

Climatology of the United States

No. 20

1971-2000

Station: MT VERNON 3 NE, IL

COOP ID: 115943

Climate Division: IL 9

NWS Call Sign:

Elevation: 490 Feet

Lat: 38° 21N

Lon: 88° 51W

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	37.0	18.8	27.9	75	1943	24	38.7	1990	-21	1994	19	12.7	1977	1149	0	.0	.0	5.3	10.8	26.5	2.5
Feb	42.8	22.9	32.9	79	1972	29	41.4	1976	-20	1905	13	19.6	1978	899	0	.0	.0	8.9	6.0	21.4	1.3
Mar	53.7	32.9	43.3	92	1907	21	51.4	1976	-10	1978	4	34.6	1984	673	0	.0	.0	19.8	1.2	15.0	@
Apr	64.8	43.2	54.0	91+	1946	21	60.6	1985	17	1923	1	47.1	1983	344	12	.0	@	27.5	.0	4.6	.0
May	74.5	52.6	63.6	99+	1941	21	69.9	1977	29+	1904	29	59.2	1997	137	92	.0	.8	30.9	.0	.1	.0
Jun	83.7	62.0	72.9	105+	1936	29	77.0	1971	36	1924	1	67.4	1982	9	245	.1	6.7	30.0	.0	.0	.0
Jul	87.8	66.4	77.1	114	1936	14	80.5	1977	46	1947	23	74.0	1996	0	376	.3	13.3	31.0	.0	.0	.0
Aug	86.3	63.9	75.1	111	1936	17	80.1	1980	42	1986	29	70.7	1992	5	317	.5	10.2	31.0	.0	.0	.0
Sep	79.2	55.5	67.4	105	1939	15	72.4	1971	28	1928	24	63.7	1974	57	127	.0	3.3	30.0	.0	.1	.0
Oct	68.2	43.2	55.7	96	1938	5	64.5	1971	18	1981	24	49.6	1987	310	22	.0	.1	30.1	.0	5.0	.0
Nov	53.9	34.1	44.0	86	1938	1	50.2	1999	-5	1929	30	36.4	1976	630	0	.0	.0	18.7	.8	13.5	.0
Dec	41.8	23.8	32.8	78	1970	2	42.0	1971	-19	1989	22	19.2	1989	998	0	.0	.0	8.4	6.0	23.8	1.3
Ann	64.5	43.3	53.9	114	Jul 1936	14	80.5	Jul 1977	-21	Jan 1994	19	12.7	Jan 1977	5211	1191	.9	34.4	271.6	24.8	110.0	5.1

+ 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: 1901-2001

(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: MT VERNON 3 NE, IL

COOP ID: 115943

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NWS Call Sign:

Elevation: 490 Feet

Lat: 38°21N

Lon: 88°51W

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	2.45	1.94	3.65	1937	14	6.88	1982	.04	1986	9.0	5.2	1.5	.5	.34	.54	.89	1.23	1.59	1.98	2.44	3.00	3.76	4.99	6.19
Feb	2.69	2.04	4.31	1986	2	6.41	1986	.57	1996	8.0	5.1	1.7	.6	.68	.93	1.32	1.67	2.01	2.37	2.77	3.25	3.87	4.86	5.78
Mar	3.98	3.37	3.90	1913	25	7.71	1985	1.35	1981	11.0	7.3	2.8	.9	1.40	1.78	2.32	2.78	3.22	3.67	4.16	4.73	5.47	6.60	7.64
Apr	4.44	3.91	4.79	1996	29	9.39	1996	1.75	1977	11.6	7.9	2.7	1.0	1.59	2.01	2.61	3.12	3.60	4.10	4.64	5.26	6.07	7.30	8.43
May	4.58	3.95	5.03	1990	17	12.89	1995	1.17	1988	11.4	7.5	3.0	1.2	1.42	1.85	2.50	3.06	3.59	4.15	4.76	5.48	6.41	7.85	9.19
Jun	3.61	3.49	3.80	1913	23	9.74	2000	.18	1991	9.9	6.7	2.6	.9	.65	.97	1.49	1.99	2.49	3.03	3.65	4.40	5.40	7.01	8.54
Jul	3.57	3.51	4.40	1956	16	7.00	1987	.86	1974	8.3	5.7	2.4	1.2	.97	1.31	1.82	2.28	2.72	3.18	3.70	4.30	5.10	6.34	7.50
Aug	3.27	3.16	6.17	1946	16	8.97	1977	.32	1976	7.6	5.0	2.3	1.0	.60	.89	1.37	1.81	2.26	2.75	3.31	3.98	4.88	6.32	7.70
Sep	3.11	2.63	4.25	1931	2	8.38	1984	.46	1995	7.6	4.7	2.2	.8	.60	.88	1.33	1.75	2.18	2.64	3.16	3.79	4.62	5.96	7.24
Oct	2.92	2.41	4.36	1919	26	10.01	1983	.86	2000	8.0	5.2	2.1	.6	.76	1.04	1.46	1.83	2.20	2.58	3.01	3.52	4.19	5.23	6.21
Nov	4.37	4.14	4.41	1993	14	13.11	1985	.51	1976	10.0	6.8	3.0	1.5	.92	1.32	1.96	2.54	3.13	3.76	4.47	5.31	6.44	8.23	9.92
Dec	3.20	2.47	3.00	1957	20	10.16	1982	.70	1980	9.6	6.0	2.2	.7	.79	1.09	1.55	1.97	2.38	2.81	3.30	3.87	4.62	5.82	6.93
Ann	42.19	41.07	6.17	Aug 1946	16	13.11	Nov 1985	.04	Jan 1986	112.0	73.1	28.5	10.9	30.70	32.95	35.81	37.98	39.90	41.75	43.66	45.76	48.31	52.00	55.18

