

Climatology of the United States

No. 20

1971-2000

Station: MOUNTAIN CITY 2, TN

COOP ID: 406292

Climate Division: TN 1

NWS Call Sign:

Elevation: 2,510 Feet Lat: 36°29N

Lon: 81°48W

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	43.3	19.2	31.3	71+	1999	28	41.5	1974	-20	1970	22	19.1	1977	1046	0	.0	.0	9.7	5.4	26.4	1.7
Feb	47.1	22.1	34.6	76+	1989	16	42.1	1990	-19+	1996	5	25.7	1978	851	0	.0	.0	12.5	4.2	22.6	.6
Mar	55.8	29.6	42.7	85	1973	14	47.8	1973	-11	1960	13	36.3	1996	691	0	.0	.0	22.2	1.0	18.4	@
Apr	64.6	36.1	50.4	88	1976	18	54.8	1981	14	1972	9	45.3	1997	440	0	.0	.0	26.9	.1	11.5	.0
May	72.4	45.6	59.0	88+	1962	18	64.7	1991	22+	1963	2	53.0	1997	214	28	.0	.0	30.7	.0	2.4	.0
Jun	79.2	53.6	66.4	92+	1968	30	70.1	1981	28+	1966	1	62.2	1995	46	88	.0	.1	30.0	.0	@	.0
Jul	82.4	58.0	70.2	95	1993	9	74.2	1993	36	1961	10	66.9	1995	8	168	.0	1.0	31.0	.0	.0	.0
Aug	81.2	56.4	68.8	93	1968	22	72.3	1983	35+	1986	29	64.2	1994	20	138	.0	.6	31.0	.0	.0	.0
Sep	76.1	50.2	63.2	94+	1975	5	67.6	1998	28+	1963	25	57.9	1997	108	52	.0	.2	30.0	.0	.5	.0
Oct	66.7	36.5	51.6	85+	1969	12	59.7	1984	10	1962	27	46.0	1988	421	6	.0	.0	29.4	.0	10.1	.0
Nov	56.6	29.3	43.0	80+	1974	3	51.8	1985	2	1970	25	34.1	1996	662	0	.0	.0	21.8	.7	18.2	.0
Dec	47.0	22.4	34.7	77	2001	6	43.5	1984	-24	1962	13	24.1	1989	940	0	.0	.0	13.9	3.4	25.0	.5
Ann	64.4	38.3	51.3	95	Jul 1993	9	74.2	Jul 1993	-24	Dec 1962	13	19.1	Jan 1977	5447	480	.0	1.9	289.1	14.8	135.1	2.8

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1956-2001

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

050-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: MOUNTAIN CITY 2, TN

COOP ID: 406292

Climate Division: TN 1

NWS Call Sign:

Elevation: 2,510 Feet Lat: 36°29N

Lon: 81°48W

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	3.85	3.49	2.63	1995	14	7.17	1995	.56	1981	13.2	7.9	2.6	.8	1.26	1.63	2.16	2.62	3.06	3.51	4.01	4.59	5.34	6.50	7.57
Feb	4.08	4.14	1.85	1994	11	6.47	1994	.94	1978	11.0	7.5	2.5	.8	1.78	2.15	2.66	3.07	3.46	3.85	4.27	4.76	5.37	6.29	7.13
Mar	4.68	4.08	3.27	1963	12	9.64	1975	.93	1988	12.1	8.9	3.1	1.0	1.82	2.25	2.87	3.38	3.87	4.37	4.90	5.52	6.31	7.53	8.63
Apr	3.99	3.72	2.80	1974	4	7.47	1977	.69	1976	10.8	7.4	2.5	.7	1.46	1.84	2.38	2.83	3.26	3.70	4.17	4.73	5.43	6.52	7.52
May	5.23	4.76	3.37	1995	28	10.44	1998	2.83	1988	12.9	9.2	3.5	1.3	2.61	3.05	3.65	4.13	4.57	5.02	5.49	6.02	6.69	7.69	8.59
Jun	4.22	3.90	2.55	1995	29	11.86	1995	1.45	1993	12.0	8.7	3.0	1.0	1.57	1.96	2.53	3.00	3.45	3.91	4.41	4.99	5.73	6.87	7.91
Jul	4.25	4.16	2.81	1966	13	8.72	1971	1.59	1993	9.6	7.3	2.3	.7	1.60	2.00	2.56	3.04	3.49	3.94	4.44	5.02	5.75	6.88	7.92
Aug	3.87	3.38	3.55	1990	6	8.47	1990	1.66	1995	10.4	6.7	2.5	.7	1.62	1.97	2.47	2.87	3.25	3.64	4.06	4.53	5.14	6.06	6.90
Sep	3.57	3.46	2.35	1959	30	6.87	1979	.96	1984	9.5	6.8	2.5	.8	1.20	1.54	2.03	2.45	2.85	3.27	3.72	4.25	4.93	5.98	6.95
Oct	2.80	2.51	4.03	1964	16	7.36	1990	.17	2000	8.5	5.3	1.7	.7	.51	.76	1.17	1.55	1.94	2.36	2.83	3.41	4.18	5.41	6.59
Nov	3.13	2.97	1.95	2001	30	6.59	1985	1.24	1990	7.8	4.9	1.5	.3	1.33	1.62	2.01	2.34	2.64	2.95	3.29	3.67	4.15	4.89	5.55
Dec	3.84	3.52	3.10	1993	5	7.02	1992	.81	1980	11.1	7.6	2.7	.8	1.12	1.49	2.03	2.51	2.97	3.45	3.99	4.61	5.43	6.70	7.88
Ann	47.51	48.19	4.03	Oct 1964	16	11.86	Jun 1995	.17	Oct 2000	128.9	88.2	30.4	9.6	37.31	39.36	41.94	43.87	45.57	47.20	48.86	50.68	52.88	56.02	58.70

