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: GREENSBURG, KY **COOP ID: 153430**

Climate Division: KY 2 **NWS Call Sign:** **Elevation: 590 Feet** **Lat: 37˚15N** **Lon: 85˚30W**

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	43.5	23.4	33.5	79	1943	24	42.1	1990	-25+	1963	25	17.6	1977	978	0	.0	.0	10.0	5.6	24.6	1.5
Feb	49.1	25.8	37.5	80+	1996	24	45.0	1990	-12	1951	2	24.7	1978	771	0	.0	.0	13.9	3.2	21.1	.7
Mar	58.8	34.0	46.4	86	1945	14	52.7	1973	-4+	1980	3	40.2	1996	576	0	.0	.0	23.5	.5	15.5	.1
Apr	68.8	42.2	55.5	97	1989	28	62.0	1981	19	1987	1	50.2	1997	297	11	.0	.2	28.5	.0	5.3	.0
May	77.4	52.1	64.8	99	1937	31	70.8	1991	27+	1963	1	59.4	1997	118	111	.0	1.2	31.0	.0	.2	.0
Jun	85.1	61.7	73.4	107	1936	29	77.3	1984	39	1966	1	68.8	1974	6	258	.0	8.3	30.0	.0	.0	.0
Jul	89.2	66.1	77.7	108	1936	10	80.9	1980	43	1937	2	74.1	1976	0	392	.5	15.6	31.0	.0	.0	.0
Aug	88.1	63.9	76.0	108	1936	21	81.7	1983	42	1935	31	71.2	1992	2	343	.2	13.1	31.0	.0	.0	.0
Sep	82.0	56.3	69.2	105	1954	6	74.0	1998	29	1942	29	65.4	1974	39	164	.0	5.5	30.0	.0	.0	.0
Oct	71.1	43.3	57.2	93	1998	1	64.4	1971	20+	1952	31	50.5	1987	274	32	.0	.1	30.6	.0	4.3	.0
Nov	58.6	35.2	46.9	84+	1984	1	54.7	1985	-3+	1950	26	37.8	1976	543	1	.0	.0	22.5	.2	13.8	.0
Dec	48.0	27.3	37.7	78+	1982	5	46.3	1971	-19	1989	24	26.1	1989	847	0	.0	.0	13.8	3.0	22.0	.3
Ann	68.3	44.3	56.3	108+	Aug 1936	21	81.7	Aug 1983	-25+	Jan 1963	25	17.6	Jan 1977	4451	1312	.7	44.0	295.8	12.5	106.8	2.6

\+ 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: 1932-2001

(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	4.17	3.88	3.76	1932	29	9.87	1974	.63	1986
Feb	4.31	4.32	3.50	1949	14	11.54	1989	1.32	1985
Mar	5.07	4.50	3.02	1967	6	13.46	1997	1.72	1971
Apr	4.27	3.57	3.35	1983	29	9.96	1983	.54	1976
May	5.68	4.82	4.60	1995	14	15.12	1995	2.05	1988
Jun	4.87	4.60	4.20	1949	16	11.90	1976	.30	1984
Jul	4.63	4.80	3.80	1971	19	9.10	1992	.80	1997
Aug	3.96	3.30	8.05	1967	1	9.89	1977	.45	1998
Sep	4.03	3.53	5.20	1979	14	11.56	1979	.66	1983
Oct	3.13	2.77	2.80	1993	17	7.38	1975	.38	1987
Nov	4.19	3.80	3.20	1986	8	9.07	1986	.76	1976
Dec	4.95	4.65	3.35	1978	4	13.36	1978	1.35	1985
Ann	53.26	55.45	8.05	Aug 1967	1	15.12	May 1995	.30	Jun 1984

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.0	7.7	3.0	.9
Feb	10.2	7.2	3.0	1.3
Mar	12.3	8.9	3.5	1.5
Apr	11.5	7.6	3.2	1.0
May	10.9	8.4	4.0	1.4
Jun	10.3	7.8	3.5	1.3
Jul	9.5	7.4	3.1	1.4
Aug	7.8	5.9	2.9	1.2
Sep	8.5	5.8	2.7	1.3
Oct	7.8	5.6	2.1	1.0
Nov	10.3	7.0	2.8	1.2
Dec	11.7	7.9	3.2	1.5
Ann	121.8	87.2	37.0	15.0

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	1.21	1.61	2.21	2.72	3.22	3.75	4.32	5.00	5.88	7.26	8.55
Feb	1.51	1.92	2.51	3.00	3.48	3.97	4.50	5.12	5.91	7.14	8.26
Mar	1.74	2.22	2.92	3.51	4.08	4.66	5.30	6.04	6.99	8.46	9.81
Apr	1.17	1.57	2.19	2.73	3.25	3.81	4.42	5.14	6.08	7.56	8.95
May	1.67	2.21	3.02	3.72	4.40	5.11	5.89	6.81	8.01	9.87	11.60
Jun	1.05	1.50	2.22	2.86	3.51	4.20	4.98	5.91	7.14	9.10	10.95
Jul	1.22	1.66	2.33	2.92	3.50	4.10	4.78	5.58	6.63	8.28	9.82
Aug	.80	1.16	1.74	2.27	2.81	3.38	4.04	4.82	5.86	7.52	9.10
Sep	.85	1.22	1.81	2.35	2.89	3.46	4.11	4.89	5.92	7.57	9.13
Oct	.62	.91	1.36	1.79	2.21	2.67	3.18	3.80	4.63	5.94	7.19
Nov	1.30	1.70	2.29	2.80	3.29	3.80	4.36	5.02	5.87	7.19	8.42
Dec	1.61	2.08	2.77	3.36	3.93	4.52	5.16	5.91	6.88	8.38	9.77
Ann	39.63	42.31	45.72	48.29	50.56	52.75	55.00	57.48	60.47	64.78	68.50

