

Climatography of the United States

No. 20

1971-2000

Station: MONTEAGLE, TN

COOP ID: 406162

Climate Division: TN 2

NWS Call Sign:

Elevation: 1,850 Feet Lat: 35° 13N Lon: 85° 51W

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	43.2	26.2	34.7	73	1952	1	44.2	1974	-20	1985	21	20.6	1977	940	0	.0	.0	10.3	5.5	20.8	.9
Feb	48.2	30.1	39.2	77+	1962	13	46.3	1990	-8	1958	17	28.1	1978	723	0	.0	.0	14.7	3.2	16.3	.2
Mar	56.9	37.6	47.3	82	1967	13	53.5	1973	2	1960	5	40.9	1996	550	1	.0	.0	24.1	.6	10.3	.0
Apr	66.0	45.9	56.0	88	1942	30	62.4	1981	19	1940	13	50.2	1983	283	10	.0	.0	28.3	.0	2.7	.0
May	73.2	54.2	63.7	95+	1941	22	70.1	1987	30+	1963	1	58.3	1997	121	80	.0	.0	30.9	.0	@	.0
Jun	80.2	61.5	70.9	99	1939	30	74.7	1981	40+	1956	3	66.6	1997	12	188	.0	.7	30.0	.0	.0	.0
Jul	83.4	65.8	74.6	101	1952	28	77.9	1993	48	1947	22	72.1	1972	0	297	.0	3.3	31.0	.0	.0	.0
Aug	83.0	64.6	73.8	96+	1943	27	77.1	1987	47	1946	31	69.8	1992	2	274	.0	2.7	31.0	.0	.0	.0
Sep	77.5	59.0	68.3	98	1954	6	72.7	1998	33	1942	28	63.9	1975	36	133	.0	1.1	30.0	.0	.0	.0
Oct	67.6	47.6	57.6	90	1941	6	64.7	1984	22+	1952	29	51.2	1976	255	25	.0	.0	30.3	.0	1.4	.0
Nov	56.6	38.7	47.7	80	1984	1	54.9	1985	-7	1950	25	39.2	1976	524	3	.0	.0	22.8	.3	9.2	.0
Dec	47.2	29.9	38.6	73	1956	8	47.7	1984	-9	1983	25	29.2	2000	819	0	.0	.0	14.3	2.7	18.4	.1
Ann	65.3	46.8	56.0	101	Jul 1952	28	77.9	Jul 1993	-20	Jan 1985	21	20.6	Jan 1977	4265	1011	.0	7.8	297.7	12.3	79.1	1.2

+ 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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1938-2001

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

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No. 20

1971-2000

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

Station: MONTEAGLE, TN

COOP ID: 406162

Climate Division: TN 2

NWS Call Sign:

Elevation: 1,850 Feet Lat: 35°13N

Lon: 85°51W

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	5.98	5.98	4.19	1946	7	12.09	1974	1.61	1985	12.7	8.8	4.6	1.8	2.22	2.78	3.58	4.26	4.89	5.55	6.25	7.07	8.12	9.74	11.21
Feb	5.04	4.89	4.40	1994	11	9.92	1994	1.51	1978	10.3	7.5	3.3	1.6	1.90	2.37	3.05	3.61	4.14	4.68	5.27	5.96	6.83	8.16	9.39
Mar	6.94	5.73	5.97	1973	16	14.98	1980	2.82	1986	12.7	9.7	4.7	1.9	2.75	3.39	4.30	5.05	5.76	6.48	7.26	8.17	9.31	11.07	12.66
Apr	5.03	4.49	4.62	1977	4	10.19	2000	1.31	1976	10.4	7.7	3.4	1.2	1.92	2.39	3.05	3.61	4.14	4.68	5.26	5.94	6.80	8.13	9.34
May	5.52	5.46	4.29	1969	17	10.41	1983	1.87	1987	11.5	8.2	3.8	1.4	2.12	2.63	3.36	3.97	4.55	5.14	5.78	6.52	7.46	8.91	10.23
Jun	4.78	3.77	7.42	1998	5	11.88	1998	.87	1988	11.1	7.8	3.1	1.3	1.07	1.51	2.22	2.85	3.48	4.15	4.90	5.80	6.99	8.87	10.65
Jul	5.44	5.16	4.70	1949	12	10.80	1972	.37	1997	11.7	8.9	3.6	1.7	1.40	1.91	2.70	3.40	4.09	4.81	5.61	6.57	7.81	9.78	11.62
Aug	4.04	3.80	4.05	1985	17	9.97	1985	.07	1999	9.6	6.4	2.8	1.3	.89	1.26	1.85	2.39	2.92	3.49	4.14	4.91	5.92	7.54	9.06
Sep	4.94	4.59	4.54	1975	23	10.11	1975	.23	1984	9.3	6.5	3.1	1.5	.96	1.41	2.13	2.80	3.47	4.20	5.02	6.01	7.32	9.42	11.42
Oct	4.25	4.05	4.10	1975	8	10.60	1975	.10	2000	8.3	5.6	2.6	1.3	.67	1.03	1.65	2.23	2.84	3.50	4.26	5.19	6.43	8.44	10.38
Nov	5.88	5.41	4.10	1948	28	12.29	1977	2.24	1976	10.7	7.7	3.9	2.0	2.54	3.07	3.81	4.42	4.98	5.56	6.17	6.87	7.77	9.12	10.35
Dec	5.93	5.15	7.66	1990	23	18.32	1990	1.39	1980	11.4	8.4	3.8	1.6	1.61	2.17	3.02	3.77	4.51	5.28	6.14	7.15	8.47	10.54	12.47
Ann	63.77	63.63	7.66	Dec 1990	23	18.32	Dec 1990	.07	Aug 1999	129.7	93.2	42.7	18.6	46.51	49.88	54.19	57.44	60.32	63.10	65.97	69.13	72.95	78.48	83.25

