

# Climatography of the United States No. 20

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

Station: PADUCAH BARKLEY RGNL AP, KY

1971-2000

COOP ID: 156110

Climate Division: KY 1

NWS Call Sign: PAH

Elevation: 407 Feet

Lat: 37°03N

Lon: 88°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	41.9	23.9	32.9	75	1950	25	43.1	1990	-15	1985	20	18.6	1977	982	0	.0	.0	8.9	6.9	23.6	1.0
Feb	48.0	28.2	38.1	78	1962	13	45.7	1976	-14	1951	2	23.6	1978	750	0	.0	.0	13.3	3.6	17.4	.2
Mar	58.1	37.1	47.6	85	1967	13	53.5	1973	-2+	1960	6	41.0	1996	530	6	.0	.0	23.7	.5	10.5	.0
Apr	68.4	45.6	57.0	90	1987	21	63.5	1981	24+	1990	7	50.9	1983	256	32	.0	@	28.6	.0	2.5	.0
May	76.9	55.0	65.9	96	1953	26	71.6	1987	34+	1976	4	61.3	1976	75	119	.0	1.2	31.0	.0	.0	.0
Jun	85.2	63.8	74.5	106	1952	30	77.1	1971	44	1993	1	69.7	1974	7	308	.2	9.6	30.0	.0	.0	.0
Jul	88.6	67.7	78.2	106	1952	28	83.1	1993	48	1962	27	74.4	1971	0	425	.6	17.1	31.0	.0	.0	.0
Aug	87.4	64.9	76.2	104+	1988	17	81.7	1983	44	1986	29	72.4	1986	0	363	.3	12.7	31.0	.0	.0	.0
Sep	81.2	57.1	69.1	104	1954	5	74.9	1998	34	1949	30	63.5	1974	43	182	@	4.8	30.0	.0	.0	.0
Oct	70.8	45.2	58.0	93+	1953	2	63.9	1971	22	1981	24	51.8	1976	236	35	.0	@	30.6	.0	2.2	.0
Nov	57.2	36.5	46.8	83+	1987	2	53.2	1999	-3	1950	25	38.3	1976	531	1	.0	.0	21.6	.2	9.9	.0
Dec	46.3	27.5	36.9	77+	1982	2	44.6	1971	-10	1989	22	25.9	2000	855	0	.0	.0	12.4	3.8	19.4	.4
Ann	67.5	46.0	56.8	106+	Jul 1952	28	83.1	Jul 1993	-15	Jan 1985	20	18.6	Jan 1977	4265	1471	1.1	45.4	292.1	15.0	85.5	1.6

+ 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](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: 1949-2001

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

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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	3.47	3.52	3.97	2000	3	8.28	1982	.99	1987	9.4	5.8	2.2	.8	1.13	1.46	1.94	2.36	2.75	3.16	3.62	4.14	4.82	5.87	6.84
Feb	3.93	3.83	6.24	1989	13	13.33	1989	1.09	1996	8.6	5.6	2.7	1.3	1.05	1.42	1.99	2.49	2.98	3.49	4.06	4.74	5.62	7.00	8.30
Mar	4.27	3.61	5.28	1964	4	8.97	1975	1.78	1995	11.0	7.7	3.0	1.0	1.84	2.23	2.77	3.20	3.61	4.03	4.47	4.99	5.63	6.61	7.50
Apr	4.95	4.57	4.13	1984	29	14.54	1983	1.55	1986	11.0	7.6	3.3	1.2	1.46	1.93	2.64	3.25	3.84	4.46	5.14	5.94	6.98	8.60	10.10
May	4.75	4.07	4.05	1983	2	9.32	1973	.71	1994	10.9	7.5	3.1	1.4	1.52	1.97	2.64	3.20	3.75	4.32	4.94	5.67	6.61	8.08	9.43
Jun	4.51	4.09	3.96	1998	9	10.98	1998	.41	1988	9.0	6.5	3.0	1.3	.92	1.33	2.00	2.60	3.21	3.86	4.60	5.49	6.66	8.54	10.32
Jul	4.45	3.84	5.48	1983	3	12.47	1972	.28	1999	8.3	5.9	2.7	1.4	.71	1.09	1.74	2.35	2.99	3.68	4.47	5.44	6.73	8.84	10.85
Aug	2.99	2.66	3.16	1952	11	7.24	1977	.11	1996	7.0	4.8	2.2	.9	.39	.63	1.05	1.47	1.91	2.39	2.96	3.65	4.59	6.14	7.63
Sep	3.56	3.34	7.49	1985	5	9.23	1985	.12+	1998	7.4	4.8	2.4	1.1	.51	.80	1.32	1.81	2.32	2.89	3.54	4.34	5.42	7.18	8.88
Oct	3.45	3.02	4.03	1998	6	7.37	1998	1.17	1982	7.7	5.1	2.4	.9	1.28	1.60	2.07	2.45	2.82	3.20	3.61	4.09	4.69	5.63	6.48
Nov	4.53	3.57	4.90	1996	7	10.50	1973	.90	1999	9.9	6.6	3.1	1.5	1.23	1.66	2.32	2.89	3.45	4.04	4.69	5.46	6.47	8.04	9.52
Dec	4.38	3.65	4.65	1982	3	11.53	1982	.63	1976	10.1	6.5	2.9	1.2	.99	1.39	2.03	2.61	3.19	3.80	4.49	5.31	6.39	8.11	9.73
Ann	49.24	48.77	7.49	Sep 1985	5	14.54	Apr 1983	.11	Aug 1996	110.3	74.4	33.0	14.0	35.10	37.84	41.35	44.01	46.37	48.66	51.01	53.62	56.78	61.36	65.32

