

Climatology of the United States

No. 20

1971-2000

Station: SOMERSET 2 N, KY

COOP ID: 157510

Climate Division: KY 4

NWS Call Sign:

Elevation: 1,050 Feet Lat: 37°07N

Lon: 84°37W

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	44.3	25.1	34.7	77	1952	1	44.4	1974	-32	1994	19	20.1	1977	940	0	.0	.0	11.0	5.7	22.0	1.6
Feb	49.4	27.9	38.7	79	1977	26	46.4	1990	-15	1965	2	26.2	1978	738	0	.0	.0	14.8	3.4	18.5	.6
Mar	58.7	35.7	47.2	83+	1981	31	54.6	1973	-4+	1980	3	41.2	1996	552	0	.0	.0	24.1	.5	13.6	.1
Apr	68.2	43.1	55.7	89	1989	27	63.0	1981	18	1992	3	51.3	1997	289	8	.0	.0	28.7	.0	5.2	.0
May	75.4	52.4	63.9	92+	1991	31	69.7	1991	26+	1963	2	59.2	1994	119	86	.0	@	31.0	.0	.3	.0
Jun	82.8	60.9	71.9	99	1988	23	75.2	1981	34	1966	1	67.8	1992	8	212	.0	2.6	30.0	.0	.0	.0
Jul	86.0	64.9	75.5	103	1952	28	79.6	1980	44	1961	11	72.1	1976	0	324	.1	7.6	31.0	.0	.0	.0
Aug	84.9	63.1	74.0	100+	1988	17	79.2	1983	41	1976	29	68.5	1992	6	284	.1	5.8	31.0	.0	.0	.0
Sep	78.8	56.5	67.7	101	1954	5	73.3	1980	30	1993	30	62.9	1994	57	137	.0	1.8	30.0	.0	.1	.0
Oct	69.1	44.1	56.6	90+	1959	5	63.6	1984	17	1987	22	49.4	1988	290	29	.0	.0	30.5	.0	4.6	.0
Nov	57.4	36.4	46.9	83	1968	2	54.3	1985	-2	1950	25	38.6	1976	543	1	.0	.0	21.8	.1	12.0	.0
Dec	48.1	29.2	38.7	75	1982	2	47.7	1984	-17	1962	12	26.8	1989	816	0	.0	.0	14.3	3.2	19.3	.3
Ann	66.9	44.9	56.0	103	Jul 1952	28	79.6	Jul 1980	-32	Jan 1994	19	20.1	Jan 1977	4358	1081	.2	17.8	298.2	12.9	95.6	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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1950-2001

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

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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: SOMERSET 2 N, KY

COOP ID: 157510

Climate Division: KY 4

NWS Call Sign:

Elevation: 1,050 Feet Lat: 37°07N

Lon: 84°37W

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	4.25	3.63	4.00	1999	23	12.14	1999	.61	1996	11.7	7.6	2.9	.9	.83	1.21	1.83	2.41	2.99	3.61	4.32	5.18	6.31	8.13	9.85
Feb	3.52	3.07	3.29	1962	27	7.08	1989	.92	1980	10.3	6.9	2.5	.9	1.05	1.38	1.88	2.32	2.74	3.18	3.66	4.23	4.96	6.11	7.18
Mar	4.68	3.66	4.33	1952	22	12.30	1975	1.18	1983	12.5	9.4	3.3	1.0	1.51	1.95	2.61	3.17	3.71	4.26	4.88	5.59	6.52	7.95	9.28
Apr	4.23	3.80	3.10	1984	22	9.97	1998	1.18	1976	11.3	8.1	3.0	.9	1.23	1.63	2.23	2.76	3.27	3.80	4.39	5.08	5.98	7.38	8.69
May	5.38	4.85	4.83	1984	7	11.86	1984	2.41	1987	12.3	9.1	3.8	1.3	2.32	2.80	3.48	4.03	4.55	5.07	5.64	6.28	7.10	8.34	9.46
Jun	4.87	4.60	4.03	1960	12	11.13	1997	.72	1984	11.0	8.2	3.3	1.3	1.35	1.81	2.51	3.12	3.72	4.35	5.05	5.87	6.93	8.61	10.17
Jul	4.46	4.22	4.70	1987	7	9.61	1987	.96	1975	9.6	7.3	2.7	1.3	1.43	1.85	2.48	3.01	3.53	4.06	4.65	5.34	6.22	7.59	8.87
Aug	3.74	3.47	6.52	1987	17	7.91	1987	1.24	1980	9.0	6.2	2.4	1.2	1.47	1.82	2.31	2.72	3.10	3.49	3.92	4.41	5.03	5.99	6.86
Sep	3.66	3.01	2.93	1979	21	8.98	1975	.00	1998	9.0	6.1	2.7	1.1	.63	1.13	1.75	2.25	2.74	3.25	3.82	4.49	5.36	6.73	8.02
Oct	3.22	2.90	3.07	1993	19	7.90	1984	.00	1998	7.6	5.0	2.0	1.1	.23	.57	1.08	1.56	2.05	2.59	3.22	3.98	5.01	6.69	8.31
Nov	4.19	3.87	2.50	1984	19	9.37	1996	.78	1976	10.0	7.0	2.8	1.1	1.19	1.59	2.19	2.71	3.22	3.75	4.34	5.04	5.94	7.35	8.66
Dec	4.59	3.94	3.86	1978	8	15.23	1978	1.22	1995	11.5	7.5	3.0	1.5	1.19	1.63	2.29	2.88	3.46	4.07	4.75	5.55	6.60	8.25	9.79
Ann	50.79	50.98	6.52	Aug 1987	17	15.23	Dec 1978	.00+	Oct 1998	125.8	88.4	34.4	13.6	37.89	40.44	43.67	46.11	48.27	50.34	52.48	54.82	57.66	61.75	65.27

