

# Climatography of the United States

No. 20

1971-2000

Station: TOOELE, UT

COOP ID: 428771

Climate Division: UT 3

NWS Call Sign:

Elevation: 5,070 Feet Lat: 40° 32N

Lon: 112° 18W

## 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	39.5	20.1	29.8	63+	1959	24	37.5	1998	-13	1963	12	21.0	1984	1091	0	.0	.0	4.0	8.6	28.2	.9
Feb	44.9	24.1	34.5	70	1972	28	40.4	2000	-7	1989	7	24.2	1984	853	0	.0	.0	7.9	2.8	23.7	.3
Mar	53.2	30.9	42.1	76+	1972	9	48.1	1972	3	1971	2	36.2	1976	710	0	.0	.0	18.6	.3	18.7	.0
Apr	61.8	37.4	49.6	88	2000	27	57.6	1987	18	1982	2	42.0	1975	470	8	.0	.0	25.4	.0	9.3	.0
May	71.4	45.6	58.5	94	2001	25	62.8	2000	21	1965	6	51.6	1995	235	34	.0	.1	30.3	.0	1.6	.0
Jun	82.6	55.0	68.8	101	1988	24	75.0	1988	27	1995	6	62.1	1993	63	178	.1	6.0	30.0	.0	.1	.0
Jul	90.7	62.4	76.6	106+	2000	30	81.7	2000	39+	1992	1	68.5	1993	5	363	1.0	16.4	31.0	.0	.0	.0
Aug	89.3	60.5	74.9	105	2000	1	80.5	2000	38	1992	26	70.0	1993	3	309	.4	13.3	31.0	.0	.0	.0
Sep	78.9	50.8	64.9	98	1990	12	70.1	1990	28+	1965	18	58.1	1986	97	92	.0	2.1	29.9	.0	.1	.0
Oct	65.6	39.6	52.6	88	2001	1	60.2	1988	11	1971	29	47.2	1984	389	4	.0	.0	27.9	@	5.3	.0
Nov	49.7	28.8	39.3	74+	1988	1	47.6	1995	-7	1955	16	30.6	1994	773	0	.0	.0	14.0	1.2	20.7	.0
Dec	40.3	20.9	30.6	70	1995	1	38.1	1977	-16	1990	23	20.8	1990	1066	0	.0	.0	4.1	6.8	28.0	.7
Ann	64.0	39.7	51.9	106+	Jul 2000	30	81.7	Jul 2000	-16	Dec 1990	23	20.8	Dec 1990	5755	988	1.5	37.9	254.1	19.7	135.7	1.9

