

# Climatology of the United States

No. 20

1971-2000

Station: DANVILLE, KY

COOP ID: 152040

Climate Division: KY 3

NWS Call Sign:

Elevation: 900 Feet Lat: 37°40N Lon: 84°46W

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	40.5	23.3	31.9	79	1943	24	42.5	1990	-20	1994	20	16.5	1977	1026	0	.0	.0	7.8	7.9	24.6	1.5
Feb	45.2	26.2	35.7	79	1999	11	43.3	2000	-9+	1996	4	21.6	1978	820	0	.0	.0	10.8	5.3	20.2	.4
Mar	55.3	34.3	44.8	85	1998	30	50.9	1973	-1+	1980	3	38.9+	1978	627	0	.0	.0	21.4	.7	14.6	@
Apr	65.3	43.2	54.3	90+	1989	26	59.7	1985	17	1944	5	49.8	1983	330	7	.0	@	28.0	.0	3.8	.0
May	73.7	52.9	63.3	95	1941	22	70.1	1987	27	1963	1	58.4	1976	149	97	.0	.2	30.9	.0	.1	.0
Jun	81.7	61.6	71.7	107	1936	29	75.6	1984	41+	1984	1	66.3	1972	17	216	@	3.1	30.0	.0	.0	.0
Jul	85.8	65.9	75.9	103+	1999	31	80.8	1999	47+	1944	22	71.9+	1979	0	336	.2	8.5	31.0	.0	.0	.0
Aug	85.0	64.2	74.6	105	1936	21	80.6	1983	42+	1986	29	70.3	1992	6	303	.2	7.1	31.0	.0	.0	.0
Sep	79.0	57.3	68.2	104+	1954	6	75.4	1998	32	1942	29	62.5	1974	52	147	@	3.0	30.0	.0	.0	.0
Oct	67.9	45.3	56.6	95	1953	1	63.2	1971	21+	1976	29	49.7	1976	292	32	.0	@	30.1	.0	2.0	.0
Nov	55.6	36.4	46.0	83+	1987	2	52.6	1985	-3+	1950	26	37.6	1976	570	0	.0	.0	20.3	.2	11.3	.0
Dec	45.2	27.6	36.4	75+	2001	6	45.1	1984	-18+	1989	23	24.3	1989	887	0	.0	.0	11.6	4.5	21.0	.5
Ann	65.0	44.9	55.0	107	Jun 1936	29	80.8	Jul 1999	-20	Jan 1994	20	16.5	Jan 1977	4776	1138	.4	21.9	282.9	18.6	97.6	2.4

+ 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](http://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: 1933-2001

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

015-A

# 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: DANVILLE, KY**

**COOP ID: 152040**

**Climate Division: KY 3**

**NWS Call Sign:**

**Elevation: 900 Feet Lat: 37°40N**

**Lon: 84°46W**

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	3.66	3.71	3.17	1945	1	7.04	1974	.52	1981	11.4	7.1	2.6	.8	1.05	1.40	1.93	2.38	2.83	3.29	3.80	4.40	5.18	6.41	7.55
Feb	3.86	3.77	4.00	1989	14	13.05	1989	1.16	1980	10.4	6.5	2.6	.9	1.16	1.53	2.08	2.55	3.01	3.49	4.01	4.63	5.44	6.69	7.85
Mar	4.96	4.25	5.30	1997	2	14.25	1997	1.72	1983	12.2	8.8	3.2	1.3	1.62	2.09	2.79	3.38	3.94	4.53	5.17	5.92	6.89	8.38	9.77
Apr	3.98	3.83	3.30	1972	22	12.65	1972	.86	1986	11.3	7.7	2.7	.9	1.08	1.46	2.03	2.53	3.02	3.54	4.11	4.79	5.68	7.06	8.35
May	4.94	3.98	3.25	1995	14	11.70	1995	1.50	1987	11.3	8.5	3.6	1.2	1.73	2.20	2.87	3.44	3.99	4.55	5.16	5.87	6.78	8.19	9.49
Jun	4.77	4.37	4.70	1989	16	12.07	1989	.54	1984	10.2	7.3	3.3	1.5	1.22	1.67	2.36	2.97	3.58	4.21	4.92	5.76	6.86	8.60	10.22
Jul	4.83	4.57	6.37	1996	20	11.17	1996	1.31	1999	9.4	7.1	3.3	1.3	1.93	2.37	3.01	3.53	4.02	4.52	5.06	5.69	6.48	7.69	8.80
Aug	3.40	3.07	3.41	1944	27	9.62	1974	.96	1983	8.7	5.9	2.4	1.0	1.12	1.44	1.92	2.32	2.71	3.11	3.54	4.06	4.71	5.73	6.68
Sep	3.29	2.44	3.52	1986	24	9.96	1979	.53	1983	7.8	5.1	2.0	.9	.53	.81	1.29	1.74	2.21	2.72	3.31	4.02	4.98	6.53	8.02
Oct	3.15	3.11	3.32	1977	2	6.34	1983	.40	1987	8.4	5.8	2.0	.8	.80	1.10	1.56	1.96	2.36	2.78	3.25	3.80	4.52	5.67	6.74
Nov	3.68	3.75	2.86	1973	27	8.32	1973	.45	1976	10.1	7.0	2.4	.8	.98	1.33	1.86	2.33	2.79	3.27	3.80	4.43	5.26	6.55	7.76
Dec	4.35	3.87	4.14	1978	9	12.10	1978	1.23	1985	11.5	7.3	3.0	1.2	1.30	1.71	2.33	2.87	3.39	3.93	4.52	5.22	6.13	7.54	8.86
Ann	48.87	47.82	6.37	Jul 1996	20	14.25	Mar 1997	.40	Oct 1987	122.7	84.1	33.1	12.6	33.83	36.71	40.42	43.25	45.76	48.20	50.73	53.53	56.93	61.88	66.18