+ 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: 1950-2001

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

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Climate Division: KY 4

NWS Call Sign:

Elevation: 1,050 Feet

Lat: 37°07N

Lon: 84°37W

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	2.6	#	0	15.0	1996	6	15.0	1996	10	1978	20	3	1978	2.2	1.4	.4	.2	@	2.4	1.5	.6	.1
Feb	2.4	1.3	1	0	9.0	1979	7	9.0	1979	14	1998	4	8	1986	1.7	1.0	.3	.2	.0	3.6	1.1	.3	.0
Mar	.9	.0	#	0	3.0	1975	10	4.0+	1978	12	1993	13	1	1993	.5	.3	@	.0	.0	.7	.2	.0	.0
Apr	#	.0	0	0	#	1987	5	#+	1987	0	0	0	0	0	.0	.0	.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	5.0	1977	27	5.0	1977	5	1977	27	#+	1995	.1	.1	@	@	.0	.2	.1	.1	.0
Dec	1.2	.0	#	0	13.8	1998	12	13.8	1998	2	1993	25	#+	1997	.8	.4	@	@	@	-9.9	-9.9	-9.9	-9.9
Ann	8.8	3.9	N/A	N/A	15.0	Jan 1996	6	15.0	Jan 1996	14	Feb 1998	4	8	Feb 1986	5.3	3.2	.7	.4	@	-9.9	-9.9	-9.9	-9.9

+ 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	5/13	5/10	5/07	5/05	5/03	4/30	4/27	4/22
32	5/07	5/02	4/28	4/25	4/22	4/19	4/16	4/12	4/07
28	4/25	4/20	4/16	4/13	4/10	4/08	4/04	4/01	3/27
24	4/11	4/06	4/03	3/31	3/28	3/25	3/22	3/18	3/13
20	4/08	4/01	3/26	3/21	3/17	3/12	3/08	3/02	2/22
16	3/19	3/12	3/07	3/03	2/27	2/23	2/19	2/14	2/07
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	9/25	9/28	10/01	10/04	10/06	10/08	10/10	10/13	10/17
32	10/02	10/06	10/09	10/12	10/15	10/17	10/20	10/23	10/28
28	10/08	10/14	10/18	10/22	10/26	10/29	11/02	11/06	11/12
24	10/21	10/28	11/02	11/06	11/10	11/14	11/18	11/23	11/30
20	11/02	11/09	11/14	11/18	11/22	11/26	11/30	12/05	12/11
16	11/13	11/20	11/25	11/30	12/04	12/08	12/12	12/18	12/25
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	170	164	160	156	153	150	146	142	136
32	195	188	183	179	175	171	167	162	155
28	220	212	207	202	197	193	188	183	175
24	250	242	236	231	226	222	217	211	202
20	279	269	261	255	249	243	237	230	220
16	304	295	289	284	279	274	269	263	254

* 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)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	940	738	552	289	119	8	0	6	57	290	543	816	4358
60	789	598	408	166	51	1	0	0	18	179	401	668	3279
57	703	520	325	109	27	0	0	0	8	126	320	580	2718
55	645	467	274	78	16	0	0	0	4	97	270	522	2373
50	505	341	169	26	4	0	0	0	1	43	164	387	1640
32	147	55	8	0	0	0	0	0	0	0	6	75	291

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	230	241	479	709	990	1194	1347	1302	1070	762	453	282	9059
55	15	9	32	96	293	504	634	589	384	146	27	16	2745
57	11	6	21	67	242	444	572	527	328	113	18	11	2360
60	4	0	11	35	174	355	479	434	248	73	9	7	1829
65	0	0	0	8	86	212	324	284	137	29	1	0	1081
70	0	0	0	1	31	95	177	153	59	8	0	0	524

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	74	125	279	484	754	967	1111	1069	841	525	257	119	74	199	478	962	1716	2683	3794	4863	5704	6229	6486	6605
45	35	66	176	344	599	817	956	914	691	377	158	60	35	101	277	621	1220	2037	2993	3907	4598	4975	5133	5193
50	13	29	100	222	445	667	801	759	541	247	86	28	13	42	142	364	809	1476	2277	3036	3577	3824	3910	3938
55	1	7	48	129	299	517	646	604	395	141	39	6	1	8	56	185	484	1001	1647	2251	2646	2787	2826	2832
60	0	1	16	61	174	369	491	449	258	62	10	0	0	1	17	78	252	621	1112	1561	1819	1881	1891	1891
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	42	85	179	311	482	659	772	735	554	336	153	63	42	127	306	617	1099	1758	2530	3265	3819	4155	4308	4371

(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