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: LEITCHFIELD 2 N, KY **COOP ID: 154703**

Climate Division: KY 2 **NWS Call Sign:** **Elevation: 620 Feet** **Lat: 37˚31N** **Lon: 86˚18W**

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	42.2	23.4	32.8	75	1950	25	42.1	1989	-27	1994	19	16.7	1977	998	0	.0	.0	8.7	7.1	24.0	1.9
Feb	48.2	26.7	37.5	79	1962	13	44.7	1990	-18	1951	2	22.7	1978	772	0	.0	.0	13.0	3.9	19.9	.7
Mar	58.1	35.0	46.6	87	1967	14	52.4	1976	-5	1980	3	39.0	1996	573	0	.0	.0	23.8	.5	14.4	.1
Apr	68.3	42.9	55.6	90	1989	26	61.2	1981	19	1990	7	50.8	1997	290	8	.0	@	28.7	.0	5.4	.0
May	76.4	52.2	64.3	94	1962	19	70.1	1987	29	1976	4	59.4	1997	117	97	.0	.3	31.0	.0	.3	.0
Jun	83.9	60.7	72.3	104	1952	30	76.1	1971	39+	1972	11	67.5	1974	7	227	@	4.8	30.0	.0	.0	.0
Jul	87.5	64.9	76.2	105+	1952	28	79.8	1980	44	1988	2	73.5+	1984	0	347	.2	10.3	31.0	.0	.0	.0
Aug	86.3	62.7	74.5	101+	1983	21	79.9	1983	43	1986	29	70.2	1992	3	298	.1	8.0	31.0	.0	.0	.0
Sep	80.0	55.7	67.9	105	1953	1	72.4	1998	32	1993	30	62.4	1974	53	139	.0	2.7	30.0	.0	@	.0
Oct	69.6	43.6	56.6	91+	1959	4	63.2	1984	18+	1976	29	50.5	1988	286	26	.0	.0	30.6	.0	4.3	.0
Nov	57.0	35.2	46.1	83+	2000	1	54.2	1985	-5	1950	25	37.1	1976	567	0	.0	.0	21.5	.2	12.4	@
Dec	46.3	27.3	36.8	75+	1982	3	46.2	1984	-17	1989	22	24.2	1989	875	0	.0	.0	11.9	3.9	20.8	.5
Ann	67.0	44.2	55.6	105+	Sep 1953	1	79.9	Aug 1983	-27	Jan 1994	19	16.7	Jan 1977	4541	1142	.3	26.1	291.2	15.6	101.5	3.2

\+ 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: 1948-2001

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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	3.56	3.44	3.78	1971	14	7.42	1974	.65	1986
Feb	4.15	3.67	5.33	1989	14	14.98	1989	.77	1978
Mar	4.53	3.74	5.53	1997	2	13.73	1997	2.16	1971
Apr	4.25	3.69	3.21	1957	4	9.27	1983	.73	1986
May	4.91	4.51	5.53	1986	15	10.83	1995	2.42	1994
Jun	4.01	3.95	3.85	1973	28	8.06	1989	1.09	1988
Jul	4.88	4.97	3.37	1984	5	10.39	1973	1.11	1975
Aug	3.56	3.01	3.76	1966	21	8.96	1974	.51	1999
Sep	3.67	3.17	6.04	1979	14	13.30	1979	.68	1983
Oct	3.17	2.66	3.57	1962	2	6.60	1985	.55	1987
Nov	4.14	3.44	3.47	1988	19	10.34	1973	.59	1976
Dec	4.61	4.15	4.03	1990	18	12.04	1978	.91	1976
Ann	49.44	50.12	6.04	Sep 1979	14	14.98	Feb 1989	.51	Aug 1999

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.0	6.6	2.3	.8
Feb	9.6	5.8	2.6	1.2
Mar	11.7	8.0	3.3	1.0
Apr	10.7	7.7	3.1	.9
May	10.9	8.0	3.7	1.3
Jun	9.8	7.3	3.1	.9
Jul	9.3	6.7	3.0	1.6
Aug	8.0	6.0	2.8	1.1
Sep	8.2	5.6	2.6	1.1
Oct	7.4	5.3	2.4	.8
Nov	9.7	6.9	3.1	1.1
Dec	11.1	7.5	3.2	1.4
Ann	116.4	81.4	35.2	13.2

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	.90	1.23	1.75	2.21	2.66	3.14	3.68	4.31	5.14	6.44	7.67
Feb	.99	1.37	1.98	2.52	3.06	3.63	4.27	5.03	6.03	7.61	9.09
Mar	1.64	2.07	2.68	3.19	3.68	4.19	4.73	5.37	6.18	7.43	8.57
Apr	1.28	1.69	2.29	2.81	3.32	3.84	4.42	5.10	5.98	7.36	8.63
May	2.23	2.66	3.26	3.75	4.21	4.66	5.15	5.72	6.42	7.49	8.46
Jun	1.22	1.60	2.17	2.66	3.13	3.63	4.17	4.81	5.63	6.92	8.12
Jul	1.82	2.28	2.93	3.48	4.00	4.53	5.10	5.77	6.62	7.93	9.13
Aug	1.04	1.38	1.89	2.33	2.76	3.20	3.70	4.28	5.03	6.21	7.31
Sep	.84	1.18	1.72	2.20	2.68	3.19	3.76	4.44	5.34	6.77	8.11
Oct	.77	1.07	1.53	1.94	2.35	2.78	3.26	3.84	4.59	5.78	6.89
Nov	1.07	1.46	2.06	2.59	3.11	3.66	4.27	4.99	5.94	7.43	8.83
Dec	1.23	1.67	2.33	2.92	3.50	4.10	4.77	5.56	6.60	8.22	9.74
Ann	37.22	39.64	42.71	45.02	47.06	49.02	51.04	53.25	55.93	59.78	63.09

