

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: PEORIA GTR PEORIA AP, IL

1971-2000

COOP ID: 116711

Climate Division: IL 4

NWS Call Sign: PIA

Elevation: 652 Feet

Lat: 40°40N

Lon: 89°41W

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	30.7	14.3	22.5	70	1989	31	34.8	1990	-25	1977	17	8.4	1977	1316	0	.0	.0	1.8	16.4	29.2	5.8
Feb	36.6	19.7	28.2	72	1976	27	39.6	1998	-19	1996	3	14.3	1979	1045	0	.0	.0	5.0	10.6	24.3	3.1
Mar	49.4	30.2	39.8	86	1986	29	46.5	2000	-10	1960	6	30.9	1984	788	1	.0	.0	14.6	2.7	18.1	.1
Apr	62.0	40.3	51.2	92	1986	25	57.0+	1985	14+	1982	7	46.1	1982	423	11	.0	.1	25.7	.1	5.4	.0
May	73.0	50.8	61.9	93	1987	21	68.4	1977	25	1966	10	57.1	1997	159	64	.0	.5	30.8	.0	.3	.0
Jun	82.2	60.1	71.1	105	1988	25	76.6	1971	39	1993	1	66.5	1974	19	210	.1	4.4	30.0	.0	.0	.0
Jul	85.7	64.6	75.1	102+	1988	31	79.6	1983	47+	1972	5	70.8	1971	2	325	.4	8.6	31.0	.0	.0	.0
Aug	83.6	62.6	73.1	103	1988	17	80.1	1983	41	1986	28	68.6	1992	7	263	.4	5.8	31.0	.0	.0	.0
Sep	76.7	54.0	65.4	100	1953	1	70.4	1998	29	1995	23	60.3	1975	94	112	.0	1.9	30.0	.0	.1	.0
Oct	64.4	42.3	53.4	90+	1963	6	59.5	1971	19+	1972	19	46.8	1976	368	12	.0	.0	28.4	.0	4.4	.0
Nov	48.8	31.4	40.1	81	1950	1	47.2	1999	-2	1977	26	31.7	1976	738	0	.0	.0	14.3	2.1	16.8	.1
Dec	35.5	20.1	27.8	71+	1982	2	36.9	1982	-23	1989	22	14.7	1983	1138	0	.0	.0	3.7	11.0	26.7	2.6
Ann	60.7	40.9	50.8	105	Jun 1988	25	80.1	Aug 1983	-25	Jan 1977	17	8.4	Jan 1977	6097	998	.9	21.3	246.3	42.9	125.3	11.7

+ 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

Issue Date: February 2004

(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

065-A

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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	1.50	1.13	4.43	1965	1	3.55	1993	.22	1986	9.9	4.1	.7	.2	.32	.45	.67	.87	1.07	1.29	1.53	1.82	2.21	2.82	3.40	
Feb	1.67	1.46	1.81	1997	21	5.37	1997	.54	1995	8.4	3.9	.9	.3	.44	.60	.84	1.05	1.26	1.48	1.73	2.01	2.39	2.98	3.54	
Mar	2.83	2.64	1.76	1984	19	6.95	1973	.66	1994	10.9	6.1	1.8	.4	.71	.98	1.39	1.76	2.12	2.50	2.92	3.42	4.08	5.12	6.09	
Apr	3.56	4.02	5.06	1950	24	7.06	1983	.71	1971	11.7	7.2	2.3	.8	1.13	1.47	1.97	2.39	2.81	3.23	3.70	4.25	4.96	6.06	7.08	
May	4.17	3.79	3.10	1957	13	10.19	1995	.82	1992	11.6	7.9	2.8	1.0	1.14	1.53	2.14	2.66	3.18	3.72	4.32	5.03	5.95	7.40	8.76	
Jun	3.84	3.18	4.42	1980	2	11.69	1974	.60	1988	9.6	6.4	2.5	.8	.67	1.00	1.57	2.09	2.63	3.21	3.88	4.68	5.76	7.50	9.16	
Jul	4.02	3.45	3.56	1953	5	10.15	1993	.33	1988	9.2	5.9	2.7	1.3	.65	.99	1.58	2.13	2.70	3.33	4.04	4.91	6.07	7.96	9.77	
Aug	3.16	2.82	4.32	1955	29	7.38	1993	.25	1992	9.3	5.6	2.3	.8	.47	.73	1.19	1.63	2.08	2.58	3.16	3.86	4.81	6.35	7.83	
Sep	3.12	2.69	4.11	1961	13	7.58	1973	.03	1979	8.4	5.6	2.3	.9	.45	.72	1.16	1.60	2.05	2.54	3.11	3.81	4.75	6.29	7.76	
Oct	2.77	2.46	3.62	1969	10	7.31	1991	.73	1987	9.2	5.6	1.9	.6	.88	1.15	1.53	1.87	2.19	2.52	2.88	3.31	3.85	4.71	5.50	
Nov	2.99	2.69	4.26	1990	27	7.62	1985	.22	1999	10.2	5.8	2.0	.6	.61	.88	1.32	1.72	2.12	2.56	3.05	3.63	4.41	5.65	6.83	
Dec	2.40	2.25	2.52	1965	24	5.45	1982	.32	1995	10.1	5.1	1.5	.6	.61	.84	1.19	1.50	1.80	2.12	2.48	2.90	3.45	4.32	5.14	
Ann	36.03	35.69	5.06	Apr 1950	24	11.69	Jun 1974	.03	Sep 1979	118.5	69.2	23.7	8.3	22.74	25.20	28.41	30.88	33.11	35.29	37.57	40.10	43.21	47.78	51.79	

