

# Climatology of the United States

No. 20

1971-2000

Station: MONTICELLO, UT

COOP ID: 425805

Climate Division: UT 7

NWS Call Sign:

Elevation: 6,820 Feet Lat: 37° 52N

Lon: 109° 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	34.0	14.1	24.1	56+	1956	11	32.5	1986	-18	1979	30	16.5	1979	1270	0	.0	.0	1.2	12.3	30.4	3.3
Feb	39.0	18.6	28.8	72	1986	25	37.4	1995	-19	1989	7	20.9	1974	1015	0	.0	.0	3.3	5.0	27.4	1.1
Mar	47.4	25.3	36.4	69+	1966	31	42.0	1999	-1+	1973	6	29.8	1973	888	0	.0	.0	14.0	.8	27.3	.1
Apr	57.2	30.8	44.0	79	2000	27	49.7	1992	5	1975	2	38.2	1975	631	0	.0	.0	24.4	.2	19.2	.0
May	67.0	38.3	52.7	91	2000	29	58.4	2000	15	1968	7	48.0	1995	386	2	.0	@	30.4	.0	6.5	.0
Jun	78.3	46.0	62.2	97	1950	28	66.8	1990	27+	1954	7	57.6	1975	132	47	.0	1.5	30.0	.0	.6	.0
Jul	83.4	52.8	68.1	97	2000	22	71.9	1996	33	1982	6	64.5	1992	19	116	.0	4.0	31.0	.0	.0	.0
Aug	80.7	51.8	66.3	101	1969	8	70.4	2000	34+	1968	23	63.4	1975	44	82	.0	.9	31.0	.0	.0	.0
Sep	72.8	43.9	58.4	91	1948	2	61.8+	1998	24+	1961	25	54.0	1985	209	10	.0	.0	29.9	.0	1.6	.0
Oct	60.5	33.6	47.1	83	1956	1	51.4	1988	5	1971	30	42.1	1984	557	0	.0	.0	27.1	.3	14.3	.0
Nov	45.0	23.3	34.2	69+	1955	11	40.4	1999	-8	1952	27	27.4	2000	925	0	.0	.0	11.0	3.1	26.5	.2
Dec	36.1	15.8	26.0	58+	1965	5	35.5	1980	-22	1990	22	17.6	1978	1212	0	.0	.0	1.8	9.2	30.5	1.8
Ann	58.5	32.9	45.7	101	Aug 1969	8	71.9	Jul 1996	-22	Dec 1990	22	16.5	Jan 1979	7288	257	.0	6.4	235.1	30.9	184.3	6.5

+ 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

068-A

# 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: MONTICELLO, UT**

**COOP ID: 425805**

**Climate Division: UT 7**

**NWS Call Sign:**

**Elevation: 6,820 Feet Lat: 37° 52N**

**Lon: 109° 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	1.81	1.20	2.40	1997	13	6.25	1980	.01	1972	6.7	4.1	1.2	.4	.07	.15	.35	.58	.86	1.19	1.61	2.15	2.93	4.28	5.64
Feb	1.31	1.00	1.89	1994	8	4.03	1993	.00	1972	6.2	2.9	.9	.2	.06	.17	.37	.56	.77	1.00	1.27	1.62	2.09	2.87	3.63
Mar	1.20	1.10	.95+	1954	23	3.09	1983	.02	1972	7.0	3.5	.6	.0	.03	.08	.20	.35	.53	.76	1.04	1.42	1.96	2.91	3.87
Apr	.95	.65	1.12	1986	2	3.60	1999	.03+	2000	5.9	2.8	.5	.1	.05	.10	.22	.34	.49	.66	.87	1.14	1.52	2.17	2.82
May	1.03	.97	1.36	1993	15	3.49	1993	.03	1984	6.9	3.2	.4	@	.11	.18	.32	.47	.62	.80	1.01	1.26	1.61	2.20	2.77
Jun	.64	.41	1.59	1995	17	2.26	1973	.00	1980	3.6	1.6	.4	@	.01	.04	.12	.21	.31	.43	.58	.77	1.05	1.52	1.99
Jul	1.35	1.19	2.09	1956	31	3.98	1981	.03	1993	8.1	3.7	.7	.1	.14	.24	.43	.61	.82	1.04	1.31	1.65	2.10	2.86	3.60
Aug	1.86	1.81	3.38	1968	1	4.26	1982	.20	1978	9.7	5.0	1.0	.2	.45	.62	.89	1.14	1.38	1.63	1.92	2.25	2.70	3.40	4.06
Sep	1.53	1.33	1.93	1962	27	4.12	1985	.06	1979	7.4	3.9	.7	.2	.18	.30	.51	.73	.96	1.21	1.51	1.87	2.37	3.19	3.99
Oct	1.88	1.56	2.02	1949	19	7.64	1972	.00	1999	6.5	4.1	1.4	.3	.09	.26	.54	.82	1.11	1.44	1.83	2.32	2.98	4.08	5.15
Nov	1.43	1.22	1.78	1987	6	4.32	1978	.00	1989	5.9	3.1	.8	.3	.04	.15	.35	.55	.78	1.04	1.36	1.75	2.30	3.22	4.13
Dec	1.26	.83	2.40	1978	18	4.79	1978	.00	1989	5.4	2.8	.8	.2	.01	.06	.19	.35	.55	.79	1.09	1.49	2.07	3.08	4.11
Ann	16.25	16.00	3.38	Aug 1968	1	7.64	Oct 1972	.00+	Oct 1999	79.3	40.7	9.4	2.0	10.49	11.56	12.96	14.04	15.01	15.96	16.94	18.04	19.38	21.35	23.07

+ 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:  
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: MONTICELLO, UT

