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

COOP ID: 154967

Lon: 88°50W

Station: LOVELACEVILLE, KY

Climate Division: KY 1 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 43.3 24.8 34.1 77 1950 25 43.4 1990 -23+ 1984 21 20.7 1977 960 0 .0 .0 10.2 5.6 23.2 1.1 Jan .3 49.8 28.5 39.2 80 1962 13 47.0 1976 -15 1951 2 25.6 1978 725 0 .0 .0 15.1 2.6 17.8 Feb Mar 60.2 36.9 48.6 85+ 1986 31 54.8 1976 -8 1960 5 42.5 1996 513 2 .0 .0 25.5 .3 11.7 0. 45.5 27 50.9 1983 21 Apr 70.6 58.1 90+1989 63.7 1981 20 +1983 19 230 .0. .1 29.3 .0 3.2 0. May 78.5 54.9 66.7 96 1953 26 71.8 1987 30 1976 4 62.4 1997 76 128 .0 1.8 31.0 .0 .1 .0 74.9 78.7 70.8 86.6 63.1 104 +1988 23 1971 42 +1993 1 1974 2 298 .3 11.4 30.0 .0 .0 .0 Jun Jul 89.9 67.2 78.6 104 +1990 9 82.7 1980 47+ 1971 31 75.8 1971 0 420 1.2 19.1 31.0 .0 .0 .0 1992 88.4 65.0 76.7 105 1964 4 81.5 1980 44 1986 29 72.9 364 .9 14.7 31.0 .0 .0 .0 Aug 5 31 34 Sep 81.8 57.9 69.9 104 1954 74.5 1998 1949 30 64.0 1974 178 .1 5.9 30.0 .0 .1 .0 2 53.4 Oct 71.7 46.0 58.9 96 1953 64.6 1971 17 1952 29 1988 218 26 .0 .3 30.7 .0 3.2 .0 57.8 37.5 47.7 85 1987 53.7 1985 -3 1950 25 38.5 1976 523 2 .0 .0 23.3 11.3 .0 Nov 1 .1 Dec 47.0 29.1 38.1 78+ 1982 2 46.9 1971 -11+1989 22 27.4 2000 837 0 .0 .0 13.7 2.9 20.0 .3 Aug Jul Jan Jan 68.8 46.4 57.6 105 1964 4 82.7 1980 -23+ 1984 21 20.7 1977 4119 1439 2.5 53.3 300.8 11.5 90.6 1.7 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 034-A

(1) From the 1971-2000 Monthly Normals

Elevation: 370 Feet Lat: 36°58N

- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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Climate Division: KY 1 NWS Call Sign: Elevation: 370 Feet Lat: 36°58N Lon: 88°50W

										Pı	recipi	tation	(incl	hes)													
	Me	ans/	P	recip	itatio	on Total					Mean Number of Days (3) Probability that the monthly/annual precipitation will be equal to or indicated amount Monthly/Annual Precipitation vs Probability Levels												less tha	an the			
	Medi	ans(1)		EAU CHICS								Daily Precipitation				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	3.82	3.58	7.20	2000	3	10.17	2000	.75	1983	9.5	6.4	2.4	1.0	.94	1.29	1.85	2.35	2.84	3.36	3.93	4.62	5.53	6.95	8.29			
Feb	4.06	3.65	5.34	1990	15	13.90	1989	1.03	1996	8.7	6.3	2.6	1.1	1.06	1.44	2.03	2.55	3.06	3.60	4.20	4.91	5.83	7.29	8.65			
Mar	4.43	4.16	6.75	1964	9	11.18	1975	1.89	1971	10.7	8.1	3.0	1.1	1.77	2.17	2.75	3.23	3.68	4.14	4.64	5.21	5.94	7.05	8.06			
Apr	5.01	4.72	3.62	1985	27	11.63	1983	1.88	1971	10.7	7.7	3.6	1.5	1.80	2.27	2.95	3.52	4.07	4.63	5.23	5.94	6.85	8.24	9.52			
May	4.48	3.87	3.83	1957	22	9.32	1973	1.24	1994	11.0	8.0	3.1	1.2	1.72	2.13	2.73	3.22	3.69	4.17	4.69	5.29	6.05	7.23	8.30			
Jun	4.29	3.90	3.35	1975	5	12.14	1998	.55	1988	9.0	6.7	2.6	1.2	1.12	1.52	2.15	2.69	3.23	3.80	4.43	5.18	6.15	7.69	9.13			
Jul	4.60	4.67	6.40	1983	3	14.05	1972	.83	1993	7.5	5.8	2.8	1.5	1.31	1.74	2.40	2.98	3.54	4.12	4.77	5.54	6.53	8.09	9.53			
Aug	2.93	2.67	3.85	1962	25	6.95	1982	.44	1999	6.7	4.7	2.1	.7	.56	.83	1.26	1.65	2.06	2.49	2.98	3.57	4.35	5.61	6.81			
Sep	3.14	3.40	5.30	1965	11	8.28	1996	.24	1998	7.4	5.2	2.1	.9	.56	.84	1.30	1.73	2.16	2.64	3.18	3.83	4.70	6.09	7.43			
Oct	3.51	3.19	4.60	1999	9	8.02	1984	.96	2000	7.1	5.0	2.7	.9	1.08	1.41	1.91	2.33	2.75	3.18	3.65	4.20	4.92	6.03	7.07			
Nov	4.54	3.99	5.20	1996	8	10.50	1973	1.05	1999	9.3	7.0	3.4	1.5	1.25	1.68	2.33	2.90	3.46	4.05	4.70	5.46	6.46	8.03	9.49			
Dec	4.62	3.81	4.12	1987	25	11.50	1990	.74	1976	9.8	7.0	3.2	1.3	1.10	1.53	2.20	2.81	3.41	4.04	4.75	5.60	6.71	8.48	10.14			
Ann	49.43	47.89	7.20	Jan 2000	3	14.05	Jul 1972	.24	Sep 1998	107.4	77.9	33.6	13.9	35.93	38.57	41.93	44.48	46.73	48.91	51.15	53.62	56.62	60.95	64.69			

