

Climatology of the United States

No. 20

1971-2000

Station: FAIRFIELD RADIO WFIW, IL

COOP ID: 112931

Climate Division: IL 9

NWS Call Sign:

Elevation: 430 Feet

Lat: 38° 23N

Lon: 88° 20W

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	19.7	28.4	77	1943	24	40.7	1990	-23+	1994	19	11.8	1977	1136	0	.0	.0	5.8	10.5	26.0	2.1
Feb	43.2	24.0	33.6	78+	1972	29	41.7	1998	-17+	1910	18	18.9	1978	879	0	.0	.0	9.4	5.8	20.3	1.2
Mar	54.3	33.4	43.9	91	1929	24	51.2	1973	-8+	1978	5	36.3	1984	656	0	.0	.0	20.5	1.1	14.2	.1
Apr	65.7	42.6	54.2	91+	1930	11	60.4	1981	17	1990	7	48.3	1983	335	9	.0	.0	28.0	.0	4.2	.0
May	75.6	52.2	63.9	98+	1934	31	71.1	1991	29	1903	1	59.3	1976	135	100	.0	.9	31.0	.0	.2	.0
Jun	85.0	61.0	73.0	105+	1934	28	76.8	1971	39+	1992	22	67.9	1974	8	247	.1	7.5	30.0	.0	.0	.0
Jul	88.2	65.1	76.7	113	1901	22	80.8	1980	45	1911	26	73.3	1994	0	362	.4	13.2	31.0	.0	.0	.0
Aug	86.6	62.8	74.7	108	1918	4	80.1	1983	43+	1986	30	70.9	1992	7	307	.5	9.6	31.0	.0	.0	.0
Sep	79.6	55.0	67.3	105	1939	15	72.2	1998	29	1942	28	62.1	1974	60	128	@	3.7	30.0	.0	.1	.0
Oct	68.3	43.5	55.9	96	1939	8	62.6	1971	19+	1981	24	48.9	1976	307	24	.0	.1	30.0	.0	4.2	.0
Nov	53.4	33.9	43.7	85	1933	1	50.1	1999	-3	1929	30	34.4	1976	641	0	.0	.0	18.3	.6	12.9	.0
Dec	41.7	24.3	33.0	74+	1982	2	41.7	1971	-18	1989	22	20.4	2000	992	0	.0	.0	8.5	6.0	22.2	1.0
Ann	64.9	43.1	54.0	113	Jul 1901	22	80.8	Jul 1980	-23+	Jan 1994	19	11.8	Jan 1977	5156	1177	1.0	35.0	273.5	24.0	104.3	4.4

+ 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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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

Station: FAIRFIELD RADIO WFIW, IL

COOP ID: 112931

Climate Division: IL 9

NWS Call Sign:

Elevation: 430 Feet

Lat: 38°23N

Lon: 88°20W

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	2.78	2.47	3.35	1917	5	8.44	1999	.30	1986	9.7	5.7	1.7	.7	.51	.75	1.16	1.54	1.93	2.34	2.82	3.39	4.16	5.39	6.57
Feb	2.70	2.44	3.14	1965	9	5.18	1986	.55	1978	8.7	5.4	1.9	.6	.79	1.05	1.44	1.77	2.10	2.43	2.81	3.25	3.82	4.71	5.54
Mar	4.62	3.98	6.13	1913	25	9.88	1989	1.54	1994	11.5	7.9	3.2	1.1	1.74	2.17	2.79	3.30	3.79	4.29	4.83	5.46	6.26	7.49	8.62
Apr	4.80	3.75	4.11	1975	24	11.11	1972	1.35	1971	11.8	8.5	3.2	1.0	1.53	1.98	2.66	3.23	3.79	4.37	5.00	5.74	6.69	8.18	9.55
May	4.73	4.80	6.76	1961	8	10.72	1995	.87	1972	11.2	7.8	3.1	1.1	1.46	1.91	2.58	3.15	3.71	4.29	4.92	5.67	6.63	8.13	9.52
Jun	4.20	4.00	3.78	1977	27	10.31	2000	.33	1991	10.0	6.7	3.1	1.0	.88	1.27	1.88	2.44	3.01	3.61	4.29	5.10	6.18	7.89	9.52
Jul	3.83	3.90	5.55	1969	24	8.21	1999	1.12	1985	8.5	6.0	2.8	1.1	1.28	1.64	2.18	2.63	3.06	3.51	3.99	4.57	5.30	6.43	7.48
Aug	3.35	3.30	3.53	1995	10	7.17	1977	.71	1990	8.0	5.4	2.3	.9	.89	1.21	1.70	2.12	2.54	2.98	3.47	4.05	4.80	5.98	7.09
Sep	2.90	2.62	4.05	1926	3	6.83	1974	.34	1995	7.4	5.0	2.2	.7	.72	1.00	1.42	1.79	2.16	2.55	2.98	3.50	4.17	5.24	6.24
Oct	3.31	3.07	6.48	1919	27	10.79	1983	.42	2000	8.1	5.2	2.0	.9	.93	1.24	1.72	2.13	2.54	2.96	3.43	3.98	4.70	5.84	6.89
Nov	4.33	4.34	4.89	1993	14	10.64	1985	.39	1999	10.6	6.8	3.1	1.3	1.10	1.51	2.14	2.69	3.24	3.82	4.47	5.23	6.23	7.81	9.29
Dec	3.45	2.72	4.00	1982	3	9.81	1982	.56	1976	10.0	6.4	2.4	.8	.88	1.20	1.71	2.15	2.59	3.05	3.56	4.17	4.97	6.23	7.40
Ann	45.00	46.24	6.76	May 1961	8	11.11	Apr 1972	.30	Jan 1986	115.5	76.8	31.0	11.2	33.33	35.63	38.55	40.75	42.70	44.58	46.51	48.64	51.21	54.92	58.11

