

Climatology of the United States

No. 20

1971-2000

Station: SEVIERVILLE 1 SE, TN

COOP ID: 408179

Climate Division: TN 1

NWS Call Sign:

Elevation: 930 Feet Lat: 35° 52N Lon: 83° 33W

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	45.9	24.9	35.4	78	1972	24	47.6	1974	-24	1985	21	21.8	1977	918	0	.0	.0	13.3	3.4	22.2	.5
Feb	51.3	27.3	39.3	85	1996	23	46.3	1990	-16	1996	5	28.5	1978	721	0	.0	.0	16.9	2.2	18.8	.4
Mar	60.7	34.3	47.5	87	1998	30	52.7	1973	-4	1993	15	41.5	1993	543	0	.0	.0	26.4	.2	13.8	@
Apr	69.2	42.7	56.0	90	1986	27	61.5	1981	18	1982	7	51.2	1983	277	6	.0	@	29.5	@	5.4	.0
May	77.0	52.6	64.8	92+	1962	18	70.0	1991	27	1971	4	60.6+	1997	100	93	.0	.4	31.0	.0	.5	.0
Jun	84.1	61.0	72.6	100	1964	22	76.3	1981	30	1966	1	68.2	1972	5	231	.0	5.5	30.0	.0	.0	.0
Jul	87.2	65.1	76.2	101	1980	16	80.2	1993	43	1964	6	72.6	1979	0	345	.1	12.0	31.0	.0	.0	.0
Aug	86.3	63.7	75.0	102	1983	21	79.4	1995	41	1968	29	71.6	1992	1	310	.1	8.4	31.0	.0	.0	.0
Sep	80.9	57.1	69.0	101	1998	13	75.4	1998	31	1967	30	64.5	1976	36	156	@	3.5	30.0	.0	.0	.0
Oct	70.6	43.4	57.0	90	1998	5	64.2	1984	19+	1962	27	49.9	1976	280	32	.0	@	30.8	.0	4.3	.0
Nov	59.3	34.7	47.0	83	1985	19	56.1	1985	7	1970	25	37.5	1976	542	1	.0	.0	25.4	.1	13.4	.0
Dec	49.9	27.5	38.7	80	1971	15	47.0	1971	-13	1962	13	31.0	1989	817	0	.0	.0	16.9	1.2	21.1	@
Ann	68.5	44.5	56.5	102	Aug 1983	21	80.2	Jul 1993	-24	Jan 1985	21	21.8	Jan 1977	4240	1174	.2	29.8	312.2	7.1	99.5	.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/normals/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1955-2001

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

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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: SEVIERVILLE 1 SE, TN

COOP ID: 408179

Climate Division: TN 1

NWS Call Sign:

Elevation: 930 Feet Lat: 35°52N

Lon: 83°33W

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	4.21	2.84+	1957	28	6.12	1972	1.20	1981	10.5	7.5	3.0	.8	1.44	1.80	2.32	2.75	3.15	3.57	4.02	4.55	5.22	6.24	7.18
Feb	3.59	3.63	4.03	1985	1	6.45	1985	.41	1978	9.9	6.8	2.5	.9	1.22	1.56	2.06	2.48	2.88	3.30	3.75	4.28	4.96	6.02	6.99
Mar	4.32	3.98	5.01	1963	12	11.73	1994	1.42	1983	11.8	8.4	3.1	.9	1.42	1.83	2.43	2.94	3.44	3.95	4.51	5.16	6.00	7.30	8.50
Apr	3.65	3.68	3.24	1994	11	8.56	1998	.16	1976	9.8	6.6	2.5	.7	.90	1.24	1.77	2.24	2.71	3.21	3.76	4.41	5.27	6.63	7.91
May	4.70	4.29	2.90	1996	28	9.31	1984	1.55	1994	11.6	8.1	3.3	1.0	2.07	2.49	3.08	3.55	4.00	4.45	4.93	5.48	6.18	7.24	8.20
Jun	3.99	3.82	2.00+	1958	26	8.70	1989	.95+	1993	9.6	6.9	2.9	1.2	1.03	1.40	1.98	2.49	3.00	3.53	4.12	4.83	5.74	7.19	8.54
Jul	4.06	3.82	3.70	1967	29	9.23	1996	.52	1993	10.8	7.8	2.8	.8	1.10	1.49	2.07	2.59	3.09	3.62	4.21	4.90	5.80	7.22	8.54
Aug	3.14	3.24	2.74	1964	16	5.77	1991	1.00	1972	8.5	5.8	2.2	.7	1.25	1.54	1.95	2.29	2.61	2.94	3.29	3.70	4.22	5.01	5.73
Sep	3.19	3.06	2.53	1970	25	7.79	1989	.00	1985	7.9	5.5	2.3	1.0	.82	1.28	1.80	2.20	2.58	2.97	3.39	3.87	4.49	5.44	6.32
Oct	2.45	2.40	2.24	1961	3	5.72	1972	.00	2000	7.0	4.9	1.7	.7	.64	.99	1.39	1.70	1.99	2.29	2.60	2.97	3.44	4.16	4.82
Nov	3.34	3.34	2.00	1991	21	6.11	1974	.46	1990	9.3	6.7	2.6	.7	1.15	1.47	1.93	2.31	2.69	3.07	3.49	3.97	4.60	5.57	6.45
Dec	3.75	3.58	2.70	1961	18	9.11	1990	1.23	1985	10.2	7.4	2.7	.8	1.13	1.49	2.02	2.48	2.92	3.39	3.90	4.49	5.27	6.48	7.60
Ann	44.03	45.37	5.01	Mar 1963	12	11.73	Mar 1994	.00+	Oct 2000	116.9	82.4	31.6	10.2	31.76	34.15	37.20	39.52	41.57	43.55	45.60	47.85	50.59	54.54	57.96