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[#] 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

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COOP ID: 154967

Station: LOVELACEVILLE, KY

Climate Division: KY 1 NWS Call Sign: Elevation: 370 Feet Lat: 36°58N Lon: 88°50W

										Snov	w (inc	hes)												
						Sno	ow To	tals									Mea	ın Nu	mber	of Day	ys (1)			
	Mean	s/Medi	ians (1))		Extremes (2)												Snow Fall >= 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	2.3	1.0	1	#	9.0	1994	17	9.6	1994	18	1978	17	5	1978	1.3	.9	.3	@	.0	2.1	1.1	.5	.0	
Feb	3.0	1.5	1	#	7.0	1993	25	13.0	1993	8	1979	10	3	1985	1.1	.8	.4	.2	.0	1.5	.5	.2	.0	
Mar	.7	#	#	0	8.0	1994	9	8.6	1994	6	1994	9	#+	2000	.3	.2	.1	@	.0	.1	.1	@	.0	
Apr	.0	.0	0	0	.0	0	0	.0	0	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	.2	.0	#	0	4.1	1993	30	4.1	1993	#	1993	30	#	1993	@	@	@	.0	.0	.0	.0	.0	.0	
Nov	.0	.0	0	0	.5	1996	10	.5	1996	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0	
Dec	1.2	.0	#	#	4.0	2000	13	6.9	2000	6	1984	6	1+	2000	.9	.5	.1	.0	.0	1.3	.2	.0	.0	
Ann	7.4	2.5	N/A	N/A	9.0	Jan 1994	17	13.0	Feb 1993	18	Jan 1978	17	5	Jan 1978	3.6	2.4	.9	.2	.0	5.0	1.9	.7	.0	

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

- (1) Derived from Snow Climatology and 1971-2000 daily data
- (2) Derived from 1971-2000 daily data

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[@] 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

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Lat: 36°58N

Station: LOVELACEVILLE, KY

Climate Division: KY 1 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 5/08 5/03 4/29 4/26 4/23 4/20 4/17 4/14 4/09 32 4/23 4/19 4/28 4/15 4/12 4/09 4/06 4/02 3/27 28 4/15 4/11 4/08 4/05 4/02 3/31 3/28 3/24 3/20 4/04 3/24 3/07 24 4/09 3/31 3/27 3/20 3/17 3/13 20 3/30 3/23 3/17 3/12 3/08 3/03 2/26 2/21 2/13 2/23 16 3/13 3/05 2/28 2/19 2/14 2/10 2/04 1/28 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 9/28 10/02 10/04 10/06 10/08 10/10 10/12 10/15 10/19 32 10/03 10/07 10/11 10/14 10/17 10/19 10/22 10/26 10/30 28 10/11 10/17 10/22 10/25 10/29 11/02 11/06 11/10 11/16 24 10/31 11/05 11/09 11/12 11/15 11/18 11/21 11/24 11/29 20 11/03 11/09 11/14 11/17 11/21 11/24 11/28 12/02 12/08 11/23 12/03 12/07 12/15 12/21 12/28 16 11/15 11/28 12/11 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 184 178 174 170 167 164 160 36 156 151 32 207 200 195 191 187 182 178 173 166 28 231 224 218 214 209 205 200 187 195 24 258 250 245 240 235 231 226 220 212 273 257 247 241 233 20 282 267 262 253

296

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

302

Derived from 1971-2000 serially complete daily data

320

16

310

Complete documentation available from:

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Elevation: 370 Feet

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^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	960	725	513	230	76	2	0	1	34	218	523	837	4119		
60	805	587	370	124	27	0	0	0	8	113	383	682	3099		
57	720	510	290	77	12	0	0	0	3	69	304	596	2581		
55	661	458	242	53	7	0	0	0	1	48	256	537	2263		
50	519	336	144	16	1	0	0	0	0	14	157	398	1585		
32	148	58	5	0	0	0	0	0	0	0	7	72	290		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	211	257	517	781	1075	1286	1443	1385	1134	831	476	258	9654
55	11	13	41	144	369	596	730	672	445	166	35	11	3233
57	8	9	27	108	312	536	668	610	387	126	23	7	2821
60	0	2	13	65	234	446	575	517	302	77	12	0	2243
65	0	0	2	21	128	298	420	364	178	26	2	0	1439
70	0	0	0	4	55	161	265	219	86	5	0	0	795

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													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
40	67	132	314	556	842	1060	1214	1160	917	598	280	105	67	199	513	1069	1911	2971	4185	5345	6262	6860	7140	7245				
45	33	69	199	412	687	910	1059	1005	767	447	174	52	33	102	301	713	1400	2310	3369	4374	5141	5588	5762	5814				
50	11	30	116	281	532	760	904	850	617	306	100	26	11	41	157	438	970	1730	2634	3484	4101	4407	4507	4533				
55	2	10	59	168	380	610	749	695	469	191	53	6	2	12	71	239	619	1229	1978	2673	3142	3333	3386	3392				
60	0	0	20	87	240	460	594	540	329	93	15	0	0	0	20	107	347	807	1401	1941	2270	2363	2378	2378				
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	hly)						Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)						
50/86	49 89 202 355 548 721 824 787 611 393 173 62											49	138	340	695	1243	1964	2788	3575	4186	4579	4752	4814					

(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

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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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