+ 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

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

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Station: FAIRFIELD RADIO WFIW, IL

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Climate Division: IL 9

NWS Call Sign:

Elevation: 430 Feet

Lat: 38°23N

Lon: 88°20W

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	4.1	2.0	1	#	6.5	1987	9	19.6	1978	16	1977	28	10	1977	2.9	2.1	.6	.1	.0	4.9	2.2	1.1	.6
Feb	3.4	1.5	1	#	9.5	1993	25	17.8	1993	13	1977	1	6	1978	1.7	1.2	.4	.2	.0	4.3	3.0	1.8	.1
Mar	2.2	.5	#	#	10.0	1996	19	11.0	1975	10	1996	19	2	1978	.8	.5	.3	.2	@	1.2	.8	.5	@
Apr	.3	.0	#	0	5.0	1971	6	5.0	1971	3	1971	6	#+	1983	.1	.1	@	@	.0	.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	.1	.0	#	0	2.5	1993	30	2.8	1993	#	1993	30	#	1993	.1	@	.0	.0	.0	.0	.0	.0	.0
Nov	.6	.0	#	0	5.0	1980	27	5.5	1980	5	1980	27	#+	1997	.4	.2	.1	@	.0	.3	.2	@	.0
Dec	2.8	1.2	#	#	9.0	1990	27	11.8	1973	9	1990	27	3+	2000	1.6	1.0	.3	.2	.0	2.4	1.2	.7	.0
Ann	13.5	5.2	N/A	N/A	10.0	Mar 1996	19	19.6	Jan 1978	16	Jan 1977	28	10	Jan 1977	7.6	5.1	1.7	.7	@	13.2	7.4	4.1	.7

+ 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	5/10	5/06	5/02	4/29	4/26	4/22	4/18	4/12
32	4/30	4/25	4/22	4/19	4/16	4/13	4/10	4/07	4/02
28	4/16	4/11	4/08	4/05	4/03	3/31	3/29	3/26	3/21
24	4/12	4/06	4/02	3/29	3/26	3/23	3/19	3/15	3/10
20	3/26	3/21	3/18	3/15	3/12	3/10	3/07	3/04	2/27
16	3/18	3/10	3/05	3/01	2/25	2/20	2/16	2/11	2/04
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	9/22	9/26	9/29	10/02	10/04	10/06	10/09	10/12	10/16
32	9/28	10/03	10/06	10/10	10/12	10/15	10/18	10/22	10/27
28	10/12	10/18	10/21	10/25	10/28	10/31	11/03	11/07	11/12
24	10/24	10/30	11/03	11/06	11/10	11/13	11/16	11/20	11/26
20	10/31	11/07	11/12	11/16	11/21	11/25	11/29	12/04	12/11
16	11/13	11/20	11/25	11/30	12/04	12/08	12/12	12/17	12/24
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	178	171	166	161	157	153	149	144	137
32	198	191	187	183	179	175	171	166	159
28	224	218	214	211	207	204	200	196	190
24	248	241	236	232	228	224	219	214	207
20	277	268	262	257	252	247	242	236	228
16	313	302	294	288	281	275	269	261	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

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	1136	879	656	335	135	8	0	7	60	307	641	992	5156
60	981	739	509	208	66	1	0	0	19	192	494	837	4046
57	889	662	423	146	38	0	0	0	8	137	411	749	3463
55	835	610	368	111	25	0	0	0	4	106	357	692	3108
50	689	482	248	47	7	0	0	0	0	49	237	548	2307
32	264	146	25	0	0	0	0	0	0	0	19	166	620

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	151	191	392	664	989	1229	1385	1324	1058	740	368	197	8688
55	9	11	22	85	301	539	672	611	372	133	17	10	2782
57	1	8	14	60	252	479	610	549	315	101	11	5	2405
60	0	0	8	32	186	390	517	456	237	64	3	0	1893
65	0	0	0	9	100	247	362	307	128	24	0	0	1177
70	0	0	0	1	43	124	213	176	54	6	0	0	617

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	39	81	227	464	770	1004	1152	1095	850	526	218	65	39	120	347	811	1581	2585	3737	4832	5682	6208	6426	6491
45	16	41	139	330	616	854	997	940	700	381	133	29	16	57	196	526	1142	1996	2993	3933	4633	5014	5147	5176
50	3	17	79	210	461	704	842	785	551	252	74	13	3	20	99	309	770	1474	2316	3101	3652	3904	3978	3991
55	0	6	36	122	314	554	687	630	405	148	34	4	0	6	42	164	478	1032	1719	2349	2754	2902	2936	2940
60	0	1	14	59	190	404	532	475	272	74	11	0	0	1	15	74	264	668	1200	1675	1947	2021	2032	2032
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	22	53	137	283	491	679	791	741	556	335	122	31	22	75	212	495	986	1665	2456	3197	3753	4088	4210	4241

(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.

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