

# Climatology of the United States No. 20

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

Station: SANTAQUIN CHLORINATOR, UT

1971-2000

COOP ID: 427686

Climate Division: UT 3

NWS Call Sign:

Elevation: 5,160 Feet Lat: 39° 57N

Lon: 111° 47W

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	37.7	18.4	28.1	64	1953	11	37.2	1998	-22	1963	13	18.3	1979	1146	0	.0	.0	3.7	8.9	29.0	2.0
Feb	43.5	22.2	32.9	71	1986	26	41.3	1995	-19	1989	6	24.6	1989	900	0	.0	.0	7.6	3.1	25.3	.5
Mar	52.1	29.5	40.8	78	1986	29	47.2	1986	-6	1964	7	33.6	1977	750	0	.0	.0	18.2	.2	21.5	.0
Apr	60.5	35.2	47.9	86	1992	30	54.5	1992	14	1975	2	40.4	1975	518	3	.0	.0	24.7	.0	12.4	.0
May	70.8	43.4	57.1	94	1974	27	61.3	1992	22	1965	6	51.3	1995	268	23	.0	.3	30.1	.0	2.7	.0
Jun	81.9	51.9	66.9	102+	1974	24	73.4	1977	29	1982	6	59.8	1993	89	145	.3	6.2	30.0	.0	.3	.0
Jul	90.1	59.8	75.0	102+	1960	26	80.2	2000	37+	1982	5	67.3	1993	6	315	.6	19.3	31.0	.0	.0	.0
Aug	88.7	57.7	73.2	104+	1979	5	78.2	2000	35	1982	29	67.3	1978	8	262	.4	15.2	31.0	.0	.0	.0
Sep	78.7	48.0	63.4	98+	1985	2	70.4	1990	22	1965	18	57.8	1971	122	72	.0	2.5	29.8	.0	1.1	.0
Oct	64.8	37.3	51.1	88+	1950	13	57.7	1988	12	1972	31	42.9	1982	439	6	.0	.0	28.3	.1	8.4	.0
Nov	48.9	26.8	37.9	78	1983	7	47.3	1999	-12	1955	16	30.2	2000	814	0	.0	.0	14.6	1.6	23.5	.1
Dec	38.5	19.3	28.9	69	1995	2	36.6	1977	-20+	1990	23	18.2	1978	1120	0	.0	.0	4.4	7.7	29.1	1.2
Ann	63.0	37.5	50.3	104+	Aug 1979	5	80.2	Jul 2000	-22	Jan 1963	13	18.2	Dec 1978	6180	826	1.3	43.5	253.4	21.6	153.3	3.8

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

092-A

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**NWS Call Sign:**

**Elevation: 5,160 Feet Lat: 39°57N**

**Lon: 111°47W**

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	1.54	1.43	1.70	1954	25	3.87	1993	.13	1986	6.4	4.1	.9	.1	.21	.34	.56	.77	.99	1.24	1.52	1.88	2.35	3.12	3.87
Feb	1.58	1.47	1.98	1983	28	3.64	1996	.33	1977	6.6	4.4	.8	.2	.31	.46	.69	.90	1.11	1.35	1.61	1.92	2.34	3.00	3.64
Mar	1.91	1.93	1.91	1998	28	3.81	1996	.42	1971	7.6	4.9	1.0	.1	.52	.70	.97	1.22	1.45	1.70	1.98	2.30	2.73	3.40	4.02
Apr	1.94	1.99	1.41	1968	6	4.11	1973	.11	1992	7.9	5.4	1.2	.1	.33	.50	.78	1.04	1.32	1.62	1.95	2.37	2.92	3.81	4.66
May	2.09	2.12	1.66	1985	12	6.09	1995	.14	1974	7.1	4.6	1.1	.3	.29	.47	.77	1.06	1.36	1.69	2.08	2.55	3.19	4.23	5.23
Jun	.83	.49	1.63	1984	7	3.67	1998	.00+	1980	3.5	2.3	.4	.1	.00	.00	.09	.22	.37	.55	.76	1.03	1.40	2.03	2.65
Jul	.74	.80	1.52	1955	25	1.99	1985	.00+	1978	4.0	2.3	.3	.1	.00	.06	.18	.30	.42	.56	.72	.92	1.19	1.64	2.09
Aug	.98	.90	1.88	1948	5	3.56	1984	.05	1976	4.8	2.4	.5	.1	.06	.12	.24	.37	.52	.70	.91	1.19	1.57	2.23	2.88
Sep	1.42	1.10	2.92	1982	27	10.42	1982	.00	1974	4.3	2.6	.9	.2	.05	.16	.36	.57	.80	1.05	1.36	1.74	2.27	3.16	4.03
Oct	2.06	2.03	2.16	1979	20	6.36	1981	.00	1978	5.4	4.1	1.1	.3	.21	.45	.79	1.09	1.40	1.72	2.09	2.54	3.14	4.10	5.02
Nov	1.80	1.72	1.97	1955	14	4.60	1983	.17	1977	6.4	4.1	1.1	.3	.51	.68	.94	1.16	1.38	1.61	1.86	2.16	2.55	3.16	3.73
Dec	1.33	1.24	1.73	1966	6	3.86	1983	.11	1976	5.9	3.8	.7	.1	.27	.40	.59	.77	.95	1.14	1.36	1.62	1.97	2.52	3.04
Ann	18.22	18.39	2.92	Sep 1982	27	10.42	Sep 1982	.00+	Jun 1980	69.9	45.0	10.0	2.0	10.51	11.89	13.71	15.14	16.44	17.71	19.06	20.57	22.43	25.19	27.64