+ 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: 1901-2001

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

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Climate Division: IL 9

NWS Call Sign:

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Lat: 38°21N

Lon: 88°51W

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	5.4	2.5	1	#	8.0	1996	3	26.0	1979	16	1978	19	8	1978	3.0	2.0	.6	.2	.0	7.3	3.6	2.8	.9
Feb	4.5	1.2	1	#	12.0	1984	28	21.5	1993	20	1984	29	6	1982	1.9	1.2	.4	.2	@	4.4	2.9	2.1	.9
Mar	1.9	1.0	#	#	6.0	1984	21	8.5	1975	15	1984	1	2	1984	.8	.6	.3	.1	.0	.9	.4	.2	.0
Apr	.4	.0	#	0	6.0	1971	6	6.0	1971	6	1971	7	#+	1983	.1	.1	.1	@	.0	.1	.1	.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	.2	.0	#	0	3.0	1993	31	5.0	1993	3	1993	31	#	1993	.1	.1	@	.0	.0	.1	@	.0	.0
Nov	.6	.0	#	0	5.5	1977	27	5.5	1977	4	1997	14	#+	1997	.4	.2	.1	@	.0	.3	.1	.0	.0
Dec	2.6	1.6	#	#	9.0	1973	20	10.0	1989	10	1990	28	3+	2000	1.6	1.1	.4	.2	.0	3.5	2.1	1.2	@
Ann	15.6	6.3	N/A	N/A	12.0	Feb 1984	28	26.0	Jan 1979	20	Feb 1984	29	8	Jan 1978	7.9	5.3	1.9	.7	@	16.6	9.2	6.4	1.8

+ 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

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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	5/13	5/08	5/04	5/01	4/28	4/25	4/21	4/17	4/12
32	4/29	4/24	4/20	4/17	4/14	4/11	4/08	4/05	3/31
28	4/18	4/14	4/11	4/08	4/05	4/03	3/31	3/28	3/23
24	4/11	4/06	4/02	3/29	3/26	3/22	3/19	3/15	3/09
20	3/30	3/24	3/20	3/16	3/13	3/09	3/06	3/01	2/24
16	3/19	3/12	3/07	3/02	2/26	2/22	2/18	2/12	2/05
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	9/24	9/28	10/01	10/03	10/06	10/08	10/11	10/14	10/18
32	10/01	10/05	10/08	10/11	10/14	10/16	10/19	10/22	10/27
28	10/12	10/18	10/22	10/25	10/28	10/31	11/04	11/08	11/13
24	10/22	10/28	11/01	11/05	11/08	11/12	11/15	11/20	11/26
20	11/02	11/08	11/12	11/16	11/19	11/22	11/26	12/01	12/06
16	11/15	11/21	11/26	11/30	12/04	12/07	12/11	12/16	12/23
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	180	173	168	164	160	157	152	148	141
32	201	194	190	185	182	178	174	169	162
28	227	219	214	209	205	201	197	191	184
24	250	242	236	231	227	222	217	212	204
20	274	266	260	255	251	246	241	235	227
16	310	299	292	286	280	274	267	260	250

* 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	1149	899	673	344	137	9	0	5	57	310	630	998	5211
60	994	759	527	221	67	1	0	0	18	194	484	843	4108
57	901	680	440	160	39	0	0	0	7	138	401	757	3523
55	842	628	386	125	25	0	0	0	4	107	347	699	3163
50	699	499	264	59	8	0	0	0	0	49	229	556	2363
32	266	152	30	0	0	0	0	0	0	0	17	174	639

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	140	177	379	659	978	1226	1399	1336	1060	735	377	199	8665
55	3	9	22	94	290	536	686	623	374	128	17	11	2793
57	0	4	15	69	242	477	624	561	318	97	11	6	2424
60	0	0	8	39	177	388	531	468	238	61	4	0	1914
65	0	0	0	12	92	245	376	317	127	22	0	0	1191
70	0	0	0	2	37	124	225	182	53	6	0	0	629

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	32	72	211	445	751	1003	1167	1103	842	513	213	58	32	104	315	760	1511	2514	3681	4784	5626	6139	6352	6410
45	9	33	122	309	597	853	1012	948	692	366	128	29	9	42	164	473	1070	1923	2935	3883	4575	4941	5069	5098
50	2	12	67	196	444	703	857	793	544	240	72	8	2	14	81	277	721	1424	2281	3074	3618	3858	3930	3938
55	0	3	32	108	299	553	702	638	400	141	32	1	0	3	35	143	442	995	1697	2335	2735	2876	2908	2909
60	0	0	11	56	174	405	547	484	265	68	9	0	0	0	11	67	241	646	1193	1677	1942	2010	2019	2019
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	19	48	130	265	474	682	805	750	552	324	123	36	19	67	197	462	936	1618	2423	3173	3725	4049	4172	4208

(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