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: HEBER, UT **COOP ID: 423809**

Climate Division: UT 5 **NWS Call Sign:** **Elevation: 5,630 Feet** **Lat: 40˚30N** **Lon: 111˚25W**

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	11.2	23.9	59	1974	16	33.3	1981	-35	1952	2	13.4	1984	1276	0	.0	.0	2.0	11.1	30.2	7.4
Feb	42.1	14.5	28.3	68	1995	24	36.9	2000	-36	1982	6	18.5	1985	1027	0	.0	.0	4.3	4.8	27.6	4.3
Mar	51.9	23.5	37.7	74	1972	9	43.8	1986	-17	1964	8	31.0	1976	846	0	.0	.0	16.0	.5	27.4	.3
Apr	62.1	29.2	45.7	85+	1992	29	52.4	1992	3	1929	8	39.8	1975	579	0	.0	.0	25.1	@	20.5	.0
May	71.8	36.1	54.0	92+	2001	26	59.4	1992	15	1972	1	48.7	1975	347	4	.0	.1	29.9	.0	8.6	.0
Jun	82.0	42.4	62.2	100	2001	30	66.1	1988	18	1999	5	57.3	1998	129	45	.0	3.2	30.0	.0	1.6	.0
Jul	89.4	49.0	69.2	105	1931	23	72.3	2000	31+	1932	5	65.1	1993	13	144	.3	11.6	31.0	.0	.0	.0
Aug	88.3	47.9	68.1	102	2000	1	72.5	2000	28+	1932	31	63.9	1975	31	128	.2	9.1	31.0	.0	.2	.0
Sep	79.4	40.1	59.8	98	2001	24	65.0	1990	16	1941	28	55.3	1986	180	23	.0	1.0	29.8	.0	5.3	.0
Oct	67.2	30.7	49.0	88+	1933	27	53.4	1988	6	1971	30	43.2	1984	497	0	.0	.0	28.0	.1	20.4	.0
Nov	49.8	22.0	35.9	78	1999	15	43.6	1999	-21	1955	16	29.4	2000	873	0	.0	.0	13.8	2.3	27.1	.6
Dec	38.5	13.2	25.9	68	1995	1	33.2	1980	-34+	1932	12	17.4	1990	1213	0	.0	.0	3.1	8.9	30.2	4.7
Ann	63.3	30.0	46.6	105	Jul 1931	23	72.5	Aug 2000	-36	Feb 1982	6	13.4	Jan 1984	7011	344	.5	25.0	244.0	27.7	199.1	17.3

\+ 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: 1928-2001

(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	1.86	1.38	2.02	1963	31	8.41	1980	.16	1992
Feb	1.71	1.69	1.80	1937	14	4.78	1986	.28	1981
Mar	1.47	1.42	1.32	1936	31	2.93	1995	.25	1971
Apr	1.28	1.18	1.10	1929	5	2.84	1978	.20	1987
May	1.48	1.45	1.72	1937	30	4.72	1995	.01	1974
Jun	.84	.79	1.42	1943	1	3.44	1998	.02	1979
Jul	.83	.69	1.66	1932	17	2.81	1985	.00	1978
Aug	.97	.76	1.04	1973	21	2.94	1983	.06	1974
Sep	1.27	1.11	1.10+	1970	5	5.55	1982	.03	1974
Oct	1.62	1.63	2.13	1946	28	4.28	1972	.04	1978
Nov	1.50	1.23	1.62	1955	14	3.64	1985	.00	1976
Dec	1.39	1.13	1.40	1955	23	4.11	1983	.04	1976
Ann	16.22	16.37	2.13	Oct 1946	28	8.41	Jan 1980	.00+	Jul 1978

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.3	5.0	.9	.2
Feb	7.8	4.5	1.1	.2
Mar	9.2	4.2	.8	@
Apr	8.4	4.4	.4	@
May	9.2	4.7	.5	.2
Jun	5.1	2.5	.5	.0
Jul	6.0	2.3	.2	@
Aug	6.5	3.0	.5	@
Sep	6.8	3.6	.7	.1
Oct	6.8	4.0	1.0	.2
Nov	7.8	4.5	.8	.1
Dec	7.7	4.4	.5	.0
Ann	90.6	47.1	7.9	1.0

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	.22	.37	.63	.89	1.16	1.47	1.83	2.27	2.87	3.86	4.82
Feb	.33	.49	.74	.97	1.20	1.45	1.74	2.08	2.53	3.26	3.95
Mar	.40	.54	.75	.94	1.12	1.31	1.52	1.77	2.10	2.61	3.09
Apr	.38	.51	.69	.85	1.00	1.16	1.33	1.53	1.80	2.21	2.60
May	.14	.24	.44	.65	.87	1.13	1.43	1.81	2.32	3.19	4.04
Jun	.04	.09	.19	.30	.43	.58	.77	1.01	1.36	1.94	2.53
Jul	.04	.11	.24	.36	.49	.63	.80	1.02	1.31	1.79	2.26
Aug	.11	.18	.32	.46	.60	.76	.95	1.18	1.50	2.03	2.54
Sep	.10	.18	.34	.52	.71	.94	1.21	1.54	2.01	2.80	3.58
Oct	.14	.25	.47	.69	.94	1.22	1.56	1.98	2.56	3.53	4.49
Nov	.19	.38	.63	.84	1.06	1.29	1.54	1.84	2.24	2.88	3.49
Dec	.12	.22	.41	.60	.81	1.05	1.34	1.70	2.19	3.01	3.83
Ann	9.32	10.55	12.18	13.46	14.62	15.76	16.96	18.32	19.99	22.47	24.66