+ 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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**Climate Division: UT 3**

**NWS Call Sign:**

**Elevation: 5,160 Feet**

**Lat: 39° 57N**

**Lon: 111° 47W**

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	12.7	12.1	5	3	16.0	1985	22	24.0	1985	22+	1993	13	16	1988	3.7	3.3	1.5	.6	.2	-9.9	-9.9	-9.9	-9.9
Feb	9.6	7.3	4	2	20.0	1989	4	30.2	1989	30	1989	8	19	1989	3.2	3.1	1.3	.5	.2	-9.9	-9.9	-9.9	-9.9
Mar	6.8	4.5	1	#	9.0	1976	1	29.5	1976	9+	2000	20	9	1976	2.1	1.8	1.0	.3	.0	2.0	.9	.6	.0
Apr	3.4	2.0	#	0	11.0	1991	11	11.0+	1991	15	1991	12	6	1973	1.1	1.1	.5	.2	@	.7	.1	.0	.0
May	1.1	.0	#	0	12.0	1975	20	21.0	1975	5	1988	1	#+	1991	.3	.2	.2	.1	@	.2	.1	@	.0
Jun	.0	.0	#	0	1.0	1990	1	1.0	1990	1	1990	1	#+	1990	@	@	.0	.0	.0	@	.0	.0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.9	.0	#	0	9.5	1972	29	9.5	1972	4	1996	25	#+	2000	.5	.4	.2	@	.0	.3	.1	.0	.0
Nov	6.8	5.0	1	#	15.5	1975	29	28.5	1975	21	1975	29	4	1994	2.1	2.0	1.0	.5	.1	3.3	1.1	.4	.2
Dec	8.8	9.5	2	1	17.8	1972	29	17.8	1972	20	1972	29	6	1990	3.4	3.1	1.4	.6	.1	-9.9	-9.9	-9.9	-9.9
Ann	50.1	40.4	N/A	N/A	20.0	Feb 1989	4	30.2	Feb 1989	30	Feb 1989	8	19	Feb 1989	16.4	15.0	7.1	2.8	.6	-9.9	-9.9	-9.9	-9.9

+ 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	6/15	6/08	6/04	5/31	5/27	5/23	5/19	5/14	5/08
32	6/07	5/30	5/25	5/20	5/16	5/12	5/07	5/02	4/24
28	5/09	5/04	4/30	4/27	4/24	4/20	4/17	4/13	4/08
24	4/25	4/17	4/11	4/07	4/02	3/28	3/24	3/18	3/10
20	4/11	4/04	3/30	3/26	3/21	3/17	3/13	3/08	2/28
16	3/24	3/16	3/10	3/06	3/01	2/24	2/19	2/14	2/06
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	9/10	9/15	9/18	9/21	9/24	9/26	9/29	10/02	10/07
32	9/18	9/24	9/28	10/01	10/05	10/08	10/12	10/16	10/22
28	10/04	10/10	10/15	10/18	10/22	10/25	10/29	11/02	11/08
24	10/17	10/22	10/26	10/29	11/01	11/04	11/07	11/11	11/17
20	10/25	10/30	11/03	11/06	11/09	11/12	11/16	11/19	11/25
16	11/04	11/10	11/13	11/16	11/19	11/22	11/25	11/29	12/04
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	142	134	128	124	119	115	110	104	96
32	171	161	153	147	141	135	129	121	111
28	206	197	191	186	181	176	170	164	155
24	243	232	225	218	212	206	200	192	182
20	259	250	243	237	232	227	221	214	205
16	289	280	273	268	263	258	252	246	237

\* 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	1146	900	750	518	268	89	6	8	122	439	814	1120	6180
60	991	760	596	379	155	38	1	1	54	301	665	965	4906
57	898	676	505	301	103	20	0	0	29	229	577	872	4210
55	836	620	447	253	75	12	0	0	18	187	519	810	3777
50	688	487	309	156	28	3	0	0	4	101	381	655	2812
32	238	115	26	6	0	0	0	0	0	2	56	184	627

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	116	140	299	481	778	1046	1331	1277	940	592	232	87	7319
55	0	0	7	38	140	369	618	564	267	64	5	0	2072
57	0	0	3	26	106	316	556	502	219	44	2	0	1774
60	0	0	1	14	65	244	464	410	154	23	0	0	1375
65	0	0	0	3	23	145	315	262	72	6	0	0	826
70	0	0	0	0	5	73	182	137	24	1	0	0	422

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	12	32	111	264	539	814	1084	1031	699	363	81	9	12	44	155	419	958	1772	2856	3887	4586	4949	5030	5039
45	0	8	52	157	391	664	929	876	550	236	35	1	0	8	60	217	608	1272	2201	3077	3627	3863	3898	3899
50	0	1	19	79	258	516	774	721	406	126	8	0	0	1	20	99	357	873	1647	2368	2774	2900	2908	2908
55	0	0	2	35	146	375	619	566	271	58	0	0	0	0	2	37	183	558	1177	1743	2014	2072	2072	2072
60	0	0	0	12	67	244	465	412	154	17	0	0	0	0	0	12	79	323	788	1200	1354	1371	1371	1371
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	1	26	89	186	344	524	697	666	456	250	66	10	1	27	116	302	646	1170	1867	2533	2989	3239	3305	3315

(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.  
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)