+ 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: 1956-2001

(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

Station: MOUNTAIN CITY 2, TN

COOP ID: 406292

Climate Division: TN 1

NWS Call Sign:

Elevation: 2,510 Feet

Lat: 36°29N

Lon: 81°48W

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	2.7	1.3	1	#	5.5	1988	8	10.5	1988	24	1996	8	4	1996	1.5	.9	.3	.1	.0	2.0	.9	.4	.0
Feb	4.3	2.0	1	#	10.0	1971	13	17.8	1971	10+	1989	18	2	1996	1.4	1.0	.4	.3	.1	1.9	.9	.6	.2
Mar	1.8	1.0	#	#	20.0	1993	14	20.0	1993	27	1993	15	2	1993	1.0	.8	.3	.2	.1	.5	.2	.1	.0
Apr	.3	.0	#	0	3.0	1971	7	3.0	1971	2	1996	9	#+	1996	.2	.2	.1	.0	.0	.1	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	#	.0	#	0	#	1989	21	#	1989	#	1989	21	#	1989	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.2	.6	#	0	5.0	1995	15	5.0	1995	5	1995	15	#+	1999	.6	.4	.1	.1	.0	.5	.2	.1	.0
Dec	4.4	3.3	#	#	8.0	1974	1	16.5	1974	15	1974	2	4	1974	1.6	1.2	.5	.3	.0	2.9	1.6	.9	.3
Ann	14.7	8.2	N/A	N/A	20.0	Mar 1993	14	20.0	Mar 1993	27	Mar 1993	15	4+	Jan 1996	6.3	4.5	1.7	1.0	.2	7.9	3.8	2.1	.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/normals/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: MOUNTAIN CITY 2, TN

COOP ID: 406292

Climate Division: TN 1

NWS Call Sign:

Elevation: 2,510 Feet

Lat: 36°29N

Lon: 81°48W

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	6/09	6/03	5/29	5/26	5/22	5/19	5/15	5/11	5/05
32	5/26	5/20	5/16	5/13	5/10	5/06	5/03	4/29	4/23
28	5/18	5/11	5/07	5/02	4/29	4/25	4/21	4/16	4/09
24	5/03	4/26	4/21	4/17	4/13	4/09	4/04	3/30	3/23
20	4/20	4/13	4/08	4/04	3/31	3/27	3/23	3/18	3/11
16	4/03	3/26	3/21	3/16	3/11	3/06	3/01	2/24	2/16
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	9/23	9/26	9/29	10/02	10/06
32	9/18	9/23	9/27	9/30	10/02	10/05	10/08	10/12	10/17
28	10/01	10/06	10/09	10/12	10/15	10/18	10/21	10/24	10/29
24	10/09	10/15	10/19	10/23	10/27	10/30	11/03	11/07	11/13
20	10/18	10/25	10/29	11/02	11/06	11/10	11/14	11/19	11/26
16	10/30	11/06	11/11	11/15	11/19	11/23	11/27	12/02	12/09
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	144	137	132	127	123	119	115	110	103
32	167	159	154	149	145	141	136	131	123
28	192	184	178	173	169	164	159	154	146
24	223	214	207	201	196	191	185	178	169
20	252	241	233	226	220	213	206	198	187
16	285	273	266	259	252	246	239	231	220

* 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

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

Station: MOUNTAIN CITY 2, TN

COOP ID: 406292

Climate Division: TN 1 NWS Call Sign: Elevation: 2,510 Feet Lat: 36° 29N Lon: 81° 48W

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	1046	851	691	440	214	46	8	20	108	421	662	940	5447
60	891	711	536	295	112	9	0	2	41	284	517	785	4183
57	798	627	445	215	68	3	0	0	19	214	434	692	3515
55	737	571	386	167	45	1	0	0	10	173	380	632	3102
50	595	435	248	75	13	0	0	0	2	92	259	490	2209
32	183	75	10	0	0	0	0	0	0	1	24	112	405

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	160	148	342	551	837	1032	1183	1141	933	610	352	195	7484
55	1	0	5	28	169	343	470	428	254	68	18	3	1787
57	0	0	2	16	130	285	408	366	203	47	12	0	1469
60	0	0	0	5	81	201	315	275	134	24	5	0	1040
65	0	0	0	0	28	88	168	138	52	6	0	0	480
70	0	0	0	0	6	22	61	47	12	0	0	0	148

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	42	67	177	328	583	780	917	888	677	376	173	69	42	109	286	614	1197	1977	2894	3782	4459	4835	5008	5077
45	16	25	92	205	429	630	762	733	528	236	92	30	16	41	133	338	767	1397	2159	2892	3420	3656	3748	3778
50	0	4	40	112	284	481	607	578	381	129	42	9	0	4	44	156	440	921	1528	2106	2487	2616	2658	2667
55	0	0	11	46	161	336	452	425	241	54	9	0	0	0	11	57	218	554	1006	1431	1672	1726	1735	1735
60	0	0	1	11	69	192	297	272	129	14	0	0	0	0	1	12	81	273	570	842	971	985	985	985
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	38	59	125	230	364	497	606	581	426	264	132	61	38	97	222	452	816	1313	1919	2500	2926	3190	3322	3383

(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

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
- 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">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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