

Climatology of the United States

No. 20

1971-2000

Station: COLUMBIA 3 WNW, TN

COOP ID: 401957

Climate Division: TN 3

NWS Call Sign:

Elevation: 650 Feet Lat: 35°39N Lon: 87°05W

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	46.1	25.0	35.6	78+	1950	25	43.9	1974	-20	1985	21	23.4	1977	913	0	.0	.0	13.2	4.3	22.6	.5
Feb	51.4	27.9	39.7	82	1962	13	48.1	1990	-12	1951	2	29.3	1978	710	0	.0	.0	16.3	2.1	18.9	.1
Mar	60.3	34.6	47.5	87	1982	20	53.7	1973	4	1980	3	41.8	1971	545	1	.0	.0	25.5	.2	12.6	.0
Apr	69.4	42.6	56.0	90+	1955	17	63.0	1981	20	1983	20	49.2	1983	284	13	.0	.1	29.2	.0	4.2	.0
May	77.1	51.9	64.5	99	1962	27	71.2	1987	31+	1963	2	59.9	1976	107	93	.0	.4	31.0	.0	.1	.0
Jun	84.8	60.7	72.8	105	1952	28	75.8	1998	39	1966	1	68.3	1974	6	238	.1	6.9	30.0	.0	.0	.0
Jul	88.5	65.8	77.2	109	1952	28	80.9	1986	51+	1967	15	73.8	1984	0	376	.5	14.4	31.0	.0	.0	.0
Aug	88.1	64.1	76.1	105	1954	16	80.6	1983	48	1953	20	71.9	1992	1	345	.2	12.1	31.0	.0	.0	.0
Sep	81.8	56.8	69.3	104+	1954	4	74.3	1998	34+	1967	30	64.8	1974	42	171	@	5.2	30.0	.0	.0	.0
Oct	71.5	43.8	57.7	93	1951	5	65.0	1984	21	1952	30	51.6	1987	259	30	.0	.1	30.8	.0	3.9	.0
Nov	60.1	35.1	47.6	88	1975	9	53.9	1985	-5	1950	25	39.7	1976	521	0	.0	.0	24.4	.1	12.9	.0
Dec	50.1	28.6	39.4	78+	1951	31	48.6	1984	-10	1989	23	28.6	1989	795	0	.0	.0	17.2	2.1	19.9	.2
Ann	69.1	44.7	57.0	109	Jul 1952	28	80.9	Jul 1986	-20	Jan 1985	21	23.4	Jan 1977	4183	1267	.8	39.2	309.6	8.8	95.1	.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: 1948-2001

(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: COLUMBIA 3 WNW, TN

COOP ID: 401957

Climate Division: TN 3

NWS Call Sign:

Elevation: 650 Feet Lat: 35°39N

Lon: 87°05W

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	4.66	4.12	4.27	1999	23	11.59	1974	.46	1986	11.1	8.1	3.4	1.1	1.23	1.67	2.35	2.94	3.52	4.14	4.82	5.63	6.68	8.34	9.89
Feb	4.35	4.17	3.00	1991	19	9.43	1990	1.05	1978	10.1	6.9	3.0	1.1	1.60	2.01	2.59	3.08	3.55	4.03	4.55	5.15	5.92	7.11	8.20
Mar	6.25	5.51	5.75	1955	21	13.77	1973	2.32	1988	11.4	8.5	3.9	1.8	2.30	2.88	3.73	4.43	5.10	5.79	6.53	7.40	8.50	10.20	11.76
Apr	4.85	4.54	4.27	1984	22	9.20	1983	1.79	1976	10.2	7.6	3.2	1.4	1.74	2.19	2.85	3.41	3.94	4.48	5.07	5.75	6.63	7.99	9.23
May	5.57	5.11	5.69	1967	13	11.74	1983	1.51	1988	10.6	7.7	4.1	1.7	2.00	2.53	3.28	3.92	4.52	5.14	5.82	6.60	7.61	9.15	10.57
Jun	4.14	3.89	3.80	1960	17	8.97	1992	.66	1988	9.5	6.7	2.8	1.1	1.13	1.52	2.12	2.65	3.16	3.69	4.29	4.99	5.91	7.35	8.69
Jul	5.03	4.61	4.30	1984	16	14.38	1998	2.02	1974	9.8	7.5	3.5	1.4	1.72	2.19	2.89	3.47	4.04	4.61	5.25	5.98	6.93	8.39	9.74
Aug	3.48	3.05	4.12	1969	19	6.43	1971	.70	1990	7.3	5.1	2.5	1.1	1.09	1.42	1.92	2.34	2.74	3.16	3.62	4.17	4.87	5.95	6.96
Sep	3.94	3.37	5.40	1979	14	9.15	1979	.40	1984	8.2	6.1	2.6	1.3	1.00	1.37	1.94	2.45	2.95	3.48	4.06	4.76	5.67	7.12	8.47
Oct	3.55	3.07	3.80	1975	17	10.61	1984	.10	2000	7.7	5.5	2.5	1.0	.47	.75	1.26	1.75	2.27	2.85	3.52	4.34	5.46	7.28	9.05
Nov	4.85	4.56	4.55	1973	27	9.77	1977	.97	1976	9.4	7.0	3.3	1.4	1.41	1.87	2.57	3.17	3.75	4.36	5.03	5.82	6.85	8.46	9.95
Dec	5.46	4.63	5.40	1956	12	12.52	1990	1.41	1985	10.5	7.8	3.5	1.8	1.74	2.26	3.03	3.68	4.32	4.97	5.69	6.53	7.62	9.31	10.87
Ann	56.13	55.88	5.75	Mar 1955	21	14.38	Jul 1998	.10	Oct 2000	115.8	84.5	38.3	16.2	41.27	44.18	47.90	50.70	53.19	55.58	58.04	60.76	64.04	68.78	72.87