\+ 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: 1932-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	2.6	2.5	#	#	7.0	1978	17	7.5	1985	5	1984	21	1	1985	1.0	.9	.2	.1	.0	.9	.0	.0	.0
Feb	1.5	#	#	0	4.0	1971	8	10.0	1971	7	1985	2	1	1985	.8	.7	.3	.0	.0	1.2	.5	.1	.0
Mar	.8	.0	#	0	5.0	1972	3	5.0	1972	4	1975	10	#+	1998	.3	.2	.1	@	.0	.2	.2	.0	.0
Apr	.0	.0	0	0	1.0	1982	8	1.0	1982	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	.2	.0	#	0	3.0	1977	27	3.0	1977	3	1977	27	#+	1997	.1	.1	@	.0	.0	@	@	.0	.0
Dec	.4	.0	#	0	2.5	1983	27	2.5	1983	3	1989	8	2	1989	.4	.3	.0	.0	.0	.0	.0	.0	.0
Ann	5.5	2.5	N/A	N/A	7.0	Jan 1978	17	10.0	Feb 1971	7	Feb 1985	2	2	Dec 1989	2.6	2.2	.6	.1	.0	2.3	.7	.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

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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	5/18	5/12	5/08	5/04	5/01	4/28	4/24	4/20	4/14
32	5/02	4/27	4/24	4/21	4/18	4/15	4/12	4/08	4/03
28	4/17	4/13	4/10	4/08	4/05	4/03	3/31	3/28	3/24
24	4/05	3/31	3/27	3/23	3/20	3/17	3/14	3/10	3/05
20	3/23	3/16	3/12	3/07	3/04	2/28	2/24	2/19	2/12
16	3/13	3/06	3/01	2/24	2/20	2/16	2/12	2/06	1/30

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	10/01	10/04	10/07	10/09	10/11	10/14	10/17	10/21
32	10/06	10/11	10/14	10/17	10/20	10/22	10/25	10/29	11/03
28	10/19	10/24	10/28	10/31	11/03	11/06	11/09	11/13	11/19
24	10/31	11/06	11/10	11/13	11/16	11/19	11/22	11/26	12/01
20	11/08	11/15	11/20	11/24	11/28	12/01	12/06	12/10	12/17
16	11/21	11/28	12/03	12/08	12/12	12/16	12/20	12/26	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	178	172	168	164	160	157	153	149	143
32	205	198	193	188	184	180	176	171	164
28	233	225	220	216	211	207	202	197	190
24	263	255	249	244	240	235	230	225	217
20	292	284	278	273	268	264	259	253	244
16	321	312	305	299	294	288	283	276	267

***** 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	978	771	576	297	118	6	0	2	39	274	543	847	4451
60	823	631	429	176	55	1	0	0	11	166	399	692	3383
57	739	548	345	118	30	0	0	0	4	116	318	609	2827
55	680	497	293	87	19	0	0	0	2	88	268	550	2484
50	538	368	182	32	5	0	0	0	0	37	162	413	1737
32	163	63	8	0	0	0	0	0	0	0	5	87	326

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	208	216	455	705	1016	1242	1415	1364	1115	781	453	263	9233
55	12	7	26	101	322	552	702	651	427	155	26	13	2994
57	9	1	17	73	271	492	640	589	369	121	16	10	2608
60	0	0	8	40	202	403	547	496	286	79	7	0	2068
65	0	0	0	11	111	258	392	343	164	32	1	0	1312
70	0	0	0	2	49	132	240	202	75	9	0	0	709

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	65	108	259	477	772	1007	1177	1127	881	543	257	106	65	173	432	909	1681	2688	3865	4992	5873	6416	6673	6779
45	31	54	160	339	618	857	1022	972	731	393	158	55	31	85	245	584	1202	2059	3081	4053	4784	5177	5335	5390
50	17	22	86	222	465	707	867	817	581	261	91	25	17	39	125	347	812	1519	2386	3203	3784	4045	4136	4161
55	1	7	43	129	319	557	712	662	435	149	43	6	1	8	51	180	499	1056	1768	2430	2865	3014	3057	3063
60	0	0	14	64	191	408	557	507	296	72	15	1	0	0	14	78	269	677	1234	1741	2037	2109	2124	2125
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	45	80	176	310	498	678	803	764	578	359	165	68	45	125	301	611	1109	1787	2590	3354	3932	4291	4456	4524

(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.
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