

Climatography of the United States

No. 20

1971-2000

Station: WAVERLY, TN

COOP ID: 409492

Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet Lat: 36°05N Lon: 87°50W

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	46.3	23.0	34.7	76	1972	25	42.9+	1998	-26+	1963	24	20.6	1977	942	0	.0	.0	12.5	4.2	23.8	1.1
Feb	51.9	26.0	39.0	82+	1982	24	47.8	1990	-7+	1971	10	25.8	1978	731	0	.0	.0	15.9	2.3	19.9	.5
Mar	61.5	34.0	47.8	97	1971	31	55.2	1973	-1	1980	3	41.8	1980	536	1	.0	.0	25.3	.3	13.7	@
Apr	71.1	42.8	57.0	91	1987	22	62.6	1981	19	1972	9	50.5	1983	256	15	.0	.2	29.2	.0	4.9	.0
May	78.9	52.5	65.7	95	1965	25	71.5	1998	28	1963	1	59.7	1976	95	117	.0	.9	31.0	.0	.2	.0
Jun	85.7	61.6	73.7	102+	1988	26	77.8	1998	36	1966	1	68.6	1974	6	265	.2	7.7	30.0	.0	.0	.0
Jul	89.6	65.8	77.7	104	1980	17	82.2	1999	45	1968	5	74.0	1971	0	394	.7	16.9	31.0	.0	.0	.0
Aug	89.0	63.5	76.3	102+	1962	20	81.0	1983	40	1968	27	71.7	1976	1	349	.4	14.5	31.0	.0	.0	.0
Sep	82.8	55.4	69.1	102	1990	7	74.7	1998	31	1967	29	64.6	1974	40	163	.1	5.1	30.0	.0	@	.0
Oct	72.3	42.6	57.5	91+	1971	1	63.8	1971	19	1976	28	51.1	1987	268	35	.0	.1	30.8	.0	5.4	.0
Nov	60.4	33.8	47.1	86	1984	1	54.2	1985	2	1970	24	37.5	1976	538	1	.0	.0	23.9	.1	14.3	.0
Dec	50.1	26.7	38.4	79	1966	9	48.0	1984	-11	1989	22	26.5	1989	824	0	.0	.0	16.8	2.3	21.6	.2
Ann	70.0	44.0	57.0	104	Jul 1980	17	82.2	Jul 1999	-26+	Jan 1963	24	20.6	Jan 1977	4237	1340	1.4	45.4	307.4	9.2	103.8	1.8

+ 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: 1962-2000

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

076-A

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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: WAVERLY, TN

COOP ID: 409492

Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet Lat: 36°05N

Lon: 87°50W

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	4.41	4.11	2.91	1999	23	9.87	1974	1.12	1986	9.3	6.6	2.9	1.3	1.12	1.54	2.18	2.75	3.31	3.90	4.55	5.33	6.35	7.95	9.46
Feb	4.68	4.46	3.85	1965	12	10.35	1990	1.60	1978	8.6	6.9	3.0	1.3	2.04	2.46	3.05	3.53	3.97	4.42	4.91	5.46	6.16	7.23	8.19
Mar	5.77	4.71	3.34	1977	4	11.20	1997	2.61	1971	10.0	8.1	3.9	1.9	2.30	2.83	3.58	4.21	4.80	5.40	6.04	6.79	7.74	9.19	10.52
Apr	4.68	4.40	3.76	1973	20	9.49	1979	1.23	1976	9.0	7.3	3.3	1.3	1.60	2.04	2.69	3.24	3.76	4.30	4.88	5.57	6.45	7.81	9.06
May	5.62	5.45	3.80	1995	28	13.60	1983	1.36	1987	9.0	7.1	3.6	1.7	2.12	2.64	3.39	4.02	4.61	5.22	5.88	6.64	7.61	9.11	10.47
Jun	4.74	4.10	5.62	1998	5	9.91	1998	.07	1988	8.3	6.6	3.3	1.4	.89	1.31	2.00	2.65	3.30	4.01	4.81	5.78	7.06	9.13	11.10
Jul	4.63	4.25	6.69	1967	6	11.07	1972	.68	1983	8.0	6.3	3.2	1.5	1.18	1.62	2.29	2.88	3.47	4.09	4.78	5.60	6.67	8.36	9.94
Aug	3.79	3.14	6.51	1971	23	14.12	1971	1.10	1999	6.1	4.4	2.5	1.1	.93	1.29	1.84	2.33	2.82	3.33	3.90	4.59	5.48	6.89	8.22
Sep	4.18	3.29	5.12	1979	14	9.52	1979	1.03	1978	7.4	5.2	2.7	1.5	1.10	1.49	2.10	2.63	3.16	3.71	4.32	5.05	6.00	7.49	8.89
Oct	3.25	3.18	2.60	1989	17	7.18	1984	.27	2000	6.5	4.8	2.5	1.0	.78	1.09	1.56	1.98	2.40	2.85	3.34	3.93	4.71	5.94	7.09
Nov	5.01	4.43	4.85	1968	28	10.23	1979	.97	1998	8.8	6.7	3.6	1.5	1.50	1.97	2.69	3.30	3.90	4.52	5.21	6.02	7.06	8.69	10.21
Dec	5.31	4.60	4.20	1987	25	11.15	1990	.98	1976	9.9	7.4	3.3	1.6	1.64	2.14	2.90	3.54	4.16	4.81	5.52	6.36	7.44	9.12	10.67
Ann	56.07	55.41	6.69	Jul 1967	6	14.12	Aug 1971	.07	Jun 1988	100.9	77.4	37.8	17.1	40.51	43.55	47.42	50.35	52.95	55.46	58.05	60.91	64.37	69.38	73.71

