

# Climatology of the United States

No. 20

1971-2000

Station: CENTERVILLE WATER PL, TN

COOP ID: 401587

Climate Division: TN 3

NWS Call Sign:

Elevation: 660 Feet Lat: 35°45N Lon: 87°26W

## 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	48.4	26.4	37.4	79	1972	24	46.2	1974	-26	1985	21	24.2	1977	856	0	.0	.0	14.5	3.0	22.3	1.1
Feb	54.8	28.8	41.8	85	1962	13	50.4	1990	-17	1971	9	28.6	1978	649	0	.0	.0	18.6	1.5	18.6	.3
Mar	64.8	36.7	50.8	89	1963	31	57.4	1973	0	1980	3	45.3	1971	447	4	.0	.0	27.7	.2	13.2	@
Apr	74.5	43.9	59.2	99	1952	26	64.3	1999	18	1973	11	55.4	1983	188	14	.0	.4	29.8	.0	6.0	.0
May	80.3	53.6	67.0	94+	1962	16	72.0	1987	27+	1971	4	62.6	1976	62	122	.0	.8	31.0	.0	.5	.0
Jun	86.3	62.0	74.2	100+	1977	12	76.8	1998	34	1966	1	70.3	1974	2	276	.1	8.6	30.0	.0	.0	.0
Jul	89.4	66.2	77.8	103	1980	16	81.4	1993	44	1972	6	75.4	1975	0	397	.7	17.0	31.0	.0	.0	.0
Aug	88.7	64.5	76.6	102	1964	4	80.9	1983	42	1986	29	72.5	1992	1	360	.6	14.9	31.0	.0	.0	.0
Sep	82.9	57.6	70.3	101	1990	7	74.5+	1986	27	1983	24	66.4	1975	29	186	.1	5.7	30.0	.0	.1	.0
Oct	73.4	45.1	59.3	94	1954	5	67.2	1984	18+	1961	27	53.5+	1988	221	43	.0	.1	30.9	.0	5.3	.0
Nov	61.4	36.9	49.2	89	1987	1	58.3	1985	1	1976	30	39.4	1976	479	3	.0	.0	25.2	@	13.2	.0
Dec	51.6	29.7	40.7	77	1964	24	49.0	1982	-10	1989	22	30.8	1989	755	0	.0	.0	18.8	1.5	19.9	.3
Ann	71.4	46.0	58.7	103	Jul 1980	16	81.4	Jul 1993	-26	Jan 1985	21	24.2	Jan 1977	3689	1405	1.5	47.5	318.5	6.2	99.1	1.7

+ 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

008-A

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1949-2001

(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: CENTERVILLE WATER PL, TN**

**COOP ID: 401587**

**Climate Division: TN 3**

**NWS Call Sign:**

**Elevation: 660 Feet Lat: 35°45N**

**Lon: 87°26W**

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	4.30	3.77	3.91	1954	21	9.91	1974	.54	1986	10.3	7.4	3.2	1.3	1.10	1.51	2.13	2.69	3.23	3.80	4.44	5.19	6.18	7.74	9.19
Feb	4.29	3.78	3.36	1990	3	8.89	1989	.93	1995	9.0	6.9	3.2	1.2	1.62	2.02	2.59	3.07	3.52	3.99	4.49	5.08	5.82	6.97	8.01
Mar	5.72	4.71	4.58	1975	12	15.30	1975	1.58	1987	11.3	8.7	3.6	1.5	2.00	2.54	3.32	3.98	4.62	5.27	5.98	6.80	7.86	9.50	11.00
Apr	4.74	3.94	4.00	1984	22	11.53	1994	1.24	1976	9.8	7.7	3.3	1.2	1.30	1.74	2.43	3.03	3.61	4.22	4.90	5.71	6.75	8.40	9.93
May	5.66	4.74	6.20	1991	27	14.19	1991	.67	1977	10.2	7.7	3.9	1.6	1.63	2.17	2.98	3.68	4.37	5.08	5.87	6.80	8.00	9.89	11.65
Jun	4.34	4.40	3.80	1998	5	9.18	1998	.00	1988	9.5	6.9	2.8	1.2	1.41	2.03	2.70	3.21	3.68	4.14	4.64	5.20	5.92	7.01	8.00
Jul	4.68	4.28	4.97	1972	16	10.47	1998	.85	1983	8.6	6.8	2.9	1.4	1.48	1.93	2.58	3.15	3.69	4.25	4.87	5.60	6.53	7.99	9.33
Aug	3.00	3.30	3.90	1964	15	8.10	1971	.23	1990	6.8	5.0	2.0	.9	.51	.77	1.21	1.62	2.04	2.50	3.02	3.66	4.51	5.88	7.20
Sep	3.89	2.89	6.35	1995	13	11.03	1977	.68	1998	7.7	6.0	2.5	1.0	.74	1.08	1.65	2.18	2.72	3.29	3.95	4.74	5.79	7.47	9.08
Oct	3.30	2.94	5.04	1972	18	10.71	1984	.28	2000	6.6	4.9	2.2	1.0	.67	.97	1.46	1.90	2.34	2.82	3.36	4.01	4.87	6.24	7.54
Nov	5.13	4.75	5.66	1973	27	10.38	1977	1.29	1971	9.6	7.5	3.6	1.7	1.75	2.24	2.95	3.54	4.12	4.71	5.35	6.10	7.06	8.55	9.93
Dec	5.50	4.20	4.60	1978	8	12.59	1978	1.32	1985	10.5	7.7	3.5	1.8	1.48	2.00	2.80	3.49	4.17	4.89	5.69	6.63	7.86	9.78	11.58
Ann	54.55	54.01	6.35	Sep 1995	13	15.30	Mar 1975	.00	Jun 1988	109.9	83.2	36.7	15.8	40.01	42.86	46.49	49.23	51.65	53.99	56.40	59.05	62.26	66.90	70.90