+ 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: 1948-2001

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

Complete documentation available from:
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Station: COLUMBIA 3 WNW, TN

COOP ID: 401957

Climate Division: TN 3

NWS Call Sign:

Elevation: 650 Feet

Lat: 35°39N

Lon: 87°05W

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	1.7	.0	#	0	5.0	1982	13	10.2	1978	5+	1978	20	1	1978	1.0	.9	.3	.1	.0	.9	.3	.1	.0
Feb	1.2	.0	#	0	6.0	1971	8	6.0	1971	4+	1996	3	1	1979	.6	.3	.1	.1	.0	.2	.1	.0	.0
Mar	.2	.0	0	0	1.3	1987	31	1.3	1987	0	0	0	0	0	.2	.1	.0	.0	.0	.0	.0	.0	.0
Apr	#	.0	0	0	#	1975	3	#	1975	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	1.9	1976	29	1.9	1976	1	1976	29	#	1976	.1	.1	.0	.0	.0	@	.0	.0	.0
Dec	.2	.0	#	0	1.5	1973	21	1.8	1985	2+	1988	9	#+	1988	.2	.2	.0	.0	.0	.1	.0	.0	.0
Ann	3.4	.0	N/A	N/A	6.0	Feb 1971	8	10.2	Jan 1978	5+	Jan 1978	20	1+	Feb 1979	2.1	1.6	.4	.2	.0	1.2	.4	.1	.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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Station: COLUMBIA 3 WNW, TN

COOP ID: 401957

Climate Division: TN 3

NWS Call Sign:

Elevation: 650 Feet

Lat: 35°39N

Lon: 87°05W

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	5/08	5/02	4/29	4/25	4/22	4/19	4/16	4/12	4/07
32	4/26	4/21	4/18	4/15	4/12	4/10	4/07	4/03	3/30
28	4/16	4/11	4/08	4/05	4/02	3/31	3/28	3/25	3/20
24	4/09	4/01	3/27	3/22	3/18	3/14	3/09	3/04	2/24
20	3/22	3/14	3/09	3/04	2/28	2/24	2/19	2/14	2/06
16	3/11	3/03	2/25	2/20	2/16	2/11	2/07	2/01	1/24
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	9/30	10/03	10/06	10/08	10/10	10/12	10/14	10/17	10/20
32	10/05	10/10	10/13	10/16	10/19	10/22	10/25	10/28	11/02
28	10/22	10/27	10/31	11/03	11/06	11/08	11/11	11/15	11/20
24	10/31	11/05	11/09	11/12	11/15	11/18	11/21	11/25	11/30
20	11/10	11/17	11/21	11/26	11/30	12/04	12/08	12/13	12/20
16	11/23	12/01	12/08	12/13	12/18	12/23	12/28	1/04	1/12
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	189	182	178	174	170	166	162	157	151
32	205	199	195	192	189	186	183	179	174
28	237	230	225	221	216	212	208	203	195
24	270	260	253	247	241	235	229	222	212
20	301	291	285	279	274	268	263	256	247
16	337	324	316	309	303	297	290	283	272

* 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: 650 Feet Lat: 35° 39N Lon: 87° 05W

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	913	710	545	284	107	6	0	1	42	259	521	795	4183
60	758	570	399	166	45	1	0	0	12	151	378	641	3121
57	674	487	316	111	22	0	0	0	5	102	297	557	2571
55	616	437	265	81	13	0	0	0	3	75	247	499	2236
50	475	309	160	29	3	0	0	0	0	29	144	364	1513
32	121	35	5	0	0	0	0	0	0	0	3	61	225

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	231	249	483	720	1008	1222	1399	1367	1120	794	472	290	9355
55	13	7	31	111	308	532	686	654	432	156	26	14	2970
57	9	1	20	81	256	472	624	592	375	121	16	10	2577
60	0	0	9	45	185	383	531	499	292	78	7	1	2030
65	0	0	1	13	93	238	376	345	171	30	0	0	1267
70	0	0	0	2	34	116	225	200	82	9	0	0	668

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	91	144	306	519	791	1008	1175	1139	904	579	289	137	91	235	541	1060	1851	2859	4034	5173	6077	6656	6945	7082
45	43	79	194	379	636	858	1020	984	754	426	179	74	43	122	316	695	1331	2189	3209	4193	4947	5373	5552	5626
50	19	36	108	250	483	708	865	829	604	284	105	36	19	55	163	413	896	1604	2469	3298	3902	4186	4291	4327
55	1	13	49	148	333	558	710	674	455	168	50	12	1	14	63	211	544	1102	1812	2486	2941	3109	3159	3171
60	0	0	20	72	198	409	555	519	313	85	17	0	0	0	20	92	290	699	1254	1773	2086	2171	2188	2188
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	58	104	206	338	512	683	807	778	599	382	193	91	58	162	368	706	1218	1901	2708	3486	4085	4467	4660	4751

(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