U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: COVINGTON 1 W, TN **COOP ID: 402108**

Climate Division: TN 4 **NWS Call Sign:** **Elevation: 310 Feet** **Lat: 35˚34N** **Lon: 89˚40W**

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	27.9	36.9	78+	1943	24	44.9	1990	-10+	1985	20	23.9	1977	871	0	.0	.0	11.7	4.9	20.7	.4
Feb	51.5	31.5	41.5	81	1962	14	49.6	1976	-11	1951	2	27.8	1978	659	0	.0	.0	15.8	3.1	15.5	.1
Mar	61.0	40.1	50.6	92	1929	24	55.8	1973	9	1943	3	44.7	1980	452	4	.0	.0	25.4	.3	7.8	.0
Apr	71.0	48.6	59.8	92+	1940	9	66.3	1981	27	1936	3	53.2	1983	193	36	.0	.1	29.1	.0	1.0	.0
May	79.8	57.7	68.8	98+	1934	31	74.6	1987	36+	1944	7	62.6	1976	57	173	.0	2.4	31.0	.0	.0	.0
Jun	88.0	66.1	77.1	105+	1936	19	81.1	1998	45	1966	1	71.8	1974	1	361	.1	13.5	30.0	.0	.0	.0
Jul	91.4	69.8	80.6	108	1930	12	85.5	1980	49	1947	23	77.6	1984	0	484	1.2	21.1	31.0	.0	.0	.0
Aug	89.8	67.3	78.6	108	1930	9	83.2	1980	46	1946	31	74.2	1992	0	421	.8	16.8	31.0	.0	.0	.0
Sep	83.6	60.1	71.9	103+	1953	2	77.6	1998	33	1942	29	66.0	1974	20	227	.1	7.6	30.0	.0	.0	.0
Oct	73.6	48.5	61.1	97	1953	1	67.5	1971	25	1952	29	55.3	1976	176	52	.0	.4	30.8	.0	.4	.0
Nov	60.5	39.9	50.2	87	1984	1	56.2	1999	6	1950	25	41.4	1976	449	4	.0	.0	23.7	.1	8.0	.0
Dec	50.2	31.5	40.9	79	1982	3	49.7	1984	-7+	1989	22	30.3	1983	749	0	.0	.0	15.9	2.5	17.5	.2
Ann	70.5	49.1	59.8	108+	Aug 1930	9	85.5	Jul 1980	-11	Feb 1951	2	23.9	Jan 1977	3627	1762	2.2	61.9	305.4	10.9	70.9	.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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1928-2001

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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	4.21	4.14	5.50	1930	8	9.09	1978	.99	1986
Feb	4.27	3.87	4.66	1962	27	10.84	1989	1.65	1995
Mar	5.41	4.44	4.35	1975	28	13.22	1975	1.55	1982
Apr	5.34	4.77	5.62	1973	20	15.55	1991	1.73	1978
May	5.22	4.41	4.70	1983	15	16.92	1983	.85	1977
Jun	4.20	3.37	4.37	1997	17	11.60	1974	.00	1988
Jul	4.13	3.59	5.80	1936	3	11.83	1998	.93	1983
Aug	2.75	2.33	6.10	1957	14	7.76	1974	.25	1983
Sep	3.62	3.42	4.51	1962	16	7.71	1977	.75	1999
Oct	3.26	3.07	3.75	1947	27	9.20	1984	.36	1971
Nov	5.28	5.24	5.80	2001	29	12.04	1988	1.21	1998
Dec	5.61	4.81	8.31	1987	25	16.05	1987	1.43	1976
Ann	53.30	55.58	8.31	Dec 1987	25	16.92	May 1983	.00	Jun 1988

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.3	7.0	3.1	1.3
Feb	8.8	6.6	3.0	1.1
Mar	11.4	8.1	3.7	1.5
Apr	10.3	7.7	3.5	1.7
May	11.1	7.9	3.6	1.5
Jun	9.0	5.8	2.9	1.3
Jul	8.5	5.8	2.8	1.4
Aug	6.5	4.2	2.0	.7
Sep	8.4	5.3	2.3	1.1
Oct	7.5	4.5	2.7	1.0
Nov	9.9	6.8	3.5	1.6
Dec	10.2	6.9	3.4	1.8
Ann	111.9	76.6	36.5	16.0

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.16	1.56	2.17	2.70	3.22	3.76	4.36	5.08	6.00	7.46	8.82
Feb	1.39	1.80	2.39	2.90	3.39	3.90	4.45	5.10	5.94	7.23	8.43
Mar	1.94	2.45	3.19	3.81	4.40	5.00	5.66	6.42	7.39	8.90	10.28
Apr	1.51	2.02	2.78	3.45	4.10	4.78	5.54	6.43	7.58	9.39	11.07
May	1.46	1.95	2.70	3.36	4.00	4.67	5.41	6.28	7.42	9.21	10.87
Jun	.57	1.11	1.82	2.42	3.01	3.63	4.33	5.17	6.27	8.01	9.66
Jul	.89	1.28	1.88	2.43	2.98	3.56	4.22	5.01	6.05	7.71	9.28
Aug	.39	.62	1.02	1.40	1.80	2.24	2.74	3.37	4.20	5.56	6.87
Sep	.83	1.17	1.70	2.17	2.64	3.15	3.71	4.39	5.27	6.68	8.00
Oct	.87	1.18	1.65	2.07	2.47	2.90	3.38	3.94	4.67	5.82	6.89
Nov	1.60	2.10	2.85	3.50	4.12	4.77	5.49	6.33	7.42	9.12	10.69
Dec	1.32	1.85	2.67	3.40	4.13	4.90	5.77	6.80	8.15	10.30	12.32
Ann	39.66	42.35	45.77	48.34	50.62	52.82	55.08	57.56	60.56	64.89	68.62