\+ 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: 1928-2001
(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	21.0	17.0	8	7
Feb	15.6	12.0	8	8
Mar	5.9	5.4	2	1
Apr	3.2	2.5	#	0
May	1.2	.0	#	0
Jun	#	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.1	.0	#	0
Oct	1.5	.0	#	0
Nov	8.7	6.0	1	1
Dec	13.4	11.0	4	3
Ann	70.6	53.9	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	28.0	1980	29	68.0	1993	39	1980	29	19	1993
Feb	18.0	1989	3	40.0	1990	32	1973	11	25	1973
Mar	9.0	1977	25	15.0	1977	19	1973	1	10	1973
Apr	6.0	1994	28	10.0	1984	2	1973	1	#+	1994
May	8.0	1975	20	12.0	1975	4	1975	20	#+	2000
Jun	#	1998	17	#+	1998	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	2.5	1982	29	3.0	1982	2	1982	29	#+	2000
Oct	9.0	1984	17	12.0	1984	7	1984	17	1	1984
Nov	10.0	1978	11	26.5	1994	13	1975	29	5	1978
Dec	14.0	1996	22	48.0	1983	23	1983	25	12	1983
Ann	28.0	Jan 1980	29	68.0	Jan 1993	39	Jan 1980	29	25	Feb 1973

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	7.1	5.9	2.5	1.4	.2
Feb	5.2	4.6	2.1	1.0	.2
Mar	3.1	2.5	.7	.2	.0
Apr	1.5	1.3	.4	@	.0
May	.5	.5	.2	.1	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.1	@	.0	.0	.0
Oct	.7	.5	.2	.1	.0
Nov	3.8	3.4	1.3	.6	@
Dec	5.2	4.6	1.9	.9	.1
Ann	27.2	23.3	9.3	4.3	.5

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	24.6	21.1	17.8	12.6
Feb	21.0	17.9	16.1	11.3
Mar	8.2	6.2	4.7	2.1
Apr	.1	.0	.0	.0
May	.1	@	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	@	.0	.0	.0
Oct	.3	.2	.1	.0
Nov	5.6	3.4	2.2	.3
Dec	17.4	12.3	8.8	4.0
Ann	77.3	61.1	49.7	30.3

+ 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	7/07	7/01	6/27	6/24	6/21	6/18	6/14	6/10	6/05
32	6/20	6/15	6/11	6/07	6/04	6/01	5/29	5/25	5/19
28	6/06	5/31	5/26	5/22	5/18	5/14	5/10	5/05	4/29
24	5/18	5/11	5/07	5/03	4/29	4/25	4/21	4/16	4/10
20	5/10	5/02	4/26	4/21	4/16	4/12	4/07	4/01	3/24
16	4/19	4/10	4/05	3/30	3/26	3/21	3/16	3/10	3/02

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	8/13	8/20	8/25	8/30	9/03	9/07	9/11	9/16	9/23
32	8/30	9/04	9/08	9/12	9/15	9/18	9/21	9/25	10/01
28	9/15	9/19	9/21	9/24	9/26	9/29	10/01	10/04	10/08
24	9/21	9/26	10/01	10/04	10/08	10/11	10/14	10/19	10/24
20	10/09	10/13	10/17	10/20	10/22	10/25	10/28	10/31	11/05
16	10/21	10/25	10/28	10/31	11/03	11/05	11/08	11/11	11/16

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	101	91	84	78	73	68	62	55	45
32	126	118	112	107	102	97	92	86	78
28	153	145	140	135	131	126	122	116	109
24	191	181	173	167	161	155	148	141	131
20	216	207	200	194	188	183	177	170	160
16	248	239	232	226	221	216	210	204	195

***** 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	1276	1027	846	579	347	129	13	31	180	497	873	1213	7011
60	1121	887	691	432	211	53	1	5	82	344	723	1058	5608
57	1028	803	598	348	145	26	0	1	43	257	633	965	4847
55	966	747	537	294	108	14	0	0	25	204	573	903	4371
50	811	610	391	177	42	2	0	0	4	97	427	748	3309
32	317	200	48	4	0	0	0	0	0	0	66	253	888

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	64	97	225	415	680	906	1154	1120	833	526	184	63	6267
55	0	0	1	15	75	230	441	407	168	17	0	0	1354
57	0	0	0	8	50	181	379	346	125	8	0	0	1097
60	0	0	0	3	23	119	287	257	74	2	0	0	765
65	0	0	0	0	4	45	144	128	23	0	0	0	344
70	0	0	0	0	0	10	46	43	4	0	0	0	103

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	59	185	414	638	878	837	559	268	50	2	0	5	64	249	663	1301	2179	3016	3575	3843	3893	3895
45	0	0	16	88	267	490	723	682	411	142	13	0	0	0	16	104	371	861	1584	2266	2677	2819	2832	2832
50	0	0	0	30	150	343	568	527	272	57	0	0	0	0	0	30	180	523	1091	1618	1890	1947	1947	1947
55	0	0	0	4	59	208	413	374	147	10	0	0	0	0	0	4	63	271	684	1058	1205	1215	1215	1215
60	0	0	0	0	13	99	261	225	55	0	0	0	0	0	0	0	13	112	373	598	653	653	653	653
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	11	67	172	314	450	564	551	417	254	62	6	0	11	78	250	564	1014	1578	2129	2546	2800	2862	2868

(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:
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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