+ 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: 1919-2001

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

# 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: TOOELE, UT**

**COOP ID: 428771**

**Climate Division: UT 3**

**NWS Call Sign:**

**Elevation: 5,070 Feet Lat: 40°32N**

**Lon: 112°18W**

### 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	1.42	1.19	1.32	1954	25	3.31	1993	.52	1986	8.0	4.2	.6	.1	.44	.57	.77	.95	1.11	1.29	1.47	1.70	1.98	2.43	2.84	
Feb	1.61	1.62	1.52	1998	24	4.96	1998	.10	1988	8.2	4.4	.9	.1	.26	.40	.64	.86	1.08	1.33	1.62	1.96	2.42	3.17	3.88	
Mar	2.48	2.33	1.14	1963	15	4.58	1995	.64	1972	10.1	6.3	1.7	.1	.83	1.06	1.41	1.70	1.98	2.27	2.59	2.96	3.43	4.17	4.85	
Apr	2.37	2.13	2.60	1986	2	5.99	1986	.55	1992	9.3	5.8	1.5	.2	.59	.81	1.15	1.46	1.76	2.08	2.44	2.87	3.42	4.30	5.13	
May	2.25	2.37	2.13	1988	1	5.31	1995	.08	1974	9.4	5.3	1.5	.3	.40	.60	.93	1.24	1.55	1.89	2.28	2.75	3.37	4.38	5.35	
Jun	.96	.75	1.10	1990	1	2.98	1998	.02+	1996	5.5	2.8	.6	@	.04	.09	.20	.33	.47	.65	.87	1.15	1.55	2.23	2.92	
Jul	.88	.71	1.02	1987	21	3.47	1984	.00+	1978	5.5	2.3	.4	@	.00	.06	.19	.33	.47	.64	.84	1.09	1.43	2.01	2.58	
Aug	.92	.73	1.40	1954	4	4.06	1983	.00+	1985	6.1	2.7	.5	@	.00	.13	.31	.46	.60	.76	.94	1.15	1.44	1.91	2.35	
Sep	1.52	1.04	2.30	2000	23	8.06	1982	.02	1979	6.1	3.3	1.0	.3	.06	.13	.30	.49	.73	1.01	1.36	1.82	2.47	3.59	4.73	
Oct	1.95	1.79	1.97	1971	28	5.29	1981	.00	1978	7.0	4.2	1.3	.3	.06	.21	.48	.76	1.07	1.43	1.85	2.38	3.12	4.36	5.58	
Nov	1.94	1.89	2.65	1958	15	4.91	1983	.56	1971	7.8	4.7	1.3	.2	.44	.62	.91	1.16	1.42	1.69	1.99	2.36	2.84	3.60	4.32	
Dec	1.46	1.33	1.56	1972	29	3.62+	1983	.15	1986	8.3	4.3	.7	@	.31	.44	.65	.85	1.04	1.25	1.49	1.77	2.15	2.75	3.31	
Ann	19.76	19.69	2.65	Nov 1958	15	8.06	Sep 1982	.00+	Aug 1985	91.3	50.3	12.0	1.6	12.48	13.83	15.58	16.94	18.16	19.36	20.60	21.99	23.70	26.20	28.40	

+ 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: 1919-2001

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

Complete documentation available from:  
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

# 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](http://www.ncdc.noaa.gov)

**Station: TOOELE, UT**

**COOP ID: 428771**

**Climate Division: UT 3**

**NWS Call Sign:**

**Elevation: 5,070 Feet**

**Lat: 40° 32N**

**Lon: 112° 18W**

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	14.5	13.5	6	4	17.0	1996	25	46.0	1993	30	1993	13	20	1973	5.3	4.9	2.1	.8	.2	20.5	17.1	12.5	5.9
Feb	14.6	11.0	5	3	12.0	1984	17	37.0	1998	25	1984	18	16	1984	4.9	4.5	2.0	1.1	.2	17.4	12.4	9.1	4.2
Mar	14.5	13.0	1	1	12.0	1975	28	35.0	1975	18	1984	2	6	1998	4.6	4.4	2.3	1.1	@	6.9	4.4	2.7	.7
Apr	7.8	5.5	#	#	10.0	1984	26	27.0	1984	12	1991	11	1+	1999	2.3	2.1	1.2	.6	@	1.9	.8	.4	.0
May	1.5	.0	#	0	13.0	1988	1	15.0	1975	10	1988	1	1	1988	.5	.5	.1	.1	@	.2	.1	.1	@
Jun	.0	.0	0	0	.5	1995	6	.5	1995	0	0	0	0	0	@	.0	.0	.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	.1	.0	#	0	3.0	1971	30	3.0	1971	3	1971	30	#+	2000	@	@	@	.0	.0	@	@	.0	.0
Oct	3.6	.0	#	0	20.0	1971	28	36.0	1971	22	1971	31	3	1971	.9	.9	.5	.3	@	1.2	.6	.4	.1
Nov	12.4	9.0	2	1	16.0	1986	7	33.0	1983	18	1971	1	4	1994	3.9	3.7	1.7	1.0	.1	9.8	6.0	4.5	.9
Dec	16.4	15.8	4	3	22.0	1972	29	58.1	1972	26	1972	30	11	1972	5.8	5.4	2.2	1.0	.2	21.5	14.9	10.0	2.6
Ann	85.4	67.8	N/A	N/A	22.0	Dec 1972	29	58.1	Dec 1972	30	Jan 1993	13	20	Jan 1973	28.2	26.4	12.1	6.0	.7	79.4	56.3	39.7	14.4