+ 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: 1933-2001

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

Complete documentation available from:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

# 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](http://www.ncdc.noaa.gov)

**Station: DANVILLE, KY**

**COOP ID: 152040**

**Climate Division: KY 3**

**NWS Call Sign:**

**Elevation: 900 Feet**

**Lat: 37°40N**

**Lon: 84°46W**

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	4.0	2.8	1	#	9.0	1996	7	15.7	1978	11	1978	21	5	1978	2.9	1.5	.4	.1	.0	5.6	3.1	1.3	.3
Feb	5.5	3.7	1	#	7.5	1986	7	19.4	1986	9	1986	15	4	1978	2.8	1.5	.6	.1	.0	5.7	3.4	1.1	.0
Mar	1.8	.7	#	#	4.0	1971	4	8.1	1971	7	1978	3	1	1978	1.1	.5	.2	.0	.0	1.0	.4	.1	.0
Apr	.1	.0	#	0	.5	1980	15	.9	1982	1	1982	8	#+	1985	.1	.0	.0	.0	.0	@	.0	.0	.0
May	#	.0	0	0	#	1989	7	#	1989	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	.3	.0	#	0	2.1	1977	28	2.7	1977	2	1976	30	#+	1997	.4	.1	.0	.0	.0	.2	.0	.0	.0
Dec	1.6	.8	#	#	4.0	2000	3	6.5	1973	3	1984	7	#+	2000	1.4	.5	.1	.0	.0	1.3	.1	.0	.0
Ann	13.3	8.0	N/A	N/A	9.0	Jan 1996	7	19.4	Feb 1986	11	Jan 1978	21	5	Jan 1978	8.7	4.1	1.3	.2	.0	13.8	7.0	2.5	.3

+ 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:

[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

# Climatography of the United States

## No. 20 1971-2000

**Station: DANVILLE, KY**

**COOP ID: 152040**

**Climate Division: KY 3**

**NWS Call Sign:**

**Elevation: 900 Feet**

**Lat: 37° 40N**

**Lon: 84° 46W**

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	5/10	5/05	5/01	4/28	4/25	4/22	4/19	4/15	4/10
32	4/26	4/21	4/18	4/15	4/12	4/10	4/07	4/04	3/30
28	4/16	4/11	4/07	4/04	4/01	3/29	3/26	3/22	3/17
24	4/05	3/30	3/25	3/21	3/17	3/14	3/10	3/05	2/26
20	3/28	3/20	3/15	3/11	3/06	3/02	2/25	2/20	2/13
16	3/12	3/05	2/28	2/24	2/21	2/17	2/13	2/08	2/02
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	10/03	10/08	10/11	10/14	10/17	10/19	10/22	10/25	10/30
32	10/13	10/18	10/21	10/24	10/27	10/30	11/02	11/05	11/10
28	10/23	10/28	11/01	11/04	11/06	11/09	11/12	11/16	11/21
24	11/01	11/07	11/12	11/15	11/19	11/22	11/26	11/30	12/06
20	11/09	11/15	11/20	11/23	11/27	11/30	12/04	12/09	12/15
16	11/15	11/25	12/02	12/08	12/13	12/19	12/25	1/01	1/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	196	188	183	178	174	170	165	160	152
32	215	209	204	200	197	193	189	185	179
28	239	232	227	223	218	214	210	205	197
24	268	260	255	250	245	241	236	231	223
20	290	281	275	270	265	260	255	249	240
16	320	309	303	297	292	287	281	275	266

\* 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](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

**Climatography  
of the United States  
No. 20  
1971-2000**

**Station: DANVILLE, KY**

**COOP ID: 152040**

**Climate Division: KY 3**

**NWS Call Sign:**

**Elevation: 900 Feet**

**Lat: 37°40N**

**Lon: 84°46W**

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	1026	820	627	330	149	17	0	6	52	292	570	887	4776
60	871	680	480	202	76	3	0	0	16	182	425	732	3667
57	787	602	393	139	45	1	0	0	7	129	343	649	3095
55	728	550	339	103	30	0	0	0	4	100	291	590	2735
50	585	422	221	40	10	0	0	0	0	45	179	451	1953
32	195	101	17	0	0	0	0	0	0	0	7	109	429

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	192	205	412	668	971	1189	1359	1320	1085	763	427	245	8836
55	12	9	22	81	288	500	646	607	398	150	21	13	2747
57	9	6	14	56	241	440	584	545	342	117	13	10	2377
60	0	0	7	29	179	353	491	452	261	77	5	0	1854
65	0	0	0	7	97	216	336	303	147	32	0	0	1138
70	0	0	0	1	42	107	195	171	66	10	0	0	592

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	57	97	231	456	745	969	1129	1090	860	532	247	96	57	154	385	841	1586	2555	3684	4774	5634	6166	6413	6509
45	27	53	138	321	590	819	974	935	710	385	153	49	27	80	218	539	1129	1948	2922	3857	4567	4952	5105	5154
50	10	21	74	204	436	669	819	780	560	255	83	19	10	31	105	309	745	1414	2233	3013	3573	3828	3911	3930
55	1	6	37	118	294	519	664	625	413	148	39	5	1	7	44	162	456	975	1639	2264	2677	2825	2864	2869
60	0	0	10	55	175	370	509	470	278	68	10	0	0	0	10	65	240	610	1119	1589	1867	1935	1945	1945
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	33	62	148	279	463	661	783	751	561	323	136	54	33	95	243	522	985	1646	2429	3180	3741	4064	4200	4254

(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](http://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](http://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.

- 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/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)