\+ 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: 1948-2001
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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	4.2	1.0	#	#
Feb	3.2	1.5	#	0
Mar	.9	.0	#	0
Apr	.1	.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	.4	.0	#	0
Dec	1.8	1.1	#	0
Ann	10.6	3.6	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	10.0	1978	17	23.5	1978	14	1978	17	3	1979
Feb	8.0	1985	1	11.0	1971	8	1979	9	6	1979
Mar	6.0	1987	31	6.0	1987	5	1987	31	#+	1987
Apr	2.5	1982	8	2.5	1982	#+	1983	18	#+	1983
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	.2	1993	31	.2	1993	0	0	0	0	0
Nov	6.0	1977	27	7.0	1977	7	1977	28	1	1977
Dec	4.0	1984	6	7.9	1997	4	1984	6	#+	1995
Ann	10.0	Jan 1978	17	23.5	Jan 1978	14	Jan 1978	17	6	Feb 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.4	1.5	.4	.1	@
Feb	2.1	1.0	.4	.1	.0
Mar	.9	.5	.1	.1	.0
Apr	.1	@	.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
Nov	.3	.1	@	@	.0
Dec	2.5	.9	.1	.0	.0
Ann	9.3	4.0	1.0	.3	@

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.8	.3	.0	.0
Feb	.7	.4	.2	.0
Mar	.3	.1	.1	.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	.2	.1	.1	.0
Dec	.5	.1	.0	.0
Ann	2.5	1.0	.4	.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	5/14	5/10	5/07	5/04	5/01	4/29	4/26	4/23	4/19
32	5/06	5/01	4/28	4/25	4/22	4/19	4/16	4/12	4/07
28	4/18	4/14	4/12	4/09	4/07	4/05	4/03	3/31	3/28
24	4/13	4/08	4/04	4/01	3/29	3/26	3/23	3/19	3/14
20	4/02	3/27	3/23	3/19	3/15	3/11	3/08	3/03	2/25
16	3/18	3/12	3/07	3/03	2/27	2/24	2/20	2/15	2/09

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	9/24	9/28	10/01	10/04	10/07	10/09	10/12	10/15	10/20
32	10/03	10/08	10/11	10/14	10/17	10/19	10/22	10/26	10/30
28	10/12	10/17	10/21	10/24	10/27	10/30	11/02	11/06	11/11
24	10/26	10/31	11/04	11/08	11/11	11/14	11/17	11/21	11/27
20	10/31	11/06	11/10	11/14	11/18	11/21	11/25	11/29	12/05
16	11/15	11/22	11/27	12/01	12/05	12/09	12/13	12/18	12/24

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	175	169	165	161	158	154	150	146	140
32	198	191	186	181	177	173	169	164	156
28	218	213	209	205	202	199	195	191	185
24	245	239	234	230	226	223	219	214	208
20	270	262	256	251	247	242	237	232	224
16	299	293	288	284	280	276	272	267	260

***** 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	998	772	573	290	117	7	0	3	53	286	567	875	4541
60	843	632	425	166	52	1	0	0	16	174	423	720	3452
57	760	554	340	107	27	0	0	0	7	121	341	637	2894
55	701	501	288	76	17	0	0	0	4	92	290	578	2547
50	560	374	177	24	4	0	0	0	0	39	179	439	1796
32	182	72	8	0	0	0	0	0	0	0	8	101	371

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	207	224	458	708	1002	1210	1370	1318	1076	763	431	249	9016
55	14	9	25	93	306	520	657	605	390	142	23	13	2797
57	10	6	16	65	254	460	595	543	333	109	14	9	2414
60	0	0	8	33	186	371	502	450	252	69	6	0	1877
65	0	0	0	8	97	227	347	298	139	26	0	0	1142
70	0	0	0	1	38	106	199	162	60	7	0	0	573

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	61	103	253	473	763	983	1141	1087	855	527	240	95	61	164	417	890	1653	2636	3777	4864	5719	6246	6486	6581
45	33	54	156	338	608	833	986	932	705	385	147	49	33	87	243	581	1189	2022	3008	3940	4645	5030	5177	5226
50	7	24	85	217	454	683	831	777	555	250	81	23	7	31	116	333	787	1470	2301	3078	3633	3883	3964	3987
55	1	6	39	123	307	533	676	622	407	140	35	5	1	7	46	169	476	1009	1685	2307	2714	2854	2889	2894
60	0	0	14	57	180	384	521	467	268	64	8	0	0	0	14	71	251	635	1156	1623	1891	1955	1963	1963
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	34	70	170	303	492	669	785	744	562	340	151	55	34	104	274	577	1069	1738	2523	3267	3829	4169	4320	4375

(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