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: VERNON, UT **COOP ID: 429133**

Climate Division: UT 3 **NWS Call Sign:** **Elevation: 5,485 Feet** **Lat: 40˚05N** **Lon: 112˚27W**

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	40.6	12.7	26.7	61+	1996	8	34.8	1998	-22+	1979	30	17.1	1979	1190	0	.0	.0	4.6	7.1	30.0	4.6
Feb	45.6	17.4	31.5	67+	1986	25	39.5	1995	-25+	1982	6	23.0	1984	939	0	.0	.0	8.3	2.8	26.5	2.2
Mar	53.0	24.5	38.8	73+	1986	28	44.4	1986	-10	1966	4	32.2	1976	813	0	.0	.0	17.4	.7	26.0	.2
Apr	61.5	29.5	45.5	85	1992	29	52.1	1990	3	1955	5	39.2	1975	586	0	.0	.0	24.4	.0	19.4	.0
May	71.5	37.0	54.3	93	2001	25	59.2	1992	16	1983	12	49.4	1995	343	9	.0	.2	30.0	.0	7.9	.0
Jun	83.1	45.7	64.4	101	1974	15	70.0	1994	22	2001	13	57.5	1998	113	94	.1	5.9	30.0	.0	.8	.0
Jul	91.2	53.0	72.1	104+	2001	2	76.0	1988	35+	1982	6	66.1	1993	8	227	.4	17.3	31.0	.0	.0	.0
Aug	89.2	52.0	70.6	102+	1996	12	73.9	1982	24	1964	29	66.7	1993	14	186	.3	12.8	31.0	.0	.1	.0
Sep	79.1	42.5	60.8	96+	1995	1	66.2	1990	16	1965	18	55.7	1971	162	36	.0	1.9	29.8	.0	3.1	.0
Oct	66.5	32.0	49.3	89	2000	2	56.2	1988	-4	1971	30	43.4	1984	490	1	.0	.0	27.8	.2	15.6	@
Nov	50.7	21.3	36.0	77	1999	12	43.7	1999	-9	1993	25	29.2	2000	870	0	.0	.0	14.7	1.6	26.6	.7
Dec	41.6	13.0	27.3	76	1965	6	33.3	1980	-26	1990	23	19.4	1990	1169	0	.0	.0	5.7	6.2	29.9	3.5
Ann	64.5	31.7	48.1	104+	Jul 2001	2	76.0	Jul 1988	-26	Dec 1990	23	17.1	Jan 1979	6697	553	.8	38.1	254.7	18.6	185.9	11.2

\+ 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: 1953-2001

(3) Derived from 1971-2000 serially complete daily data

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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	.75	.61	.79	1954	24	2.68	1993	.08	1989
Feb	.86	.87	1.13	2000	17	2.19	1996	.00	1988
Mar	1.09	1.01	1.05	1986	9	2.62	1986	.07	1972
Apr	.86	.71	.92	1986	2	1.97	1995	.06	1977
May	1.21	.86	1.20	1975	20	3.34	1995	.04	1972
Jun	.71	.37	1.42	1990	1	2.76	1997	.00+	1994
Jul	.84	.82	1.19	1968	30	2.95	1985	.00+	2000
Aug	.88	.65	1.02	1971	17	3.52	1983	.00	1985
Sep	.92	.57	1.69	1982	26	5.35	1982	.00+	1979
Oct	1.13	1.12	1.01	1979	20	2.90	1981	.00+	1999
Nov	.90	.79	.97	1973	3	2.48	1973	.01	1999
Dec	.62	.48	.78	1992	12	2.13	1983	.00	1976
Ann	10.77	11.28	1.69	Sep 1982	26	5.35	Sep 1982	.00+	Jul 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.4	2.5	.1	.0
Feb	5.2	2.8	.3	.1
Mar	6.8	3.7	.3	@
Apr	6.3	2.9	.2	.0
May	7.3	3.8	.5	.1
Jun	3.9	2.1	.3	@
Jul	4.7	2.5	.4	@
Aug	5.2	2.6	.5	@
Sep	4.8	2.3	.4	.2
Oct	5.4	3.3	.6	@
Nov	5.1	2.6	.4	.0
Dec	4.8	2.2	.1	.0
Ann	64.9	33.3	4.1	.4

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	.10	.16	.26	.37	.48	.60	.74	.91	1.14	1.53	1.90
Feb	.05	.13	.27	.39	.53	.68	.85	1.06	1.35	1.83	2.30
Mar	.21	.31	.47	.62	.76	.92	1.10	1.32	1.61	2.08	2.52
Apr	.15	.23	.36	.47	.59	.72	.87	1.05	1.29	1.67	2.03
May	.14	.23	.40	.57	.75	.95	1.18	1.47	1.87	2.52	3.15
Jun	.00	.00	.11	.22	.35	.49	.66	.88	1.18	1.69	2.20
Jul	.00	.11	.27	.40	.54	.68	.85	1.05	1.32	1.76	2.18
Aug	.03	.09	.21	.33	.47	.63	.82	1.07	1.41	1.98	2.55
Sep	.00	.09	.26	.40	.56	.72	.91	1.15	1.46	1.99	2.49
Oct	.00	.23	.46	.64	.81	.99	1.19	1.41	1.72	2.20	2.66
Nov	.09	.15	.28	.40	.54	.69	.87	1.10	1.41	1.92	2.42
Dec	.02	.07	.16	.25	.34	.46	.59	.76	.99	1.38	1.76
Ann	5.61	6.49	7.68	8.63	9.49	10.36	11.27	12.31	13.60	15.53	17.25