+ 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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Climate Division: IL 4

NWS Call Sign: PIA

Elevation: 652 Feet

Lat: 40° 40N

Lon: 89° 41W

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	7.8	6.9	2	1	12.2	1979	13	24.7	1979	20	1979	14	12	1979	7.0	2.6	.7	.2	@	15.6	7.9	3.7	1.0
Feb	5.6	4.1	2	2	6.4	1981	10	15.2	1989	17+	1979	14	15	1979	5.0	1.8	.5	.1	.0	11.1	6.9	3.5	1.0
Mar	3.2	2.4	#	1	6.9	1991	13	8.0	1972	7+	1991	14	2	1978	2.5	1.1	.3	.1	.0	3.4	1.7	.6	.0
Apr	1.0	.0	#	0	5.9	1982	8	13.4	1982	10	1982	9	1	1982	.8	.2	.1	.1	.0	.5	.3	.1	@
May	#	.0	#	0	#	1989	6	#	1989	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	.0	.0	0	0	.4	1989	19	.6	1989	#+	1989	20	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Nov	2.1	.8	#	0	6.8	1975	26	9.1	1974	7+	1975	27	1+	1975	2.5	.6	.2	@	.0	1.4	.4	.1	.0
Dec	6.6	4.7	1	0	8.0	2000	11	21.7	1977	13+	2000	31	6	2000	5.3	1.9	.7	.2	.0	9.0	4.4	2.6	.3
Ann	26.3	18.9	N/A	N/A	12.2	Jan 1979	13	24.7	Jan 1979	20	Jan 1979	14	15	Feb 1979	23.2	8.2	2.5	.7	@	41.0	21.6	10.6	2.3

+ 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	5/21	5/15	5/11	5/07	5/04	4/30	4/27	4/23	4/17
32	5/03	4/28	4/25	4/22	4/19	4/16	4/13	4/10	4/05
28	4/16	4/12	4/10	4/08	4/06	4/04	4/02	3/30	3/27
24	4/13	4/08	4/05	4/03	3/31	3/29	3/26	3/23	3/18
20	4/04	3/30	3/25	3/22	3/19	3/15	3/12	3/07	3/02
16	3/26	3/20	3/15	3/11	3/08	3/04	2/28	2/23	2/17
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	9/23	9/27	9/29	10/02	10/04	10/06	10/08	10/11	10/15
32	9/28	10/03	10/07	10/10	10/14	10/17	10/20	10/24	10/29
28	10/11	10/16	10/20	10/24	10/27	10/30	11/03	11/07	11/12
24	10/25	10/30	11/03	11/06	11/09	11/11	11/15	11/18	11/23
20	11/02	11/07	11/10	11/14	11/17	11/20	11/23	11/27	12/02
16	11/08	11/14	11/19	11/23	11/26	11/30	12/04	12/08	12/15
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	171	165	160	156	152	149	145	140	134
32	195	189	184	180	177	173	169	165	159
28	222	216	211	207	204	200	196	191	185
24	240	234	229	225	222	218	214	210	204
20	268	259	253	247	242	237	232	226	217
16	288	279	273	268	263	258	252	246	238

* 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	1316	1045	788	423	159	19	2	7	94	368	738	1138	6097
60	1162	891	627	284	99	4	0	2	27	237	597	998	4928
57	1069	807	542	213	64	1	0	0	11	172	510	905	4294
55	1007	757	483	170	45	0	0	0	6	134	454	844	3900
50	857	627	346	86	17	0	0	0	1	64	322	701	3021
32	377	240	55	0	0	0	0	0	0	0	42	263	977

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	42	93	289	580	931	1179	1343	1282	1009	671	283	81	7783
55	0	0	17	68	245	489	630	569	331	96	12	1	2458
57	0	0	11	50	199	429	568	507	279	71	8	1	2123
60	0	0	6	30	138	342	475	415	209	42	3	0	1660
65	0	0	1	11	64	210	325	263	112	12	0	0	998
70	0	0	0	3	23	99	180	137	49	2	0	0	493

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	7	31	136	361	692	949	1105	1043	779	438	134	22	7	38	174	535	1227	2176	3281	4324	5103	5541	5675	5697
45	0	11	75	239	537	799	950	888	629	300	75	8	0	11	86	325	862	1661	2611	3499	4128	4428	4503	4511
50	0	3	40	142	388	649	795	733	481	185	33	3	0	3	43	185	573	1222	2017	2750	3231	3416	3449	3452
55	0	0	17	72	250	499	640	578	340	106	11	0	0	0	17	89	339	838	1478	2056	2396	2502	2513	2513
60	0	0	5	32	143	352	485	424	218	47	3	0	0	0	5	37	180	532	1017	1441	1659	1706	1709	1709
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	2	19	87	213	425	631	760	709	500	253	74	11	2	21	108	321	746	1377	2137	2846	3346	3599	3673	3684

(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