+ 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: 1949-2001

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

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**Elevation: 407 Feet**

**Lat: 37°03N**

**Lon: 88°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	3.9	1.3	1	0	11.0	1978	16	24.7	1978	20+	1978	21	7	1978	2.5	1.4	.6	.1	@	5.4	2.6	1.1	.3
Feb	3.3	1.2	1	0	7.9	1993	15	15.3	1993	8+	1979	9	4	1978	1.9	1.2	.4	.1	.0	4.4	2.2	.8	.0
Mar	1.2	.2	#	0	5.0	1975	9	8.0	1975	7	1994	9	1+	1994	.9	.5	.1	@	.0	.8	.3	.1	.0
Apr	.1	.0	#	0	3.0	1971	5	3.5	1971	3	1971	6	#	1971	.1	.0	@	.0	.0	@	@	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	2000	.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	.1	.0	#	0	2.0	1993	30	2.2	1993	2	1993	30	#	1993	.1	.0	.0	.0	.0	@	.0	.0	.0
Nov	.1	.0	0	0	1.0	1971	23	1.0	1971	#+	1995	11	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Dec	1.5	.7	#	0	7.1	1984	5	7.1	1984	7	1984	6	1+	2000	1.3	.5	.1	@	.0	1.5	.2	.1	.0
Ann	10.2	3.4	N/A	N/A	11.0	Jan 1978	16	24.7	Jan 1978	20+	Jan 1978	21	7	Jan 1978	6.9	3.6	1.2	.2	@	12.1	5.3	2.1	.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:

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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	5/03	4/28	4/25	4/22	4/19	4/16	4/13	4/09	4/04
32	4/21	4/17	4/13	4/10	4/07	4/05	4/02	3/29	3/24
28	4/14	4/08	4/05	4/01	3/29	3/26	3/22	3/19	3/13
24	3/27	3/21	3/17	3/14	3/11	3/08	3/04	2/28	2/22
20	3/16	3/09	3/04	2/28	2/24	2/20	2/16	2/11	2/04
16	3/07	2/27	2/22	2/18	2/14	2/10	2/05	1/31	1/24
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	9/29	10/03	10/06	10/08	10/10	10/13	10/15	10/18	10/22
32	10/09	10/14	10/18	10/21	10/25	10/28	10/31	11/04	11/09
28	10/20	10/26	10/30	11/02	11/06	11/09	11/12	11/16	11/22
24	10/31	11/06	11/11	11/15	11/19	11/23	11/27	12/02	12/09
20	11/15	11/22	11/27	12/01	12/05	12/09	12/13	12/18	12/25
16	11/24	12/02	12/07	12/11	12/16	12/20	12/24	12/30	1/06
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	187	183	179	177	174	171	169	165	161
32	222	214	209	204	200	195	190	185	177
28	243	235	230	225	221	217	212	207	199
24	276	268	262	257	253	248	243	238	230
20	309	300	294	288	283	278	273	267	258
16	333	323	316	310	304	298	292	285	275

\* 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:  
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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	982	750	530	256	75	7	0	0	43	236	531	855	4265
60	839	616	395	145	39	0	0	0	10	141	404	717	3306
57	755	539	313	93	19	0	0	0	4	93	323	632	2771
55	696	487	264	66	12	0	0	0	2	68	274	573	2442
50	553	364	161	21	3	0	0	0	0	25	169	433	1729
32	172	75	8	0	0	0	0	0	0	0	7	95	357

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	169	249	509	771	1080	1307	1465	1401	1142	834	478	243	9648
55	5	8	51	156	371	617	752	688	454	182	47	10	3341
57	3	5	36	122	313	557	690	626	397	143	34	6	2932
60	1	2	21	80	233	467	597	533	314	94	18	3	2363
65	0	0	6	32	119	308	425	363	182	35	1	0	1471
70	0	0	1	7	50	184	289	229	96	10	0	0	866

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	66	128	302	541	844	1073	1227	1161	916	598	276	104	66	194	496	1037	1881	2954	4181	5342	6258	6856	7132	7236
45	33	67	192	400	689	923	1072	1006	766	446	175	56	33	100	292	692	1381	2304	3376	4382	5148	5594	5769	5825
50	10	29	109	268	535	773	917	851	616	305	100	24	10	39	148	416	951	1724	2641	3492	4108	4413	4513	4537
55	2	9	59	160	380	623	762	696	467	191	50	7	2	11	70	230	610	1233	1995	2691	3158	3349	3399	3406
60	0	1	25	81	239	473	607	541	324	98	18	0	0	1	26	107	346	819	1426	1967	2291	2389	2407	2407
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	40	77	179	331	543	744	849	799	603	378	159	61	40	117	296	627	1170	1914	2763	3562	4165	4543	4702	4763

(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.  
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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## 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)