COOP ID: 425805

Climate Division: UT 7

NWS Call Sign:

Elevation: 6,820 Feet

Lat: 37° 52N

Lon: 109° 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	18.3	13.5	8	5	24.0	1973	4	53.0	1979	57	1973	4	43	1973	5.5	4.9	2.5	1.5	.4	22.5	19.1	14.9	7.4
Feb	12.3	11.3	8	5	17.0	1987	24	36.0	1979	51	1979	2	40	1979	4.2	3.7	1.7	.8	.2	18.4	14.8	12.4	8.2
Mar	9.0	5.9	2	1	10.0	1998	7	28.5	2000	42	1979	2	17	1979	3.8	3.4	1.2	.4	@	9.8	6.8	4.3	1.5
Apr	4.1	1.0	#	#	12.0	1983	5	19.0	1997	6	1997	1	1	1983	1.5	1.5	.6	.3	@	1.6	.6	.4	.0
May	.8	.0	#	0	5.0	1993	5	8.0	1979	5	1993	5	#+	1999	.4	.4	.1	@	.0	@	@	@	.0
Jun	.0	.0	0	0	1.0	1999	5	1.0	1999	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	.0	.0	#	0	1.0	1996	18	1.0	1996	#	1996	18	#	1996	@	@	.0	.0	.0	.0	.0	.0	.0
Oct	.9	.0	#	0	5.0	1991	30	9.0	1991	6	1991	30	1	1994	.6	.5	.1	@	.0	.3	@	@	.0
Nov	8.8	7.5	1	1	12.0	1983	25	22.0	1983	18	1983	26	4	1983	2.9	2.5	1.2	.5	.1	6.1	3.9	2.1	.4
Dec	11.1	10.0	4	2	12.0	1972	28	38.0	1978	35	1972	31	19	1972	4.2	3.7	1.6	.9	.2	14.9	10.5	7.7	3.8
Ann	65.3	49.2	N/A	N/A	24.0	Jan 1973	4	53.0	Jan 1979	57	Jan 1973	4	43	Jan 1973	23.1	20.6	9.0	4.4	.9	73.6	55.7	41.8	21.3

+ 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

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: MONTICELLO, UT**

**COOP ID: 425805**

**Climate Division: UT 7**

**NWS Call Sign:**

**Elevation: 6,820 Feet**

**Lat: 37° 52N**

**Lon: 109° 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	6/25	6/20	6/16	6/13	6/10	6/07	6/04	5/31	5/26
32	6/15	6/09	6/05	6/02	5/30	5/27	5/23	5/19	5/14
28	5/26	5/21	5/18	5/15	5/13	5/10	5/08	5/04	4/30
24	5/21	5/14	5/09	5/04	4/30	4/26	4/21	4/16	4/09
20	5/03	4/26	4/21	4/17	4/13	4/09	4/05	3/31	3/24
16	4/21	4/13	4/08	4/03	3/29	3/24	3/19	3/14	3/06
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	9/04	9/08	9/11	9/14	9/16	9/19	9/22	9/25	9/29
32	9/14	9/18	9/21	9/24	9/26	9/29	10/01	10/04	10/09
28	9/19	9/25	9/29	10/02	10/05	10/09	10/12	10/16	10/22
24	10/02	10/08	10/12	10/15	10/19	10/22	10/25	10/29	11/04
20	10/17	10/22	10/26	10/29	11/01	11/04	11/07	11/11	11/16
16	10/23	10/28	10/31	11/03	11/06	11/08	11/11	11/15	11/19
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	117	110	106	101	98	94	90	85	78
32	138	131	126	122	119	115	111	106	100
28	166	159	154	149	145	141	136	131	123
24	197	188	181	176	171	166	160	154	145
20	230	220	213	207	201	196	190	182	173
16	245	237	231	226	221	216	211	205	197

\* 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: MONTICELLO, UT**

**COOP ID: 425805**

**Climate Division: UT 7**

**NWS Call Sign:**

**Elevation: 6,820 Feet Lat: 37° 52N**

**Lon: 109° 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	1270	1015	888	631	386	132	19	44	209	557	925	1212	7288
60	1115	875	733	481	244	55	2	7	98	403	775	1057	5845
57	1022	791	640	394	171	28	0	1	53	314	685	964	5063
55	960	735	578	338	129	16	0	0	32	258	625	902	4573
50	805	595	428	210	53	3	0	0	6	140	476	747	3463
32	292	161	54	6	0	0	0	0	0	1	72	236	822

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	46	70	189	365	640	905	1120	1061	791	468	137	47	5839
55	0	0	0	7	56	231	407	348	133	12	0	0	1194
57	0	0	0	3	36	183	345	288	94	5	0	0	954
60	0	0	0	0	16	121	253	200	49	1	0	0	640
65	0	0	0	0	2	47	116	82	10	0	0	0	257
70	0	0	0	0	0	11	30	17	1	0	0	0	59

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	50	179	411	679	890	834	569	260	32	0	0	5	55	234	645	1324	2214	3048	3617	3877	3909	3909
45	0	0	9	85	267	529	735	679	420	139	6	0	0	0	9	94	361	890	1625	2304	2724	2863	2869	2869
50	0	0	0	29	146	380	580	524	276	52	0	0	0	0	0	29	175	555	1135	1659	1935	1987	1987	1987
55	0	0	0	1	57	245	425	369	147	12	0	0	0	0	0	1	58	303	728	1097	1244	1256	1256	1256
60	0	0	0	0	8	122	271	214	54	0	0	0	0	0	0	0	8	130	401	615	669	669	669	669
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	9	53	146	290	454	578	539	372	196	38	0	0	9	62	208	498	952	1530	2069	2441	2637	2675	2675

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