

Climatography of the United States

No. 20

1971-2000

Station: VIRDEN, IL

COOP ID: 118860

Climate Division: IL 6

NWS Call Sign:

Elevation: 675 Feet

Lat: 39° 30N

Lon: 89° 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	34.8	18.4	26.6	71	1950	25	39.4	1990	-22	1977	17	11.7	1977	1189	0	.0	.0	3.8	12.6	27.3	3.4
Feb	40.7	23.5	32.1	75	1972	29	41.4	1998	-19	1996	3	18.3	1979	921	0	.0	.0	6.9	8.0	21.2	1.9
Mar	53.0	33.2	43.1	85	1986	29	49.7	1973	-9	1960	5	35.1	1978	679	0	.0	.0	18.6	1.5	15.0	.1
Apr	65.7	43.5	54.6	90+	1989	26	61.4	1981	19+	1982	7	49.2	1983	325	13	.0	.1	27.5	.0	4.0	.0
May	75.8	53.6	64.7	95	1953	26	71.6	1987	27	1966	10	59.8+	1997	127	118	.0	1.1	30.9	.0	.1	.0
Jun	84.2	62.4	73.3	107	1954	26	77.5	1984	40+	1972	11	67.9	1974	9	259	.1	6.9	30.0	.0	.0	.0
Jul	87.9	65.8	76.9	114	1954	14	80.9	1983	44	1975	14	72.1	1971	0	366	.4	12.8	31.0	.0	.0	.0
Aug	86.2	63.5	74.9	105	1983	20	81.6	1983	39	1986	28	70.6	1992	8	313	.6	9.3	31.0	.0	.0	.0
Sep	80.2	55.9	68.1	101+	1954	5	73.7	1998	30	1974	23	62.1	1974	53	143	.0	4.3	30.0	.0	.1	.0
Oct	68.2	45.2	56.7	93	1963	7	62.9	1971	18+	1972	19	50.2	1976	280	24	.0	.1	29.9	.0	3.3	.0
Nov	52.3	34.4	43.4	83	1950	1	51.2	1999	-4	1950	25	35.3	1996	649	0	.0	.0	16.6	1.1	14.0	@
Dec	39.4	23.6	31.5	74	1970	3	39.7	1982	-20+	1989	23	17.7	1983	1038	0	.0	.0	5.8	7.4	24.9	1.5
Ann	64.0	43.6	53.8	114	Jul 1954	14	81.6	Aug 1983	-22	Jan 1977	17	11.7	Jan 1977	5278	1236	1.1	34.6	262.0	30.6	109.9	6.9

+ 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: 1948-2001

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

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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: VIRDEN, IL

COOP ID: 118860

Climate Division: IL 6

NWS Call Sign:

Elevation: 675 Feet

Lat: 39°30N

Lon: 89°46W

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	1.85	1.45	3.00	1975	10	5.75	1975	.03	1986	6.7	4.5	.9	.2	.23	.38	.64	.90	1.17	1.47	1.82	2.26	2.85	3.82	4.76
Feb	2.02	1.80	2.06	1997	27	5.09	1990	.30	1991	6.7	4.2	1.4	.4	.47	.66	.95	1.22	1.48	1.76	2.08	2.45	2.94	3.73	4.46
Mar	3.22	2.94	1.92	1980	30	8.22	1973	1.03	1986	9.3	7.0	2.2	.6	1.06	1.37	1.81	2.19	2.56	2.94	3.35	3.84	4.46	5.42	6.31
Apr	3.59	3.41	3.98	1994	12	11.41	1994	.86	1971	9.9	6.7	2.2	.8	.85	1.19	1.71	2.18	2.65	3.14	3.69	4.35	5.22	6.59	7.88
May	4.37	3.55	3.77	1983	2	8.96	1990	.99	1987	9.2	7.0	3.1	1.2	1.05	1.46	2.10	2.67	3.23	3.83	4.50	5.30	6.34	7.99	9.55
Jun	3.92	3.40	4.30	2001	6	9.34	1998	.73	1992	8.2	6.3	2.7	1.4	.97	1.33	1.91	2.41	2.91	3.44	4.04	4.74	5.66	7.12	8.48
Jul	3.62	2.90	4.30	1981	4	10.87	1981	.18	1997	7.3	5.0	2.6	1.1	.60	.91	1.44	1.94	2.45	3.01	3.65	4.42	5.46	7.14	8.74
Aug	3.06	2.97	2.83	1975	29	6.89	1974	.11	1971	7.2	5.1	2.0	1.0	.53	.80	1.24	1.66	2.09	2.55	3.08	3.73	4.58	5.97	7.29
Sep	2.95	2.42	4.75	1966	19	7.81	1993	.33	1985	6.8	5.0	2.4	.6	.63	.91	1.34	1.73	2.12	2.54	3.01	3.58	4.33	5.52	6.64
Oct	2.58	2.05	3.05	2000	5	5.43	1990	.60	1992	7.4	5.1	1.8	.7	.66	.90	1.28	1.61	1.94	2.28	2.66	3.12	3.71	4.65	5.52
Nov	3.34	3.18	1.85	1996	7	9.61	1985	.54	1976	8.2	6.2	2.4	1.0	.78	1.09	1.58	2.02	2.45	2.91	3.43	4.05	4.86	6.14	7.35
Dec	2.53	2.16	4.25	1982	3	7.37	1982	.31	1976	7.1	4.7	1.7	.6	.46	.69	1.06	1.40	1.75	2.13	2.56	3.08	3.77	4.89	5.95
Ann	37.05	36.58	4.75	Sep 1966	19	11.41	Apr 1994	.03	Jan 1986	94.0	66.8	25.4	9.6	25.39	27.61	30.48	32.67	34.62	36.51	38.47	40.64	43.29	47.14	50.49

