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

COOP ID: 116610

Lon: 87°42W

Station: PARIS WATERWORKS, IL

Climate Division: IL 7 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 33.6 16.4 25.0 80 1932 9 36.5 1990 -23 1930 18 8.8 1977 1241 0 .0 .0 3.7 13.6 27.2 4.0 Jan 39.4 20.5 30.0 75 2000 26 39.4 1998 -21 1905 13 15.4 1978 981 0 .0 .0 8.0 21.8 2.2 Feb 6.6 Mar 51.0 30.9 41.0 88 1907 22 48.7 1973 -8 1960 6 32.5 1984 746 0 .0 .0 17.1 1.7 16.0 .1 92 17 7 47.3 1997 5 Apr 62.9 41.3 52.1 1930 11 57.7 1981 1982 393 .0 .0 26.8 (a) 4.8 .0 May 73.7 51.5 62.6 98 1934 31 69.6 1987 28 +1971 3 57.0 1997 165 90 .0 .9 30.9 .0 .2 .0 1954 36 3 67.0 5.5 Jun 82.8 61.3 72.1 106 25 76.3 1984 1910 1982 13 225 .1 30.0 .0 .0 .0 Jul 85.9 64.7 75.3 109+ 1954 14 79.4 1999 45+ 1937 72.2 1971 0 320 .4 9.2 31.0 .0 .0 .0 1992 83.9 62.5 73.2 107 1918 6 79.1 1995 39 1915 31 68.4 11 265 .1 6.0 31.0 .0 .0 .0 Aug 71 Sep 77.9 54.5 66.2 105 1954 5 71.3 1998 27 +1942 28 60.8 1974 106 .0 2.3 30.0 .0 .1 .0 54.7 3 47.3 1976 (a) Oct 66.0 43.4 93+ 1954 62.1 1971 15 1925 29 336 18 .0 29.5 .0 3.1 .0 32.8 42.1 83 1933 1 49.0 1999 1950 25 32.6 1976 689 0 .0 .0 16.5 1.2 13.7 .0 Nov 51.3 -6 Dec 38.7 22.5 30.6 73 1982 2 39.4 1982 -22 1989 22 17.7 1989 1066 0 .0 .0 5.7 7.8 24.7 1.6 Jul Jul Jan Jan 62.3 41.9 52.1 109 +1954 14 79.4 1999 -23 1930 18 8.8 1977 5712 1029 23.9 258.8 32.3 111.6 7.9 .6 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 062-A

Elevation: 680 Feet Lat: 39°38N

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

⁽¹⁾ From the 1971-2000 Monthly Normals

⁽²⁾ Derived from station's available digital record: 1901-2001

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

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COOP ID: 116610

Station: PARIS WATERWORKS, IL

Climate Division: IL 7 NWS Call Sign: Elevation: 680 Feet Lat: 39°38N Lon: 87°42W