\+ 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: 1953-2001
(3) Derived from 1971-2000 serially complete daily data

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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	6.0	2	1
Feb	8.1	7.0	2	1
Mar	6.1	5.8	#	#
Apr	2.6	1.0	#	#
May	.2	.0	#	0
Jun	.2	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.2	.0	#	0
Oct	1.3	.0	#	0
Nov	5.4	4.0	1	#
Dec	6.5	5.0	1	1
Ann	38.6	28.8	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	8.0	1987	5	32.0	1993	16	1993	11	11	1993
Feb	9.0	2000	17	19.6	1998	13	1989	4	9	1993
Mar	11.0	1980	21	23.0	1980	11	1980	21	3	1976
Apr	6.0	1998	15	9.0+	1998	4	1998	15	#+	1999
May	2.0	1974	20	2.0+	1980	12	1975	20	1	1975
Jun	5.0	1990	1	5.0	1990	5	1990	1	#	1990
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	3.0	1971	30	3.0	1971	4	1982	29	#+	1986
Oct	7.5	1972	29	7.5	1972	4	1984	26	1	1984
Nov	10.0	1973	3	16.0	1994	11	1973	18	2	1983
Dec	8.0	1972	29	21.0	1983	12	1981	28	6	1982
Ann	11.0	Mar 1980	21	32.0	Jan 1993	16	Jan 1993	11	11	Jan 1993

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.6	3.4	1.2	.3	.0
Feb	3.3	3.2	1.2	.4	.0
Mar	2.2	2.2	.8	.2	@
Apr	1.1	1.1	.3	@	.0
May	.1	.1	.0	.0	.0
Jun	@	@	@	@	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.1	.1	@	.0	.0
Oct	.6	.5	.2	@	.0
Nov	2.5	2.4	.6	.3	@
Dec	3.0	2.8	1.0	.3	.0
Ann	16.5	15.8	5.3	1.5	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.8	3.1	1.8	.4
Feb	6.1	3.3	1.7	.4
Mar	2.3	.9	.2	.1
Apr	.5	.2	.0	.0
May	@	.0	.0	.0
Jun	@	@	@	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	@	@	.0	.0
Oct	.6	.3	.0	.0
Nov	3.7	1.9	.3	.0
Dec	4.8	3.0	1.3	.1
Ann	24.8	12.7	5.3	1.0

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

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	8/26	8/31	9/04	9/07	9/10	9/13	9/16	9/20	9/25
32	9/08	9/12	9/15	9/18	9/20	9/23	9/26	9/29	10/03
28	9/19	9/23	9/26	9/28	10/01	10/03	10/06	10/08	10/13
24	9/22	9/28	10/03	10/07	10/10	10/14	10/18	10/22	10/28
20	10/12	10/17	10/21	10/24	10/27	10/30	11/03	11/06	11/12
16	10/21	10/26	10/30	11/02	11/04	11/07	11/10	11/13	11/18

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	108	101	95	90	86	82	77	71	64
32	129	123	119	115	112	108	105	100	94
28	155	148	144	140	136	132	128	124	117
24	185	176	170	164	159	154	148	142	133
20	216	207	201	195	190	184	178	172	163
16	255	243	235	227	220	213	206	197	185

***** 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	1190	939	813	586	343	113	8	14	162	490	870	1169	6697
60	1035	799	658	441	214	50	1	2	75	341	720	1014	5350
57	942	715	566	358	150	27	0	0	41	260	630	921	4610
55	880	659	505	306	115	17	0	0	25	211	571	859	4148
50	725	520	360	192	49	4	0	0	5	111	428	704	3098
32	251	129	34	8	0	0	0	0	0	1	68	210	701

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	84	114	243	412	689	971	1243	1195	864	535	188	64	6602
55	0	0	2	20	91	298	530	482	199	32	1	0	1655
57	0	0	0	13	65	248	468	420	155	19	0	0	1388
60	0	0	0	5	35	181	376	329	99	7	0	0	1032
65	0	0	0	0	9	94	227	186	36	1	0	0	553
70	0	0	0	0	1	38	105	77	8	0	0	0	229

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	19	73	192	433	722	988	940	618	302	64	7	2	21	94	286	719	1441	2429	3369	3987	4289	4353	4360
45	0	2	25	99	291	572	833	785	474	179	21	1	0	2	27	126	417	989	1822	2607	3081	3260	3281	3282
50	0	0	3	42	169	424	678	630	334	83	0	0	0	0	3	45	214	638	1316	1946	2280	2363	2363	2363
55	0	0	0	15	79	286	523	475	206	27	0	0	0	0	0	15	94	380	903	1378	1584	1611	1611	1611
60	0	0	0	0	29	170	369	322	100	4	0	0	0	0	0	0	29	199	568	890	990	994	994	994
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	27	75	168	313	475	621	601	430	251	69	14	3	30	105	273	586	1061	1682	2283	2713	2964	3033	3047

(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