\+ 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: 1928-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	3.2	1.8	#	#
Feb	2.7	.0	#	#
Mar	.6	.0	#	#
Apr	#	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	#	.0	#	0
Nov	.1	.0	#	0
Dec	.3	.0	#	#
Ann	6.9	1.8	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	11.0	1985	4	16.5	1985	11	1985	4	3	1985
Feb	8.0	1979	7	15.6	1985	12	1985	2	4	1978
Mar	3.5	1987	31	6.0	1971	3	1991	30	#+	1998
Apr	#	1987	4	#+	1987	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	#	1993	31	#+	1993	#	1993	30	#	1993
Nov	2.0	1971	23	3.0	1971	3	1971	24	#+	1995
Dec	1.5	1983	27	2.2	1983	2	1983	27	#+	2000
Ann	11.0	Jan 1985	4	16.5	Jan 1985	12	Feb 1985	2	4	Feb 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.4	1.1	.4	.1	@
Feb	.9	.7	.4	.1	.0
Mar	.3	.3	.1	.0	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.1	.1	.0	.0	.0
Dec	.3	.1	.0	.0	.0
Ann	3.0	2.3	.9	.2	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	3.3	1.6	.6	@
Feb	1.8	1.0	.5	.1
Mar	.4	.1	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.1	@	.0	.0
Dec	.4	.0	.0	.0
Ann	6.0	2.7	1.1	.1

+ 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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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	4/24	4/20	4/16	4/14	4/11	4/08	4/06	4/02	3/29
32	4/14	4/08	4/05	4/01	3/29	3/26	3/23	3/19	3/14
28	3/31	3/25	3/20	3/16	3/13	3/09	3/05	2/28	2/22
24	3/16	3/09	3/04	2/27	2/23	2/19	2/15	2/10	2/03
20	3/09	3/01	2/24	2/19	2/15	2/10	2/06	1/31	1/24
16	3/01	2/21	2/15	2/10	2/05	1/31	1/24	1/16	0/00

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	10/05	10/11	10/14	10/18	10/21	10/24	10/27	10/31	11/05
32	10/24	10/29	11/01	11/03	11/06	11/08	11/11	11/14	11/18
28	10/30	11/06	11/11	11/15	11/18	11/22	11/26	11/30	12/07
24	11/10	11/16	11/21	11/25	11/29	12/03	12/07	12/12	12/19
20	11/15	11/26	12/03	12/10	12/16	12/22	12/28	1/05	1/15
16	11/30	12/10	12/17	12/23	12/29	1/04	1/11	1/21	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	209	203	199	196	192	189	185	181	175
32	243	235	230	225	221	217	212	207	199
28	279	269	262	256	250	244	238	231	221
24	307	297	290	284	278	272	266	259	249
20	340	325	316	308	301	294	286	278	266
16	>365	>365	>365	337	325	315	307	297	285

***** 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

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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	871	659	452	193	57	1	0	0	20	176	449	749	3627
60	720	529	313	99	19	0	0	0	4	89	313	603	2689
57	635	451	238	59	9	0	0	0	1	53	240	516	2202
55	577	401	195	39	5	0	0	0	0	35	197	460	1909
50	440	289	109	11	0	0	0	0	0	10	111	331	1301
32	104	46	3	0	0	0	0	0	0	0	3	52	208

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	255	311	578	834	1139	1350	1507	1444	1197	899	548	326	10388
55	16	23	57	183	431	660	794	731	507	222	52	21	3697
57	12	16	38	143	373	600	732	669	448	177	35	15	3258
60	4	10	19	93	290	510	639	576	361	120	18	9	2649
65	0	0	4	36	173	361	484	421	227	52	4	0	1762
70	0	0	0	10	87	219	329	272	120	16	0	0	1053

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	99	174	360	604	900	1117	1267	1203	966	662	335	151	99	273	633	1237	2137	3254	4521	5724	6690	7352	7687	7838
45	52	100	241	460	745	967	1112	1048	816	509	222	81	52	152	393	853	1598	2565	3677	4725	5541	6050	6272	6353
50	25	51	145	322	590	817	957	893	666	363	133	41	25	76	221	543	1133	1950	2907	3800	4466	4829	4962	5003
55	7	18	79	208	438	667	802	738	516	235	70	12	7	25	104	312	750	1417	2219	2957	3473	3708	3778	3790
60	0	3	33	120	292	517	647	583	374	132	32	1	0	3	36	156	448	965	1612	2195	2569	2701	2733	2734
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	57	104	214	373	589	766	865	823	642	425	199	85	57	161	375	748	1337	2103	2968	3791	4433	4858	5057	5142

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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