

Climatology of the United States

No. 20

1971-2000

Station: HAVANA 4 NNE, IL

COOP ID: 113940

Climate Division: IL 4

NWS Call Sign:

Elevation: 460 Feet

Lat: 40°21N

Lon: 90°01W

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	31.9	14.0	23.0	70	1967	24	34.8	1990	-30	1999	5	9.9	1977	1303	0	.0	.0	2.5	15.1	29.0	5.6
Feb	38.0	19.2	28.6	75	1972	29	38.5	1998	-25	1979	9	13.9	1979	1020	0	.0	.0	5.8	9.1	24.0	3.5
Mar	50.2	29.7	40.0	88	1986	30	44.9	2000	-13	1978	5	31.0	1978	776	0	.0	.0	15.9	2.3	18.6	.1
Apr	63.0	40.3	51.7	95	1986	26	59.0	1977	16	1982	6	46.5+	1983	407	7	.0	.2	26.1	.1	5.3	.0
May	74.0	50.8	62.4	96	1977	19	68.9	1977	31+	1997	16	57.0	1973	164	84	.0	1.7	30.8	.0	.2	.0
Jun	84.0	60.4	72.2	104	1988	26	77.0	1971	42+	1993	1	67.5	1974	13	229	.4	7.6	30.0	.0	.0	.0
Jul	88.4	63.9	76.2	106	1983	23	81.5	1983	46	1971	31	72.3	1971	0	346	1.1	12.5	31.0	.0	.0	.0
Aug	86.4	61.2	73.8	106	1983	19	81.4	1983	38	1986	29	69.5	1992	14	287	.8	9.0	31.0	.0	.0	.0
Sep	79.9	52.3	66.1	100	1984	2	70.2	1998	28	1995	23	61.6	1974	63	96	@	4.1	30.0	.0	.3	.0
Oct	67.6	40.5	54.1	92	1997	4	60.3	1971	19	1981	24	48.0	1987	348	10	.0	.1	29.1	.0	5.8	.0
Nov	50.9	30.2	40.6	82	2000	2	45.9	1990	1+	1991	8	33.9	1976	733	0	.0	.0	15.2	1.7	17.4	.0
Dec	37.2	19.4	28.3	72+	1998	5	37.3	1982	-23+	1989	23	14.5	1983	1139	0	.0	.0	4.6	9.3	27.0	2.8
Ann	62.6	40.2	51.4	106+	Aug 1983	19	81.5	Jul 1983	-30	Jan 1999	5	9.9	Jan 1977	5980	1059	2.3	35.2	252.0	37.6	127.6	12.0

+ 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

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No. 20

1971-2000

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

Station: HAVANA 4 NNE, IL

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Lon: 90°01W

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	1.68	2.20	1965	2	5.36	1982	.20	1986	7.4	4.8	1.0	.3	.32	.49	.75	1.01	1.27	1.54	1.86	2.25	2.77	3.60	4.39
Feb	1.94	1.68	2.71	1997	21	4.99	1997	.00	1987	6.3	4.2	1.3	.3	.38	.65	.98	1.24	1.50	1.75	2.04	2.37	2.81	3.48	4.11
Mar	3.02	2.64	2.53	1977	12	7.11	1973	.77	1994	9.1	6.4	2.0	.6	.95	1.24	1.66	2.02	2.38	2.74	3.14	3.61	4.21	5.16	6.03
Apr	3.45	3.88	2.65	1965	6	6.72	1983	.41	1971	9.6	7.0	2.6	.6	.96	1.29	1.79	2.22	2.64	3.09	3.58	4.16	4.91	6.09	7.19
May	4.43	3.95	4.35	1984	20	10.75	1995	.92	1992	10.1	8.2	3.2	1.0	1.13	1.55	2.19	2.76	3.32	3.91	4.57	5.35	6.38	7.99	9.50
Jun	3.81	3.08	2.95	1951	28	9.41	1990	.72	1988	8.6	6.4	2.9	1.0	.70	1.04	1.60	2.11	2.64	3.21	3.86	4.64	5.68	7.35	8.95
Jul	3.87	3.41	3.60	1971	10	10.58	1993	.50	1983	8.2	6.7	2.5	1.0	.82	1.17	1.74	2.26	2.78	3.33	3.95	4.71	5.70	7.28	8.77
Aug	3.45	3.26	4.10	1960	4	7.71	1977	.59	1986	7.1	5.6	2.3	1.0	.75	1.07	1.58	2.03	2.49	2.98	3.53	4.19	5.06	6.44	7.75
Sep	3.21	2.46	3.90	1961	14	8.91	1993	.20	1979	6.7	5.5	2.1	.9	.55	.83	1.29	1.73	2.19	2.68	3.24	3.91	4.82	6.29	7.69
Oct	2.86	2.47	3.30	1969	11	9.03	1973	1.06+	1999	7.1	5.4	1.7	.8	.83	1.10	1.51	1.87	2.21	2.57	2.97	3.44	4.05	5.00	5.89
Nov	3.26	2.76	2.52	1990	5	10.83	1985	.21	1999	7.7	5.9	2.2	.9	.63	.92	1.40	1.84	2.29	2.77	3.31	3.97	4.84	6.24	7.57
Dec	2.63	2.53	2.30	1982	3	6.46	1982	.34	1976	8.0	5.5	1.7	.7	.65	.90	1.28	1.62	1.96	2.31	2.71	3.19	3.81	4.79	5.71
Ann	37.78	38.15	4.35	May 1984	20	10.83	Nov 1985	.00	Feb 1987	95.9	71.6	25.5	9.1	24.41	26.90	30.14	32.64	34.89	37.07	39.35	41.89	44.99	49.54	53.52

