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: KANAB, UT **COOP ID: 424508**

Climate Division: UT 4 **NWS Call Sign:** **Elevation: 4,940 Feet** **Lat: 37˚02N** **Lon: 112˚31W**

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	47.3	21.9	34.6	72	1971	31	42.4	1986	-11+	1949	5	26.7	1973	942	0	.0	.0	13.5	1.1	27.8	.3
Feb	52.7	25.8	39.3	77	1986	26	45.8	1995	-12	1949	14	32.2	1979	721	0	.0	.0	18.2	.5	21.9	.1
Mar	58.6	29.8	44.2	83	1966	31	50.6	1972	3	1952	12	39.0	1973	644	0	.0	.0	26.4	@	17.8	.0
Apr	66.5	34.6	50.6	90	1981	30	57.0	2000	12	1975	2	42.2	1975	437	4	.0	@	28.5	.0	7.9	.0
May	75.7	41.8	58.8	97+	1951	26	64.9	2000	18	1967	1	54.1	1977	224	30	.0	1.4	31.0	.0	1.3	.0
Jun	86.4	49.7	68.1	107	1954	22	72.4	1994	30	1955	2	64.2	1995	45	136	.9	13.1	30.0	.0	.0	.0
Jul	90.8	56.8	73.8	108	1985	5	77.1	1996	39	1997	2	71.0	1987	1	274	2.3	22.8	31.0	.0	.0	.0
Aug	87.7	56.4	72.1	105+	1981	6	75.6	1994	42	1968	23	69.5	1975	3	220	.9	16.9	31.0	.0	.0	.0
Sep	80.8	49.4	65.1	103	1955	6	68.5	1979	30+	1965	20	59.0	1986	69	71	.0	5.3	30.0	.0	.0	.0
Oct	69.8	39.0	54.4	94	1980	1	60.3	1988	13	1971	30	48.7	1984	336	7	.0	.3	30.4	.0	3.7	.0
Nov	56.0	28.9	42.5	80+	1962	1	48.9	1999	5	1985	19	36.9	1994	676	0	.0	.0	23.6	.1	19.7	.0
Dec	48.4	22.9	35.7	74	1950	10	43.4	1980	-10	1990	23	28.1	1990	909	0	.0	.0	16.2	.6	27.5	.3
Ann	68.4	38.1	53.3	108	Jul 1985	5	77.1	Jul 1996	-12	Feb 1949	14	26.7	Jan 1973	5007	742	4.1	59.8	309.8	2.3	127.6	.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: 1948-2001

(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	1.86	1.14	2.01	1969	25	7.45	1993	.00	1976
Feb	1.73	1.28	2.32	1996	21	5.77	1980	.00	1972
Mar	1.91	1.61	1.39	1991	1	4.96	1978	.00+	1997
Apr	.95	.53	1.14	1988	21	3.94	1988	.00	1989
May	.68	.43	1.07	1965	13	2.81	1995	.02	1974
Jun	.40	.25	1.40	1956	30	1.42	1972	.00+	1989
Jul	1.05	.88	1.58	1950	18	4.23	1999	.01	1993
Aug	1.45	1.05	1.92	1997	10	4.07	1997	.16+	1985
Sep	1.37	.93	2.81	1997	11	9.12	1997	.00+	1993
Oct	1.35	1.03	1.19	1993	6	4.04	2000	.00	1995
Nov	1.18	.87	1.74	1995	1	4.68	1978	.00	1992
Dec	1.01	.85	2.80	1966	6	3.12	1984	.00	1989
Ann	14.94	13.38	2.81	Sep 1997	11	9.12	Sep 1997	.00+	Mar 1997

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.6	4.5	1.2	.2
Feb	6.7	4.3	1.2	.2
Mar	8.1	5.1	1.1	.2
Apr	5.3	2.7	.5	.1
May	5.0	2.2	.2	@
Jun	2.8	1.4	.1	.0
Jul	6.0	2.6	.7	.1
Aug	7.7	3.7	.7	.1
Sep	5.9	2.7	.7	.3
Oct	5.2	3.1	1.1	.1
Nov	4.5	2.6	.9	.2
Dec	5.1	2.8	.6	.1
Ann	68.9	37.7	9.0	1.6

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	.02	.11	.31	.56	.85	1.21	1.65	2.23	3.06	4.49	5.93
Feb	.11	.29	.56	.82	1.08	1.38	1.72	2.13	2.70	3.62	4.52
Mar	.00	.10	.38	.66	.98	1.35	1.79	2.34	3.12	4.42	5.72
Apr	.02	.07	.18	.32	.47	.65	.87	1.15	1.55	2.24	2.93
May	.03	.07	.15	.24	.35	.47	.62	.81	1.09	1.56	2.02
Jun	.00	.00	.02	.09	.16	.25	.36	.49	.68	1.00	1.33
Jul	.04	.09	.20	.34	.50	.69	.93	1.25	1.70	2.47	3.25
Aug	.17	.28	.49	.69	.91	1.15	1.42	1.77	2.24	3.02	3.77
Sep	.00	.03	.15	.33	.54	.81	1.16	1.61	2.28	3.44	4.62
Oct	.03	.11	.28	.47	.68	.94	1.24	1.64	2.20	3.15	4.10
Nov	.01	.06	.18	.33	.52	.74	1.03	1.40	1.93	2.87	3.81
Dec	.04	.13	.28	.42	.58	.76	.98	1.25	1.61	2.22	2.82
Ann	7.16	8.45	10.21	11.63	12.95	14.26	15.67	17.27	19.27	22.29	25.01

