

# Climatography of the United States

No. 20

1971-2000

Station: KAMAS, UT

COOP ID: 424467

Climate Division: UT 5

NWS Call Sign:

Elevation: 6,475 Feet Lat: 40°39N

Lon: 111°17W

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	34.8	12.4	23.6	59	1953	11	31.0	2000	-26	1963	11	15.6	1979	1284	0	.0	.0	1.7	10.9	30.3	5.5
Feb	39.1	14.9	27.0	61	1986	25	34.8	2000	-30	1982	5	21.1	1985	1063	0	.0	.0	3.6	5.7	27.4	3.9
Mar	46.4	21.9	34.2	69	1986	28	40.4	1986	-11	1971	2	28.0	1976	956	0	.0	.0	11.9	1.2	28.1	.7
Apr	56.2	27.8	42.0	80+	1992	29	48.2	1992	4+	1955	5	35.1	1975	690	0	.0	.0	21.7	.2	22.5	.0
May	66.0	34.6	50.3	86+	2000	29	54.9	2000	15+	1965	7	46.0	1995	456	0	.0	.0	28.7	.0	11.5	.0
Jun	77.2	41.0	59.1	96	2001	29	64.4	1988	22	1962	5	54.8	1998	197	19	.0	.9	29.9	.0	2.6	.0
Jul	85.1	47.7	66.4	100	1954	11	70.4	1988	29	1997	2	60.7	1993	50	93	.0	5.4	31.0	.0	.1	.0
Aug	84.0	47.2	65.6	98	2000	1	69.3	2000	24	1992	26	62.1	1975	53	71	.0	3.3	31.0	.0	.3	.0
Sep	74.3	38.9	56.6	93	1950	3	61.3	1979	16+	1970	25	51.4	1971	260	8	.0	.2	29.5	.0	6.1	.0
Oct	62.0	30.0	46.0	83+	1979	7	53.0	1988	-1	1991	31	39.0	1984	590	0	.0	.0	26.8	.3	20.1	@
Nov	44.9	21.0	33.0	75	1980	5	42.7	1999	-18	1955	16	25.6	2000	961	0	.0	.0	11.1	4.6	26.9	.8
Dec	36.0	13.0	24.5	62+	1981	9	31.3	1979	-31	1990	21	17.7	1971	1256	0	.0	.0	3.3	9.5	30.3	4.3
Ann	58.8	29.2	44.0	100	Jul 1954	11	70.4	Jul 1988	-31	Dec 1990	21	15.6	Jan 1979	7816	191	.0	9.8	230.2	32.4	206.2	15.2

+ 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](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

Issue Date: February 2004

(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

051-A

# Climatology 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: KAMAS, UT**

**COOP ID: 424467**

**Climate Division: UT 5**

**NWS Call Sign:**

**Elevation: 6,475 Feet Lat: 40°39N**

**Lon: 111°17W**

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.58	1.44	2.90	1980	14	5.11	1980	.18	1984	8.7	4.6	.5	.2	.27	.41	.64	.86	1.08	1.32	1.60	1.93	2.38	3.10	3.80
Feb	1.45	1.42	4.12	1966	27	3.83	1986	.33+	1991	8.5	4.5	.8	.1	.41	.55	.75	.94	1.11	1.30	1.51	1.75	2.06	2.56	3.02
Mar	1.59	1.50	1.13	1986	9	3.21	1975	.57	1997	9.2	5.3	.5	.1	.69	.83	1.03	1.19	1.34	1.50	1.66	1.85	2.09	2.46	2.79
Apr	1.55	1.39	2.00	1963	20	4.39	1974	.09	1987	8.3	4.7	.6	.1	.28	.42	.65	.86	1.08	1.31	1.57	1.89	2.32	3.01	3.66
May	1.64	1.43	1.91	1975	20	4.07	1995	.04	1974	8.3	4.9	.7	.1	.19	.31	.54	.77	1.01	1.29	1.61	2.00	2.54	3.44	4.30
Jun	.94	.68	1.67	1998	17	4.17	1998	.00+	1980	5.1	2.9	.3	@	.00	.06	.21	.35	.51	.68	.90	1.16	1.53	2.14	2.74
Jul	1.06	.95	1.40	1987	21	3.21	1985	.00	1978	5.5	2.9	.5	.1	.08	.19	.36	.51	.68	.85	1.06	1.31	1.64	2.19	2.72
Aug	1.06	.90	1.04	1970	5	2.43	1983	.00	1985	5.8	3.0	.5	.0	.08	.19	.37	.52	.68	.86	1.06	1.31	1.64	2.18	2.70
Sep	1.48	1.33	1.72	1982	26	6.61	1982	.00+	1987	6.3	3.8	.9	.2	.00	.18	.45	.69	.93	1.19	1.49	1.84	2.33	3.13	3.89
Oct	1.74	1.70	1.40	1969	17	4.62	1981	.00	1978	6.5	4.3	.9	.1	.20	.41	.70	.95	1.20	1.47	1.78	2.15	2.64	3.42	4.16
Nov	1.52	1.36	1.12	1968	25	4.04	1985	.02	1976	7.4	4.1	.7	.1	.20	.32	.53	.75	.97	1.21	1.50	1.85	2.33	3.11	3.86
Dec	1.28	1.20	1.50+	1949	23	3.58	1983	.03	1979	7.9	4.2	.4	.0	.10	.18	.35	.52	.72	.94	1.21	1.55	2.02	2.81	3.59
Ann	16.89	17.13	4.12	Feb 1966	27	6.61	Sep 1982	.00+	Sep 1987	87.5	49.2	7.3	1.1	10.21	11.42	13.02	14.26	15.38	16.48	17.64	18.93	20.52	22.86	24.92