										Pı	recipi	tation	(incl	nes)										
	Mea	Precipitation Totals Means/ Medians(1) Extremes										ays (3	5)	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										
	Medi	ans(1)				Extremes	i			Daily Precipitation				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	2.23	1.81	3.00	1949	18	5.90	1975	.10	1986	10.4	5.7	1.1	.2	.38	.58	.90	1.21	1.52	1.86	2.25	2.72	3.35	4.36	5.33
Feb	2.23	1.97	2.73	1997	27	5.46	1999	.40	1978	9.2	5.0	1.2	.5	.49	.69	1.02	1.32	1.61	1.93	2.28	2.71	3.27	4.16	5.00
Mar	3.27	3.45	4.60	1922	14	7.29	1973	.90	1994	11.0	7.4	2.6	.4	1.18	1.48	1.93	2.30	2.65	3.02	3.41	3.88	4.46	5.37	6.21
Apr	3.96	3.33	3.80	1922	14	8.98	1996	.32	1971	11.9	7.8	2.8	1.0	1.07	1.44	2.01	2.51	3.01	3.52	4.09	4.77	5.66	7.04	8.34
May	4.31	4.18	4.20	1935	2	12.53	1974	.74	1987	10.9	8.0	3.1	.8	1.10	1.50	2.13	2.68	3.23	3.81	4.45	5.21	6.21	7.79	9.26
Jun	4.24	4.09	10.20	1957	28	12.70	1998	.47	1984	9.7	7.2	2.7	1.2	.81	1.19	1.81	2.38	2.97	3.59	4.30	5.16	6.30	8.14	9.88
Jul	4.43	3.73	3.98	1979	28	9.70	1989	.56	1974	8.9	6.5	3.0	1.3	.98	1.39	2.04	2.63	3.21	3.84	4.54	5.38	6.49	8.25	9.92
Aug	4.42	4.75	3.46	1993	17	8.24	1993	.44	1986	8.2	5.9	3.0	1.4	1.16	1.58	2.22	2.78	3.34	3.92	4.57	5.34	6.34	7.92	9.39
Sep	2.94	2.57	6.75	1931	15	9.54	1993	.14	1979	7.5	5.1	2.0	.8	.45	.70	1.13	1.53	1.95	2.41	2.94	3.59	4.46	5.88	7.23
Oct	2.78	2.41	3.95	1949	11	6.07	1991	.80	1989	8.5	5.2	2.0	.7	.93	1.19	1.58	1.91	2.22	2.55	2.90	3.32	3.85	4.68	5.44
Nov	3.68	3.50	3.70	1993	14	10.46	1985	.43	1976	9.7	6.6	2.3	.8	.73	1.07	1.61	2.10	2.61	3.14	3.75	4.48	5.45	7.01	8.48
Dec	3.10	2.70	3.40	1967	21	7.80	1990	.59	1976	11.0	6.2	2.0	.6	.77	1.06	1.51	1.91	2.31	2.73	3.20	3.75	4.48	5.63	6.72
Ann	41.59	42.42	10.20	Jun 1957	28	12.70	Jun 1998	.10	Jan 1986	116.9	76.6	27.8	9.7	29.60	31.92	34.90	37.16	39.17	41.11	43.12	45.33	48.02	51.92	55.29

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

[#] 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

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COOP ID: 116610

Station: PARIS WATERWORKS, IL

Climate Division: IL 7 NWS Call Sign: Elevation: 680 Feet Lat: 39°38N Lon: 87°42W

										Snov	w (incl	nes)													
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)				
	Mean	s/Medi	ans (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	8.9	6.2	3	1	17.0	1982	31	27.4	1978	30	1979	31	15	1977	5.0	3.1	1.3	.6	@	10.0	7.0	5.0	2.3		
Feb	6.1	4.5	3	1	9.0	1974	24	17.0	1984	26	1979	19	20	1979	3.5	2.0	.7	.3	.0	7.5	4.4	3.0	1.6		
Mar	3.7	2.5	1	#	9.0	1978	8	23.0	1978	17	1978	7	8	1978	1.8	1.1	.5	.2	.0	2.3	1.5	1.2	.6		
Apr	.3	.0	#	0	2.0	1973	10	2.0	1973	2	1994	6	#+	2000	.3	.1	.0	.0	.0	@	.0	.0	.0		
May	.0	.0	0	0	.0	0	0	.0	0	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	.1	.0	#	0	3.0	1989	19	4.0	1989	#+	2000	8	#+	2000	.1	.1	@	.0	.0	.0	.0	.0	.0		
Nov	1.4	.0	#	0	8.0	1980	27	11.5	1980	9	1980	28	1	1980	.8	.5	.1	.1	.0	.7	.2	.1	.0		
Dec	5.7	2.8	1	#	14.0	1973	19	37.5	1973	21	1973	22	6+	2000	3.1	1.9	.7	.3	.1	6.1	3.7	2.8	.5		
Ann	26.2	16.0	N/A	N/A	17.0	Jan 1982	31	37.5	Dec 1973	30	Jan 1979	31	20	Feb 1979	14.6	8.8	3.3	1.5	.1	26.6	16.8	12.1	5.0		