+ 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

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**Climate Division: TN 3**

**NWS Call Sign:**

**Elevation: 660 Feet**

**Lat: 35°45N**

**Lon: 87°26W**

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	1.0	#	#	0	6.0	1985	20	10.0	1985	7	1988	7	1	1982	.3	.3	.2	.1	.0	.1	.1	.1	.0
Feb	1.8	.1	#	0	6.0	1971	8	9.0	1971	6	1971	8	4	1979	.8	.6	.2	.2	.0	.1	.1	.1	.0
Mar	.3	.0	#	0	4.0	1971	25	4.0	1971	2	1980	1	#+	1990	.1	.1	@	.0	.0	.0	.0	.0	.0
Apr	#	.0	0	0	#	1973	10	#+	1973	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	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	#	0	#	1996	10	#+	1996	#	1996	10	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.1	.0	#	0	1.0	1982	12	1.0	1982	2	1985	20	#+	1990	.1	@	.0	.0	.0	.0	.0	.0	.0
Ann	3.2	.1	N/A	N/A	6.0+	Jan 1985	20	10.0	Jan 1985	7	Jan 1988	7	4	Feb 1979	1.3	1.0	.4	.3	.0	.2	.2	.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

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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	5/23	5/17	5/12	5/09	5/05	5/01	4/28	4/23	4/17
32	5/11	5/05	5/01	4/27	4/24	4/20	4/17	4/12	4/06
28	4/26	4/21	4/17	4/14	4/11	4/08	4/05	4/01	3/27
24	4/16	4/11	4/07	4/04	4/01	3/29	3/26	3/23	3/18
20	4/05	3/29	3/24	3/20	3/16	3/12	3/08	3/03	2/25
16	3/18	3/11	3/06	3/01	2/25	2/21	2/16	2/11	2/03
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	9/19	9/24	9/27	9/30	10/03	10/06	10/08	10/12	10/16
32	9/28	10/03	10/06	10/08	10/11	10/13	10/16	10/19	10/24
28	10/04	10/10	10/14	10/18	10/21	10/25	10/28	11/01	11/07
24	10/19	10/24	10/28	11/01	11/04	11/07	11/10	11/14	11/20
20	11/01	11/07	11/11	11/15	11/19	11/22	11/26	12/01	12/07
16	11/05	11/14	11/20	11/26	12/01	12/06	12/12	12/18	12/27
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	173	165	159	155	150	146	141	135	127
32	192	184	179	174	169	165	160	154	146
28	216	208	202	197	193	188	183	177	169
24	239	231	225	220	216	211	206	201	193
20	275	265	258	252	247	241	236	229	219
16	315	302	293	286	279	271	264	255	242

\* 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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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	856	649	447	188	62	2	0	1	29	221	479	755	3689
60	710	516	306	83	18	0	0	0	7	125	341	607	2713
57	622	437	231	43	7	0	0	0	2	82	265	519	2208
55	565	387	189	25	3	0	0	0	1	59	220	462	1911
50	430	271	103	4	0	0	0	0	0	21	127	331	1287
32	102	34	2	0	0	0	0	0	0	0	3	49	190

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	269	309	582	816	1083	1264	1420	1382	1147	845	517	317	9951
55	19	17	55	151	373	574	707	669	458	191	43	17	3274
57	14	12	36	109	315	514	645	607	400	152	29	12	2845
60	9	7	18	60	233	424	552	514	314	102	15	7	2255
65	0	0	4	14	122	276	397	360	186	43	3	0	1405
70	0	0	0	2	49	141	243	215	89	14	0	0	753

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	102	164	350	567	823	1013	1166	1125	901	586	293	135	102	266	616	1183	2006	3019	4185	5310	6211	6797	7090	7225
45	51	94	229	423	668	863	1011	970	751	437	186	70	51	145	374	797	1465	2328	3339	4309	5060	5497	5683	5753
50	22	45	132	289	513	713	856	815	601	294	105	32	22	67	199	488	1001	1714	2570	3385	3986	4280	4385	4417
55	3	17	66	176	362	563	701	660	454	175	51	13	3	20	86	262	624	1187	1888	2548	3002	3177	3228	3241
60	0	2	30	88	222	413	546	505	310	87	14	0	0	2	32	120	342	755	1301	1806	2116	2203	2217	2217
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	72	133	257	397	552	688	784	755	601	408	204	95	72	205	462	859	1411	2099	2883	3638	4239	4647	4851	4946

(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:  
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## 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)