+ 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: 1948-2001
(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	9.3	6.0	1	#
Feb	5.0	3.8	#	#
Mar	2.6	2.0	#	0
Apr	2.3	.2	#	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	.2	.0	#	0
Nov	2.3	.8	#	0
Dec	3.7	2.0	#	#
Ann	25.4	14.8	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	15.0	1973	4	35.1	1979	16	1979	31	8	1973
Feb	11.0	1997	27	17.0	1990	19	1979	1	6	1979
Mar	7.0	1973	22	15.5	1973	6	1997	1	#+	2000
Apr	9.0	1975	1	14.8	1975	4	1975	1	#+	1999
May	#	1999	4	#+	1999	#	1979	8	#	1979
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	2.0	1991	29	4.0	1991	2	1991	29	#+	1996
Nov	10.5	1985	12	16.0	1985	11	1985	12	2	1985
Dec	7.0	1988	23	18.0	1988	12	1988	25	3	1988
Ann	15.0	Jan 1973	4	35.1	Jan 1979	19	Feb 1979	1	8	Jan 1973

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.2	2.6	1.3	.6	@
Feb	2.1	1.9	.6	.4	@
Mar	1.7	1.2	.3	.1	.0
Apr	1.0	.8	.2	.1	.0
May	.0	.0	.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	.2	.1	.0	.0	.0
Nov	1.0	.9	.2	.1	@
Dec	1.9	1.5	.5	.2	.0
Ann	11.1	9.0	3.1	1.5	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	6.8	3.7	2.7	.4
Feb	2.7	1.4	.8	.3
Mar	.5	.1	@	.0
Apr	.3	@	.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	@	.0	.0	.0
Nov	1.0	.4	.2	@
Dec	2.3	.7	.4	.2
Ann	13.6	6.3	4.1	.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	5/30	5/25	5/21	5/18	5/15	5/12	5/09	5/06	5/01
32	5/24	5/16	5/11	5/07	5/02	4/28	4/24	4/19	4/11
28	5/11	5/03	4/26	4/21	4/16	4/11	4/06	3/30	3/22
24	4/25	4/15	4/08	4/03	3/28	3/23	3/17	3/10	3/01
20	4/07	3/27	3/19	3/12	3/05	2/27	2/20	2/11	1/31
16	3/20	3/07	2/25	2/17	2/09	2/01	1/24	1/14	1/01

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	9/23	9/29	10/03	10/07	10/10	10/14	10/17	10/22	10/27
32	10/08	10/13	10/17	10/20	10/23	10/25	10/28	11/01	11/06
28	10/15	10/19	10/23	10/26	10/29	11/01	11/04	11/07	11/12
24	10/27	11/01	11/05	11/08	11/11	11/14	11/17	11/21	11/26
20	11/01	11/07	11/11	11/14	11/17	11/20	11/24	11/28	12/03
16	11/14	11/20	11/25	11/29	12/02	12/06	12/10	12/15	12/21

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	172	164	158	152	147	142	137	131	122
32	200	190	184	178	172	167	161	154	145
28	227	216	208	201	195	189	182	174	163
24	259	248	240	233	227	220	213	205	194
20	299	285	274	265	256	248	238	228	213
16	343	325	313	303	294	285	276	265	250

***** 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	942	721	644	437	224	45	1	3	69	336	676	909	5007
60	787	581	491	301	122	12	0	0	20	206	526	754	3800
57	694	497	402	228	77	5	0	0	7	142	437	661	3150
55	632	441	345	186	54	2	0	0	3	106	379	599	2747
50	483	307	215	101	17	0	0	0	0	44	244	449	1860
32	84	18	7	0	0	0	0	0	0	0	8	61	178

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	166	221	386	557	829	1081	1296	1240	992	695	321	175	7959
55	0	0	11	53	170	393	583	527	306	88	3	0	2134
57	0	0	6	35	131	335	521	465	249	62	1	0	1805
60	0	0	2	18	83	253	428	372	172	32	0	0	1360
65	0	0	0	4	30	136	274	220	71	7	0	0	742
70	0	0	0	0	7	55	131	91	17	1	0	0	302

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	37	93	200	369	633	891	1104	1050	810	508	169	40	37	130	330	699	1332	2223	3327	4377	5187	5695	5864	5904
45	3	31	90	241	478	741	949	895	660	360	78	0	3	34	124	365	843	1584	2533	3428	4088	4448	4526	4526
50	0	3	27	125	329	592	794	740	510	223	23	0	0	3	30	155	484	1076	1870	2610	3120	3343	3366	3366
55	0	0	0	47	194	442	639	585	361	111	1	0	0	0	0	47	241	683	1322	1907	2268	2379	2380	2380
60	0	0	0	12	85	299	484	430	219	38	0	0	0	0	0	12	97	396	880	1310	1529	1567	1567	1567
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	49	89	171	275	421	561	687	669	521	350	146	52	49	138	309	584	1005	1566	2253	2922	3443	3793	3939	3991

(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