133	127	122	116	109	99
32	173	164	158	153	148	143	137	131	122
28	201	193	187	182	177	173	168	162	154
24	235	225	217	211	205	199	192	184	174
20	255	246	240	234	229	224	219	212	203
16	291	279	270	262	255	247	240	231	218

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1138	889	792	543	285	63	2	8	105	437	820	1098	6180
60	983	749	637	401	169	21	0	0	37	297	670	943	4907
57	890	665	548	320	115	9	0	0	17	224	580	850	4218
55	828	609	490	270	86	5	0	0	9	181	522	788	3788
50	673	469	350	165	34	0	0	0	1	96	380	633	2801
32	197	80	42	6	0	0	0	0	0	1	45	160	531

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	82	115	273	454	759	1054	1272	1208	932	592	216	85	7042
55	0	0	8	28	132	369	559	495	251	59	2	0	1903
57	0	0	4	18	100	313	497	433	199	40	1	0	1605
60	0	0	1	9	61	235	404	340	130	19	0	0	1199
65	0	0	0	1	21	127	251	194	47	4	0	0	645
70	0	0	0	0	5	53	116	79	9	0	0	0	262

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	2	27	104	270	549	852	1061	995	720	384	86	7	2	29	133	403	952	1804	2865	3860	4580	4964	5050	5057
45	0	1	42	157	401	702	906	840	570	251	28	0	0	1	43	200	601	1303	2209	3049	3619	3870	3898	3898
50	0	0	8	75	260	552	751	685	423	140	4	0	0	0	8	83	343	895	1646	2331	2754	2894	2898	2898
55	0	0	0	24	147	404	596	530	286	62	0	0	0	0	0	24	171	575	1171	1701	1987	2049	2049	2049
60	0	0	0	4	57	265	441	375	156	16	0	0	0	0	0	4	61	326	767	1142	1298	1314	1314	1314
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	2	21	83	190	353	547	689	651	456	244	62	5	2	23	106	296	649	1196	1885	2536	2992	3236	3298	3303

(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