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

# Climatography of the United States

## No. 20 1971-2000

Station: TOOELE, UT

COOP ID: 428771

Climate Division: UT 3

NWS Call Sign:

Elevation: 5,070 Feet

Lat: 40°32N

Lon: 112°18W

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	6/12	6/05	5/31	5/27	5/23	5/19	5/14	5/09	5/02
32	5/27	5/20	5/15	5/11	5/07	5/03	4/28	4/23	4/16
28	5/10	5/03	4/28	4/24	4/20	4/16	4/11	4/06	3/30
24	4/21	4/13	4/07	4/02	3/28	3/24	3/19	3/13	3/05
20	4/03	3/26	3/20	3/14	3/09	3/05	2/27	2/21	2/13
16	3/12	3/04	2/27	2/23	2/18	2/14	2/10	2/04	1/28
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	9/18	9/22	9/25	9/28	9/30	10/02	10/05	10/08	10/12
32	10/02	10/07	10/11	10/14	10/17	10/20	10/24	10/28	11/02
28	10/16	10/21	10/24	10/27	10/30	11/01	11/04	11/08	11/13
24	10/26	10/31	11/03	11/06	11/08	11/11	11/14	11/17	11/22
20	11/01	11/06	11/10	11/13	11/15	11/18	11/21	11/25	11/30
16	11/06	11/12	11/16	11/20	11/24	11/27	12/01	12/06	12/12
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	153	145	139	134	130	125	120	114	106
32	191	181	174	168	163	157	151	144	135
28	218	209	203	197	192	187	182	175	166
24	252	243	236	230	224	219	213	206	196
20	284	272	264	257	250	244	237	228	217
16	303	294	288	283	278	273	267	261	252

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

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: TOOELE, UT**

**COOP ID: 428771**

**Climate Division: UT 3      NWS Call Sign:      Elevation: 5,070 Feet    Lat: 40° 32N      Lon: 112° 18W**

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	1091	853	710	470	235	63	5	3	97	389	773	1066	5755
60	936	713	556	337	133	23	1	0	39	252	623	911	4524
57	843	629	466	265	87	11	0	0	19	182	536	818	3856
55	781	573	407	223	63	6	0	0	11	141	479	756	3440
50	631	438	270	135	23	0	0	0	2	66	345	602	2512
32	188	77	14	5	0	0	0	0	0	0	47	159	490

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	120	148	326	533	822	1105	1380	1329	985	639	264	117	7768
55	0	0	6	61	172	421	667	616	305	67	7	0	2322
57	0	0	3	43	134	366	605	554	254	45	3	0	2007
60	0	0	1	25	87	288	513	461	184	22	0	0	1581
65	0	0	0	8	34	178	363	309	92	4	0	0	988
70	0	0	0	0	10	96	226	172	35	0	0	0	539

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	39	132	302	568	851	1115	1068	730	390	87	21	12	51	183	485	1053	1904	3019	4087	4817	5207	5294	5315
45	0	9	59	190	420	702	960	913	581	258	39	5	0	9	68	258	678	1380	2340	3253	3834	4092	4131	4136
50	0	0	22	102	281	555	805	758	435	146	9	0	0	0	22	124	405	960	1765	2523	2958	3104	3113	3113
55	0	0	2	49	170	409	650	603	300	65	0	0	0	0	2	51	221	630	1280	1883	2183	2248	2248	2248
60	0	0	0	18	86	280	497	448	181	20	0	0	0	0	0	18	104	384	881	1329	1510	1530	1530	1530
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	26	90	194	356	550	739	705	467	244	56	9	3	29	119	313	669	1219	1958	2663	3130	3374	3430	3439

(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> |
|---|---|

## 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)