+ 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: 1938-2001

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

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Station: MONTEAGLE, TN

COOP ID: 406162

Climate Division: TN 2

NWS Call Sign:

Elevation: 1,850 Feet

Lat: 35°13N

Lon: 85°51W

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	2.4	.0	#	0	5.5	1977	20	13.0	1977	6	1977	20	2	1977	1.0	.6	.2	.1	.0	3.1	.9	.2	.0
Feb	.8	.0	#	0	6.0	1985	12	6.0	1985	3+	1978	21	1	1978	.6	.3	.2	.1	.0	.9	.2	.0	.0
Mar	.5	.0	#	0	9.5	1971	25	9.5	1971	1	1978	17	#+	1996	.4	.3	.1	.1	.0	.2	.0	.0	.0
Apr	#	.0	0	0	#	1992	2	#+	1992	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.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	0	0	.3	1989	20	.3	1989	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	#	0	3.0	1974	14	3.0	1974	3	1974	14	#+	1976	.1	.1	@	.0	.0	.1	@	.0	.0
Dec	.5	.0	#	0	3.0	1974	1	3.0	1974	2+	1993	25	#+	1993	.3	.2	@	.0	.0	.2	.0	.0	.0
Ann	4.4	.0	N/A	N/A	9.5	Mar 1971	25	13.0	Jan 1977	6	Jan 1977	20	2	Jan 1977	2.4	1.5	.5	.3	.0	4.5	1.1	.2	.0

+ 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:

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No. 20
1971-2000**

Station: MONTEAGLE, TN

COOP ID: 406162

Climate Division: TN 2

NWS Call Sign:

Elevation: 1,850 Feet

Lat: 35° 13N

Lon: 85° 51W

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	5/07	5/01	4/27	4/24	4/21	4/18	4/14	4/10	4/04
32	4/21	4/17	4/14	4/11	4/08	4/06	4/03	3/31	3/27
28	4/15	4/09	4/05	4/02	3/29	3/26	3/22	3/18	3/12
24	4/06	3/30	3/25	3/20	3/16	3/11	3/07	3/01	2/22
20	3/23	3/15	3/09	3/04	2/27	2/23	2/18	2/12	2/04
16	3/12	3/05	2/28	2/24	2/20	2/16	2/11	2/06	1/30
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	10/04	10/08	10/11	10/14	10/17	10/19	10/22	10/25	10/29
32	10/08	10/14	10/18	10/22	10/25	10/29	11/01	11/05	11/11
28	10/29	11/03	11/06	11/09	11/12	11/14	11/17	11/21	11/26
24	11/03	11/09	11/13	11/17	11/20	11/23	11/27	12/01	12/07
20	11/11	11/18	11/24	11/28	12/02	12/06	12/11	12/16	12/23
16	11/21	11/30	12/07	12/12	12/17	12/23	12/28	1/04	1/13
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	200	193	187	183	178	174	169	163	156
32	219	212	207	203	199	195	191	186	179
28	248	241	235	231	227	223	218	213	206
24	274	265	259	254	249	244	239	232	224
20	304	295	288	283	277	272	266	260	250
16	327	318	311	305	300	295	289	282	273

* 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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Climate Division: TN 2 NWS Call Sign: Elevation: 1,850 Feet Lat: 35°13N Lon: 85°51W

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	940	723	550	283	121	12	0	2	36	255	524	819	4265
60	785	583	404	162	52	2	0	0	8	147	385	665	3193
57	702	500	321	106	26	0	0	0	3	98	307	579	2642
55	643	449	270	76	16	0	0	0	1	72	260	520	2307
50	503	320	163	26	3	0	0	0	0	28	161	382	1586
32	142	38	5	0	0	0	0	0	0	0	7	65	257

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	225	238	478	718	982	1165	1320	1296	1087	793	476	269	9047
55	13	6	30	104	285	475	607	583	398	152	39	11	2703
57	10	1	19	74	234	416	545	521	339	115	26	8	2308
60	0	0	9	40	166	327	452	428	255	71	14	1	1763
65	0	0	1	10	80	188	297	274	133	25	3	0	1011
70	0	0	0	1	28	80	151	137	50	5	0	0	452

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	83	137	296	498	754	938	1083	1056	857	561	282	126	83	220	516	1014	1768	2706	3789	4845	5702	6263	6545	6671
45	37	72	187	359	599	788	928	901	707	410	175	64	37	109	296	655	1254	2042	2970	3871	4578	4988	5163	5227
50	13	30	99	236	444	638	773	746	558	273	96	27	13	43	142	378	822	1460	2233	2979	3537	3810	3906	3933
55	0	5	46	137	301	488	618	591	413	158	43	7	0	5	51	188	489	977	1595	2186	2599	2757	2800	2807
60	0	0	13	59	169	340	463	436	274	72	11	0	0	0	13	72	241	581	1044	1480	1754	1826	1837	1837
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	37	75	164	297	466	637	761	740	562	332	151	60	37	112	276	573	1039	1676	2437	3177	3739	4071	4222	4282

(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

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