+ 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: 1962-2000

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

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Station: WAVERLY, TN

COOP ID: 409492

Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet

Lat: 36°05N

Lon: 87°50W

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	1.1	.0	#	0	5.0	1973	8	6.0	1973	3	1997	11	#+	1997	-9.9	-9.9	-9.9	-9.9	-9.9	.2	.1	.0	.0
Feb	1.3	.2	#	0	4.9	1971	12	7.0	1971	4	1971	13	1	1971	.6	.4	.2	.0	.0	.4	.2	.0	.0
Mar	.8	.0	#	0	1.6	1996	19	3.5	1996	1+	1999	15	#+	1999	.8	.1	.0	.0	.0	.1	.0	.0	.0
Apr	#	.0	0	0	#	1971	6	#	1971	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	.1	.0	0	0	.6	1996	10	.6	1996	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.5	.0	#	0	4.5	1997	29	4.5	1997	5	1997	30	#+	1997	.4	.1	.1	.0	.0	.0	.0	.0	.0
Ann	3.8	.2	N/A	N/A	5.0	Jan 1973	8	7.0	Feb 1971	5	Dec 1997	30	1	Feb 1971	-9.9	-9.9	-9.9	-9.9	-9.9	.7	.3	.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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Climate Division: TN 3

NWS Call Sign:

Elevation: 540 Feet

Lat: 36°05N

Lon: 87°50W

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	5/16	5/10	5/06	5/02	4/29	4/25	4/22	4/17	4/11
32	5/06	4/30	4/25	4/22	4/18	4/15	4/11	4/07	4/01
28	4/22	4/17	4/14	4/11	4/09	4/06	4/03	3/31	3/26
24	4/14	4/08	4/03	3/31	3/28	3/24	3/21	3/16	3/10
20	4/01	3/25	3/19	3/14	3/10	3/06	3/01	2/23	2/16
16	3/19	3/11	3/05	2/28	2/24	2/19	2/14	2/09	2/01
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	9/30	10/03	10/05	10/08	10/10	10/12	10/15	10/19
32	10/02	10/07	10/11	10/14	10/17	10/20	10/23	10/27	11/01
28	10/09	10/15	10/19	10/22	10/26	10/29	11/02	11/06	11/11
24	10/23	10/30	11/03	11/07	11/10	11/14	11/18	11/22	11/29
20	10/31	11/07	11/12	11/16	11/20	11/24	11/29	12/04	12/11
16	11/16	11/24	11/30	12/05	12/09	12/14	12/19	12/25	1/02
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	174	169	165	161	157	153	149	142
32	203	196	190	185	181	176	172	166	158
28	220	213	208	203	199	195	191	186	179
24	253	244	238	232	227	222	217	210	201
20	282	273	266	260	255	249	243	237	227
16	321	310	302	295	288	282	274	266	255

* 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 3 NWS Call Sign: Elevation: 540 Feet Lat: 36°05N Lon: 87°50W

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	942	731	536	256	95	6	0	1	40	268	538	824	4237
60	787	591	392	142	38	1	0	0	11	163	394	669	3188
57	704	515	310	91	19	0	0	0	4	113	314	586	2656
55	646	462	261	64	11	0	0	0	2	86	264	528	2324
50	505	338	158	20	2	0	0	0	0	37	158	391	1609
32	145	57	7	0	0	0	0	0	0	0	5	74	288

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	227	250	494	749	1045	1250	1417	1371	1113	789	458	273	9436
55	14	11	35	122	343	560	704	658	425	162	27	14	3075
57	11	8	23	89	288	500	642	596	367	127	17	10	2678
60	0	1	12	51	215	410	549	503	284	84	8	0	2117
65	0	0	1	15	117	265	394	349	163	35	1	0	1340
70	0	0	0	3	50	139	244	206	73	11	0	0	726

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	135	304	523	815	1022	1183	1139	895	565	277	120	80	215	519	1042	1857	2879	4062	5201	6096	6661	6938	7058
45	40	75	198	384	660	872	1028	984	745	414	174	62	40	115	313	697	1357	2229	3257	4241	4986	5400	5574	5636
50	18	34	114	256	507	722	873	829	595	277	101	29	18	52	166	422	929	1651	2524	3353	3948	4225	4326	4355
55	4	12	59	153	355	572	718	674	447	165	53	10	4	16	75	228	583	1155	1873	2547	2994	3159	3212	3222
60	0	0	22	74	219	423	563	519	308	83	16	0	0	0	22	96	315	738	1301	1820	2128	2211	2227	2227
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	59	102	214	347	536	694	805	767	589	382	191	83	59	161	375	722	1258	1952	2757	3524	4113	4495	4686	4769

(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