+ 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: 1955-2001

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

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Station: SEVIERVILLE 1 SE, TN

COOP ID: 408179

Climate Division: TN 1

NWS Call Sign:

Elevation: 930 Feet

Lat: 35°52N

Lon: 83°33W

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	1.3	.0	#	#	7.0	1985	28	7.0	1985	6	1988	7	1	1977	.6	.5	.1	.1	.0	.4	.1	.0	.0
Feb	1.4	.0	#	0	7.0	1985	12	7.0	1985	6	1971	13	#+	1999	.7	.5	.2	.1	.0	.2	.0	.0	.0
Mar	.6	.0	#	0	5.0	1980	2	5.0	1980	2	1971	4	#+	1999	.3	.3	.1	@	.0	.2	.0	.0	.0
Apr	.1	.0	#	0	2.0	1983	18	2.0	1983	12	1987	3	1	1987	@	@	.0	.0	.0	.1	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	#	1998	7	#	1998	.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	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	1.0	1980	28	1.0+	1996	#+	1997	17	#+	1997	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	.3	.0	#	0	2.0	1977	30	2.1	1977	4	1982	12	#+	1997	.4	.2	.0	.0	.0	.2	.0	.0	.0
Ann	3.8	.0	N/A	N/A	7.0+	Feb 1985	12	7.0+	Feb 1985	12	Apr 1987	3	1+	Apr 1987	2.1	1.6	.4	.2	.0	1.1	.1	.0	.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

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Climate Division: TN 1

NWS Call Sign:

Elevation: 930 Feet

Lat: 35° 52N

Lon: 83° 33W

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	5/20	5/14	5/09	5/05	5/02	4/28	4/24	4/20	4/14
32	5/12	5/06	5/01	4/27	4/24	4/20	4/16	4/12	4/05
28	4/26	4/20	4/16	4/12	4/09	4/05	4/01	3/28	3/22
24	4/12	4/05	4/01	3/28	3/24	3/21	3/17	3/12	3/06
20	3/30	3/23	3/17	3/13	3/09	3/05	2/28	2/23	2/15
16	3/15	3/07	3/01	2/24	2/19	2/14	2/09	2/03	1/26
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	9/27	10/01	10/03	10/06	10/08	10/10	10/13	10/16	10/20
32	10/03	10/08	10/11	10/14	10/17	10/19	10/22	10/26	10/31
28	10/12	10/17	10/21	10/24	10/27	10/30	11/03	11/06	11/12
24	10/26	11/01	11/05	11/09	11/12	11/15	11/19	11/23	11/29
20	11/04	11/11	11/16	11/20	11/24	11/28	12/02	12/07	12/14
16	11/14	11/24	12/01	12/08	12/13	12/19	12/25	1/01	1/11
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	181	173	168	163	159	154	149	144	136
32	198	190	185	180	175	171	166	161	153
28	222	215	210	205	201	197	192	187	180
24	257	248	242	237	232	227	222	215	207
20	286	277	270	265	260	255	249	243	234
16	327	315	307	301	295	289	282	275	265

* 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 1 NWS Call Sign: Elevation: 930 Feet Lat: 35°52N Lon: 83°33W

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	918	721	543	277	100	5	0	1	36	280	542	817	4240
60	766	581	396	153	39	0	0	0	10	173	398	662	3178
57	681	500	312	95	18	0	0	0	4	122	317	571	2620
55	622	448	260	65	10	0	0	0	2	93	266	515	2281
50	483	322	153	18	1	0	0	0	0	42	159	373	1551
32	131	43	4	0	0	0	0	0	0	0	3	55	236

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	236	246	484	719	1016	1216	1368	1333	1110	775	452	262	9217
55	15	8	27	94	313	526	655	620	422	155	25	8	2868
57	11	3	17	64	259	466	593	558	364	122	16	3	2476
60	4	0	8	32	187	376	500	465	280	80	7	0	1939
65	0	0	0	6	93	231	345	310	156	32	1	0	1174
70	0	0	0	1	34	108	197	168	66	10	0	0	584

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	80	133	292	496	772	979	1124	1094	877	547	257	115	80	213	505	1001	1773	2752	3876	4970	5847	6394	6651	6766
45	34	69	187	354	617	829	969	939	727	395	153	57	34	103	290	644	1261	2090	3059	3998	4725	5120	5273	5330
50	13	25	100	225	463	679	814	784	577	256	80	26	13	38	138	363	826	1505	2319	3103	3680	3936	4016	4042
55	1	7	38	125	313	529	659	629	427	142	29	8	1	8	46	171	484	1013	1672	2301	2728	2870	2899	2907
60	0	0	12	51	181	380	504	474	286	64	6	0	0	0	12	63	244	624	1128	1602	1888	1952	1958	1958
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	59	106	210	332	501	663	769	748	579	364	180	83	59	165	375	707	1208	1871	2640	3388	3967	4331	4511	4594

(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