+ 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

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

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Station: VIRDEN, IL

COOP ID: 118860

Climate Division: IL 6

NWS Call Sign:

Elevation: 675 Feet

Lat: 39°30N

Lon: 89°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	5.6	5.5	2	1	8.0	1999	2	14.8	1978	13	1977	20	8	1977	3.4	2.6	1.0	.3	.0	10.0	5.8	3.6	.7
Feb	6.3	5.1	1	#	8.0	1984	28	17.5	1993	11	1979	9	6	1979	2.9	2.3	.9	.2	.0	6.6	3.2	1.3	.0
Mar	4.1	3.0	#	#	8.0	1978	8	23.5	1978	16	1978	8	5	1978	1.5	1.2	.6	.2	.0	1.7	.7	.2	.0
Apr	.6	.0	#	0	4.0	1980	14	6.0	1980	4	1980	15	#+	2000	.3	.2	.1	.0	.0	.2	.1	.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	#	.0	0	0	#	1993	31	#+	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.4	.3	#	#	7.0	1975	27	7.1	1975	7	1977	27	1	1977	.7	.4	.2	.1	.0	.6	.2	.1	.0
Dec	5.4	3.5	1	#	11.0	1973	19	26.0	1973	12+	1981	23	4	1981	1.9	1.7	.5	.3	@	5.5	3.1	1.6	.3
Ann	23.4	17.4	N/A	N/A	11.0	Dec 1973	19	26.0	Dec 1973	16	Mar 1978	8	8	Jan 1977	10.7	8.4	3.3	1.1	@	24.6	13.1	6.8	1.0

+ 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

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	5/10	5/06	5/03	4/30	4/27	4/25	4/22	4/19	4/15
32	4/27	4/23	4/20	4/17	4/14	4/12	4/09	4/06	4/01
28	4/15	4/11	4/08	4/05	4/03	3/31	3/29	3/26	3/22
24	4/11	4/05	4/01	3/29	3/25	3/22	3/19	3/15	3/09
20	4/03	3/29	3/24	3/21	3/17	3/14	3/11	3/06	3/01
16	3/21	3/14	3/09	3/05	3/01	2/25	2/21	2/16	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	9/23	9/27	9/30	10/02	10/04	10/06	10/09	10/11	10/15
32	9/28	10/04	10/08	10/11	10/15	10/18	10/22	10/26	11/01
28	10/11	10/17	10/21	10/24	10/28	10/31	11/03	11/07	11/13
24	10/25	10/31	11/04	11/08	11/12	11/15	11/19	11/23	11/29
20	10/31	11/07	11/11	11/16	11/20	11/24	11/28	12/03	12/10
16	11/10	11/17	11/22	11/26	11/30	12/04	12/08	12/13	12/20
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	176	170	166	162	159	156	152	148	142
32	205	197	192	187	183	178	174	168	161
28	227	220	215	211	207	203	199	194	188
24	257	248	241	236	231	225	220	213	204
20	275	265	258	252	246	241	235	228	218
16	302	292	285	279	273	267	261	254	244

* 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	1189	921	679	325	127	9	0	8	53	280	649	1038	5278
60	1034	782	527	204	62	2	0	0	16	167	504	883	4181
57	942	706	442	144	36	0	0	0	6	114	421	794	3605
55	881	654	385	110	24	0	0	0	3	86	368	736	3247
50	738	526	260	47	7	0	0	0	0	36	248	593	2455
32	293	180	28	0	0	0	0	0	0	0	25	196	722

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	127	183	372	678	1014	1240	1389	1328	1081	767	365	181	8725
55	2	13	16	98	325	550	676	615	393	139	18	9	2854
57	0	9	11	72	275	490	614	553	337	106	12	4	2483
60	0	1	3	42	208	402	521	460	256	66	4	0	1963
65	0	0	0	13	118	259	366	313	143	24	0	0	1236
70	0	0	0	3	55	136	219	183	65	6	0	0	667

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	18	60	194	452	775	1009	1152	1091	848	532	187	45	18	78	272	724	1499	2508	3660	4751	5599	6131	6318	6363
45	5	25	114	321	620	859	997	936	698	385	110	18	5	30	144	465	1085	1944	2941	3877	4575	4960	5070	5088
50	1	9	62	201	466	709	842	781	549	252	59	6	1	10	72	273	739	1448	2290	3071	3620	3872	3931	3937
55	0	2	32	115	321	559	687	626	405	148	23	2	0	2	34	149	470	1029	1716	2342	2747	2895	2918	2920
60	0	0	8	56	195	409	532	471	272	74	5	0	0	0	8	64	259	668	1200	1671	1943	2017	2022	2022
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	10	37	118	275	487	682	790	744	555	323	107	24	10	47	165	440	927	1609	2399	3143	3698	4021	4128	4152

(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