+ 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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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	9.1	6.0	3	1	10.5	1987	19	32.5	1979	22	1979	28	14	1979	4.7	3.8	1.2	.5	@	12.6	8.8	3.8	1.2
Feb	7.3	6.5	3	1	10.0	1978	14	21.0+	1993	21	1979	19	20	1979	3.1	2.5	.9	.4	@	7.9	5.7	3.1	.6
Mar	3.7	2.0	#	#	11.0	1999	9	16.5	1978	8	1994	1	3	1978	1.9	1.3	.3	.1	@	1.7	1.0	.2	.0
Apr	.9	.0	#	0	10.8	1997	11	11.5	1982	8	1982	9	1	1982	.3	.3	.2	@	@	.4	.2	.1	.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	#	1997	27	#+	1997	#	1997	27	#	1997	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.3	.5	#	#	8.0	1975	27	10.0	1975	8	1975	27	1	1975	.9	.5	.1	@	.0	.9	.2	.1	.0
Dec	7.0	5.5	1	1	8.0	1981	17	23.0	2000	12	2000	30	6	2000	3.3	2.8	.9	.2	.0	6.3	4.0	2.3	.3
Ann	29.3	20.5	N/A	N/A	11.0	Mar 1999	9	32.5	Jan 1979	22	Jan 1979	28	20	Feb 1979	14.2	11.2	3.6	1.2	@	29.8	19.9	9.6	2.1

+ 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	5/16	5/11	5/08	5/05	5/02	4/29	4/26	4/22	4/17
32	5/03	4/28	4/25	4/22	4/19	4/17	4/14	4/10	4/06
28	4/16	4/13	4/11	4/09	4/07	4/05	4/03	4/01	3/28
24	4/13	4/08	4/05	4/02	3/30	3/28	3/25	3/21	3/17
20	4/04	3/29	3/24	3/20	3/17	3/13	3/09	3/04	2/26
16	3/24	3/18	3/13	3/09	3/05	3/01	2/25	2/20	2/14
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	9/17	9/22	9/25	9/28	10/01	10/04	10/07	10/10	10/15
32	9/26	10/01	10/04	10/07	10/10	10/13	10/16	10/19	10/24
28	10/06	10/12	10/16	10/20	10/24	10/27	10/31	11/04	11/10
24	10/16	10/22	10/26	10/30	11/02	11/06	11/09	11/14	11/20
20	10/29	11/03	11/07	11/10	11/14	11/17	11/20	11/24	11/29
16	11/07	11/13	11/17	11/21	11/24	11/28	12/01	12/05	12/11
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	170	163	159	155	151	148	144	139	133
32	192	185	181	177	173	169	165	160	154
28	217	211	206	203	199	196	192	188	182
24	238	231	225	221	216	212	207	202	194
20	264	256	251	246	241	237	232	226	218
16	290	281	274	269	263	258	252	246	237

* 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	1303	1020	776	407	164	13	0	14	63	348	733	1139	5980
60	1148	880	621	275	87	2	0	2	18	220	584	984	4821
57	1055	796	535	206	54	1	0	0	6	157	496	891	4197
55	993	746	476	166	37	0	0	0	3	121	440	833	3815
50	842	616	339	85	13	0	0	0	0	56	307	689	2947
32	361	232	51	0	0	0	0	0	0	0	36	257	937

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	80	136	298	590	943	1206	1369	1296	1023	685	293	142	8061
55	0	6	10	65	268	516	656	583	335	93	6	4	2542
57	0	0	7	46	222	457	594	521	279	66	2	0	2194
60	0	0	0	25	162	369	501	430	201	37	0	0	1725
65	0	0	0	7	84	229	346	287	96	10	0	0	1059
70	0	0	0	1	34	114	200	166	34	1	0	0	550

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	8	40	151	384	723	978	1138	1062	799	463	150	28	8	48	199	583	1306	2284	3422	4484	5283	5746	5896	5924
45	2	15	83	260	568	828	983	907	649	324	84	10	2	17	100	360	928	1756	2739	3646	4295	4619	4703	4713
50	0	6	41	157	415	678	828	752	501	205	40	2	0	6	47	204	619	1297	2125	2877	3378	3583	3623	3625
55	0	0	21	83	278	528	673	597	358	114	14	0	0	0	21	104	382	910	1583	2180	2538	2652	2666	2666
60	0	0	6	40	161	381	518	444	230	55	4	0	0	0	6	46	207	588	1106	1550	1780	1835	1839	1839
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	5	29	97	238	446	653	772	714	517	298	89	17	5	34	131	369	815	1468	2240	2954	3471	3769	3858	3875

(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