

Climatography of the United States

No. 20

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

Station: ROCKWOOD 2, TN

1971-2000

COOP ID: 407834

Climate Division: TN 1

NWS Call Sign:

Elevation: 860 Feet

Lat: 35° 51N

Lon: 84° 42W

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	45.2	25.1	35.2	74	1999	23	45.1	1974	-12	1966	31	22.5	1977	926	0	.0	.0	11.7	3.0	23.1	.6
Feb	50.2	26.8	38.5	78	1980	24	45.2	1990	-10+	1996	5	29.9	1978	741	0	.0	.0	15.5	1.8	20.2	.1
Mar	59.5	34.0	46.8	86	1982	20	52.5	1997	1	1980	3	40.3	1971	566	0	.0	.0	25.3	.2	13.9	.0
Apr	69.3	42.0	55.7	91	1986	28	61.1	1985	21	1987	1	51.4	1996	288	8	.0	@	29.1	.0	4.3	.0
May	76.6	51.1	63.9	93+	1962	17	69.9	1987	28+	1963	2	59.0	1997	121	84	.0	.2	31.0	.0	.3	.0
Jun	83.7	60.1	71.9	100	1978	29	75.2	1984	36	1966	1	67.9	1972	8	214	@	4.2	30.0	.0	.0	.0
Jul	87.0	64.4	75.7	107	1980	17	79.0	1980	46	1967	16	72.4	1976	0	332	.3	11.3	31.0	.0	.0	.0
Aug	85.9	62.9	74.4	102	1968	25	78.1	1995	44	1968	31	70.7	1992	1	293	.2	8.2	31.0	.0	.0	.0
Sep	80.5	56.4	68.5	97+	1980	15	74.7	1998	28	1967	30	63.1	1976	40	143	.0	3.7	30.0	.0	.1	.0
Oct	70.0	43.3	56.7	89+	1971	1	63.8	1984	21+	1962	27	50.9	1976	285	26	.0	.0	30.8	.0	3.8	.0
Nov	58.8	34.6	46.7	81	1984	1	55.4	1985	8	1969	15	39.1	1976	551	1	.0	.0	24.1	.1	14.4	.0
Dec	48.8	27.8	38.3	77	1982	5	45.4	1984	-8	1962	13	29.6	1989	827	0	.0	.0	16.1	1.6	21.4	.2
Ann	68.0	44.0	56.0	107	Jul 1980	17	79.0	Jul 1980	-12	Jan 1966	31	22.5	Jan 1977	4354	1101	.5	27.6	305.6	6.7	101.5	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1962-2001

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

063-A

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Station: ROCKWOOD 2, TN

COOP ID: 407834

Climate Division: TN 1

NWS Call Sign:

Elevation: 860 Feet Lat: 35°51N

Lon: 84°42W

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	5.75	5.75	3.51	1988	20	11.89	1974	1.31	1981	12.3	9.0	4.3	1.8	2.12	2.66	3.43	4.08	4.70	5.33	6.01	6.81	7.83	9.39	10.82
Feb	4.90	4.74	2.97	1966	13	8.22	1994	1.59	1980	10.6	7.8	3.7	1.5	2.18	2.62	3.23	3.72	4.18	4.64	5.14	5.70	6.42	7.50	8.48
Mar	6.12	5.52	4.00	1963	12	15.22	1975	2.34	1986	12.3	9.2	4.2	2.0	2.33	2.90	3.72	4.40	5.04	5.70	6.41	7.23	8.28	9.89	11.36
Apr	4.58	4.17	3.30	2000	4	12.57	1998	.92	1976	11.0	8.3	3.1	1.1	1.29	1.72	2.38	2.95	3.51	4.10	4.74	5.51	6.50	8.05	9.50
May	5.62	5.41	6.79	1973	28	14.63	1973	2.50	1992	11.9	8.5	3.9	1.6	2.18	2.70	3.45	4.06	4.65	5.24	5.88	6.63	7.57	9.03	10.35
Jun	5.15	4.96	4.30	1989	20	16.34	1989	.42	1988	10.7	7.5	3.6	1.5	1.17	1.65	2.40	3.08	3.76	4.47	5.28	6.24	7.51	9.52	11.42
Jul	5.53	5.48	3.30	1967	7	14.64	1979	1.63	1974	12.2	9.2	4.3	1.7	1.98	2.50	3.25	3.88	4.48	5.10	5.78	6.56	7.56	9.11	10.53
Aug	4.27	4.23	4.59	1985	17	10.25	1985	1.15	1999	10.5	7.2	3.0	1.1	1.48	1.89	2.47	2.97	3.44	3.93	4.46	5.08	5.87	7.10	8.23
Sep	3.93	3.13	3.96	1988	4	9.89	1977	1.12	1978	9.0	6.3	2.9	1.2	1.11	1.49	2.05	2.54	3.02	3.52	4.07	4.73	5.58	6.91	8.15
Oct	3.49	2.99	3.65	1995	5	7.07	1995	.05	2000	7.8	5.2	2.7	1.1	.51	.80	1.31	1.79	2.29	2.85	3.49	4.27	5.32	7.03	8.68
Nov	5.17	4.99	4.20	1973	28	9.26	1977	1.89	1976	10.0	7.5	3.6	1.5	2.17	2.64	3.30	3.84	4.35	4.86	5.41	6.05	6.85	8.08	9.19
Dec	5.73	5.24	4.90	1973	26	13.62	1990	1.56	1985	11.5	8.5	3.9	1.6	1.59	2.14	2.96	3.68	4.38	5.12	5.93	6.90	8.15	10.11	11.95
Ann	60.24	58.64	6.79	May 1973	28	16.34	Jun 1989	.05	Oct 2000	129.8	94.2	43.2	17.7	43.95	47.14	51.20	54.27	56.98	59.61	62.31	65.29	68.89	74.11	78.60