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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[@] 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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Station: PARIS WATERWORKS, IL

Climate Division: IL 7

NWS Call Sign:

				Freez	e Data											
			Sprii	ng Freeze D	ates (Month/	Day)										
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated((*)								
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	5/16	5/10	5/07	5/04	5/01	4/28	4/25	4/21	4/16							
32	5/02	4/27	4/23	4/20	4/16	4/13	4/10	4/06	4/01							
28	4/20	4/15	4/12	4/09	4/06	4/03	3/31	3/27	3/22							
24	4/09	4/05	4/01	3/30	3/27	3/24	3/22	3/18	3/14							
20	4/01	3/27	3/23	3/20	3/17	3/14	3/11	3/07	3/02							
16	3/20	3/13	3/09	3/05	3/01	2/25	2/21	2/17	2/10							
		•	Fal	l Freeze Da	tes (Month/D	ay)		•								
Temp (F)		Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	9/24	9/28	10/01	10/03	10/05	10/08	10/10	10/13	10/17							
32	9/30	10/05	10/09	10/13	10/16	10/19	10/23	10/27	11/01							
28	10/12	10/18	10/23	10/26	10/30	11/03	11/06	11/11	11/17							
24	10/27	11/01	11/04	11/08	11/10	11/13	11/16	11/20	11/25							
20	11/06	11/11	11/15	11/19	11/22	11/25	11/28	12/02	12/08							
16	11/12	11/19	11/24	11/28	12/02	12/06	12/11	12/16	12/23							
				Freeze F	ree Period											
Temp (F)		Probability of longer than indicated freeze free period (Days)														
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	175	169	165	161	157	153	150	145	139							
32	202	195	190	186	182	178	174	168	161							
28	230	222	216	211	207	202	197	191	183							
24	247	241	236	232	228	224	219	214	208							
20	270	263	258	253	249	245	241	236	229							
16	299	291	285	280	275	271	266	260	251							

^{*} 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						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1241	981	746	393	165	13	0	11	71	336	689	1066	5712		
60	1086	841	591	259	88	3	0	1	24	215	541	911	4560		
57	993	759	506	189	55	1	0	0	10	156	458	821	3948		
55	931	708	448	149	38	0	0	0	5	122	403	763	3567		
50	787	578	315	70	13	0	0	0	1	59	277	619	2719		
32	322	205	44	0	0	0	0	0	0	0	31	213	815		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	104	148	321	602	949	1202	1343	1277	1025	705	332	170	8178
55	0	7	13	61	274	512	630	564	340	114	14	8	2537
57	0	3	8	41	229	452	568	502	285	85	9	3	2185
60	0	0	1	21	169	364	475	410	209	52	2	0	1703
65	0	0	0	5	90	225	320	265	106	18	0	0	1029
70	0	0	0	1	39	111	175	143	40	4	0	0	513

	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	23	54	182	412	743	991	1126	1062	823	496	187	45	23	77	259	671	1414	2405	3531	4593	5416	5912	6099	6144
45	6	24	104	283	589	841	971	907	673	353	111	23	6	30	134	417	1006	1847	2818	3725	4398	4751	4862	4885
50	0	7	59	175	436	691	816	752	524	228	59	7	0	7	66	241	677	1368	2184	2936	3460	3688	3747	3754
55	0	1	33	98	297	541	661	597	380	132	23	0	0	1	34	132	429	970	1631	2228	2608	2740	2763	2763
60	0	0	6	48	175	396	506	443	249	65	5	0	0	0	6	54	229	625	1131	1574	1823	1888	1893	1893
Base		•		Gro	wing De	gree Unit	s for Co	rn (Mont	thly)	•	•			•	Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	8	32	104	244	465	671	783	731	536	298	103	22	8	40	144	388	853	1524	2307	3038	3574	3872	3975	3997

(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

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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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