+ 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

Complete documentation available from:  
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**Station: KAMAS, UT**

**COOP ID: 424467**

**Climate Division: UT 5**

**NWS Call Sign:**

**Elevation: 6,475 Feet**

**Lat: 40° 39N**

**Lon: 111° 17W**

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	21.1	16.0	10	10	18.0	1993	10	62.8	1993	40	1993	11	24	1993	7.4	5.9	2.9	1.2	.4	25.1	23.7	21.1	16.4
Feb	13.6	12.1	12	13	12.0	1994	11	39.1	1994	34	1993	25	30	1980	6.0	5.2	1.9	1.1	.1	22.3	20.3	18.5	13.1
Mar	11.4	10.5	5	4	7.0	1996	23	20.5	1985	29	1993	1	24	1980	4.8	4.0	1.2	.4	.0	9.8	7.5	5.8	3.2
Apr	7.3	5.8	1	#	8.0	1986	13	23.7	1991	12	1980	10	5	1986	2.4	1.9	1.0	.3	.0	1.1	.5	.1	.0
May	2.1	.0	#	0	15.0	1975	20	15.0	1975	15	1975	20	1	1975	.6	.6	.2	.1	.1	.4	.2	.2	.1
Jun	.4	.0	#	0	8.0	1998	17	8.0	1998	8	1998	17	#	1998	.1	.1	@	@	.0	.1	.1	@	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.7	.0	#	0	7.2	2000	23	8.7	2000	6	2000	23	#+	2000	.2	.2	.1	@	.0	.1	@	@	.0
Oct	2.8	.3	#	0	9.0	1972	29	16.0	1984	9	1972	29	1	1991	1.1	1.0	.4	.1	.0	.9	.4	.2	.0
Nov	14.0	11.5	2	1	17.0	1985	12	43.0	1985	18	1985	12	7	1985	4.5	3.7	1.9	1.0	.1	9.3	5.4	3.7	.9
Dec	20.4	18.3	5	6	13.7	1992	30	48.5	1983	25	1983	27	16	1983	6.0	5.3	2.6	.9	.1	23.0	20.8	16.4	6.8
Ann	93.8	74.5	N/A	N/A	18.0	Jan 1993	10	62.8	Jan 1993	40	Jan 1993	11	30	Feb 1980	33.1	27.9	12.2	5.1	.8	92.1	78.9	66.0	40.5

+ 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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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	7/21	7/14	7/09	7/05	7/01	6/27	6/22	6/17	6/10
32	6/30	6/25	6/22	6/18	6/15	6/12	6/09	6/06	5/31
28	6/14	6/08	6/03	5/31	5/27	5/23	5/20	5/15	5/09
24	5/22	5/16	5/11	5/07	5/04	4/30	4/27	4/22	4/16
20	5/13	5/07	5/02	4/28	4/24	4/21	4/17	4/12	4/05
16	4/26	4/19	4/14	4/10	4/07	4/03	3/30	3/25	3/18
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	8/10	8/16	8/21	8/25	8/28	9/01	9/05	9/09	9/16
32	8/24	8/30	9/03	9/06	9/10	9/13	9/16	9/20	9/26
28	9/08	9/13	9/17	9/20	9/22	9/25	9/28	10/01	10/06
24	9/11	9/18	9/22	9/27	9/30	10/04	10/08	10/13	10/20
20	9/28	10/05	10/10	10/15	10/19	10/23	10/28	11/02	11/10
16	10/10	10/16	10/21	10/25	10/28	11/01	11/05	11/10	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	89	79	71	64	58	52	45	37	26
32	107	99	94	90	85	81	77	71	64
28	137	131	126	122	118	114	109	105	98
24	175	166	160	154	149	143	138	131	122
20	211	200	191	184	177	170	163	155	143
16	233	223	216	210	204	198	192	185	175

\* 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:

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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	1284	1063	956	690	456	197	50	53	260	590	961	1256	7816
60	1129	923	801	540	308	95	10	10	141	437	811	1101	6306
57	1036	839	708	455	226	53	3	2	87	349	721	1008	5487
55	974	783	646	399	178	33	1	1	60	294	661	946	4976
50	819	643	493	268	85	7	0	0	17	174	517	791	3814
32	293	191	79	19	0	0	0	0	0	6	119	268	975

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	33	52	147	319	567	813	1066	1041	738	439	148	35	5398
55	0	0	0	9	32	155	354	329	107	14	0	0	1000
57	0	0	0	5	18	115	294	269	74	7	0	0	782
60	0	0	0	0	7	67	209	183	38	2	0	0	506
65	0	0	0	0	0	19	93	71	8	0	0	0	191
70	0	0	0	0	0	3	25	14	0	0	0	0	42

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	2	35	134	333	575	819	790	508	227	42	2	0	2	37	171	504	1079	1898	2688	3196	3423	3465	3467
45	0	0	6	58	200	427	664	635	363	118	11	0	0	0	6	64	264	691	1355	1990	2353	2471	2482	2482
50	0	0	0	17	97	286	509	481	229	44	1	0	0	0	0	17	114	400	909	1390	1619	1663	1664	1664
55	0	0	0	0	32	164	355	329	113	8	0	0	0	0	0	0	32	196	551	880	993	1001	1001	1001
60	0	0	0	0	3	69	207	183	37	0	0	0	0	0	0	0	3	72	279	462	499	499	499	499
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	6	39	125	259	409	548	532	372	208	48	2	0	6	45	170	429	838	1386	1918	2290	2498	2546	2548

(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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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.  
Complete documentation for the 1971-2000 Normals is available on the internet from:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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 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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)