+ 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: 1962-2001

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

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Station: ROCKWOOD 2, TN

COOP ID: 407834

Climate Division: TN 1

NWS Call Sign:

Elevation: 860 Feet

Lat: 35°51N

Lon: 84°42W

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	.5	#	0	7.3	1973	8	7.3	1973	6	1988	8	1	1988	1.1	.7	.3	.1	.0	.2	.1	.0	.0
Feb	1.2	.0	#	0	8.0	1996	2	8.0+	1996	8	1996	2	2	1979	.8	.6	.3	.1	.0	.1	.1	.0	.0
Mar	.1	.0	#	0	1.0	1975	10	1.0	1975	2	1980	1	#+	1980	.1	.1	.0	.0	.0	.1	.0	.0	.0
Apr	.3	.0	0	0	4.8	1987	3	4.8	1987	5	1987	3	2	1987	.1	.1	.1	.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	#	1979	29	#+	1979	1	1996	10	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.5	.0	#	0	3.0	1976	21	6.3	1976	1	1985	21	#+	1985	.4	.3	.1	.0	.0	.1	.0	.0	.0
Ann	4.5	.5	N/A	N/A	8.0	Feb 1996	2	8.0+	Feb 1996	8	Feb 1996	2	2+	Apr 1987	2.5	1.8	.8	.2	.0	.5	.2	.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

Station: ROCKWOOD 2, TN

COOP ID: 407834

Climate Division: TN 1

NWS Call Sign:

Elevation: 860 Feet

Lat: 35° 51N

Lon: 84° 42W

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	4/26	4/22	4/18	4/12
32	5/08	5/01	4/26	4/22	4/18	4/14	4/10	4/05	3/30
28	4/16	4/10	4/06	4/03	3/31	3/28	3/25	3/21	3/15
24	4/01	3/26	3/22	3/18	3/15	3/12	3/08	3/04	2/26
20	3/18	3/11	3/06	3/02	2/26	2/22	2/18	2/13	2/06
16	3/12	3/04	2/25	2/20	2/15	2/10	2/05	1/30	1/21
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	9/29	10/03	10/06	10/08	10/10	10/13	10/15	10/18	10/22
32	10/03	10/09	10/12	10/15	10/18	10/21	10/25	10/28	11/02
28	10/20	10/24	10/28	10/30	11/02	11/05	11/08	11/11	11/15
24	10/31	11/06	11/11	11/15	11/18	11/21	11/25	11/29	12/05
20	11/09	11/16	11/21	11/25	11/29	12/03	12/07	12/12	12/19
16	11/28	12/05	12/11	12/16	12/21	12/25	12/30	1/05	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	185	178	172	168	164	159	155	149	142
32	207	199	193	187	183	178	173	167	158
28	235	228	223	219	215	211	207	202	195
24	272	263	257	252	247	242	237	231	222
20	297	289	284	279	275	271	266	261	253
16	345	328	318	311	305	298	292	284	274

* 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:
www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

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No. 20
1971-2000**

Station: ROCKWOOD 2, TN

COOP ID: 407834

Climate Division: TN 1 NWS Call Sign: Elevation: 860 Feet Lat: 35° 51N Lon: 84° 42W

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	926	741	566	288	121	8	0	1	40	285	551	827	4354
60	771	601	417	165	53	1	0	0	11	174	407	672	3272
57	685	517	333	107	28	0	0	0	4	121	326	580	2701
55	627	462	281	76	17	0	0	0	2	92	275	524	2356
50	485	334	170	25	4	0	0	0	0	40	166	381	1605
32	123	38	5	0	0	0	0	0	0	0	4	55	225

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	221	221	463	710	986	1196	1355	1315	1093	764	444	251	9019
55	11	1	25	95	290	506	642	602	405	143	24	7	2751
57	7	0	16	66	238	446	580	540	347	110	16	1	2367
60	0	0	7	34	171	357	487	447	264	70	7	0	1844
65	0	0	0	8	84	214	332	293	143	26	1	0	1101
70	0	0	0	1	31	96	184	151	58	7	0	0	528

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	68	109	271	494	759	974	1128	1085	875	541	252	103	68	177	448	942	1701	2675	3803	4888	5763	6304	6556	6659
45	29	52	159	353	604	824	973	930	725	390	149	48	29	81	240	593	1197	2021	2994	3924	4649	5039	5188	5236
50	9	17	85	225	450	674	818	775	576	250	78	19	9	26	111	336	786	1460	2278	3053	3629	3879	3957	3976
55	0	4	34	123	303	524	663	620	427	138	34	2	0	4	38	161	464	988	1651	2271	2698	2836	2870	2872
60	0	0	5	58	174	375	508	465	284	63	6	0	0	0	5	63	237	612	1120	1585	1869	1932	1938	1938
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	44	88	186	323	487	654	771	740	578	354	167	67	44	132	318	641	1128	1782	2553	3293	3871	4225	4392	4459

(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/normals/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