

Climatography of the United States

No. 20

1971-2000

Station: FLORENCE, KS

COOP ID: 142773

Climate Division: KS 5

NWS Call Sign:

Elevation: 1,294 Feet Lat: 38°15N Lon: 96°56W

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	40.6	19.0	29.8	76	1981	24	39.8	1986	-17	1959	4	15.5	1979	1092	0	.0	.0	9.1	8.9	28.0	2.2
Feb	47.8	24.3	36.1	82	1972	29	47.3	1976	-20	1982	6	22.8	1978	811	0	.0	.0	12.9	5.1	21.4	1.5
Mar	58.6	33.6	46.1	91	1967	29	52.8	1986	-6	1967	8	39.3	1996	586	0	.0	.0	23.2	.8	15.1	.1
Apr	68.8	43.7	56.3	95+	1989	26	63.7	1981	12+	1975	3	49.6	1983	280	17	.0	.5	28.4	@	4.0	.0
May	77.1	53.3	65.2	101	1964	26	70.8	1977	27	1976	3	59.9	1995	93	100	.0	1.3	31.0	.0	.3	.0
Jun	86.3	62.8	74.6	112+	1980	30	80.3	1980	40+	1982	1	69.2	1992	8	294	1.0	10.0	30.0	.0	.0	.0
Jul	92.0	68.0	80.0	115+	1954	14	89.5	1980	45+	1997	4	76.2	1971	0	464	5.0	20.7	31.0	.0	.0	.0
Aug	90.6	66.3	78.5	111	1984	29	85.9	2000	45+	1974	4	72.2	1992	5	422	3.9	18.4	31.0	.0	.0	.0
Sep	82.1	57.5	69.8	109	2000	2	76.7	1998	24	1984	30	61.5	1974	49	193	1.0	7.6	30.0	.0	.2	.0
Oct	71.2	45.8	58.5	97+	1963	5	61.8	2000	10	1993	31	53.0	1976	218	16	.0	.8	30.2	.0	3.5	.0
Nov	55.2	33.0	44.1	86	1980	8	52.7	1999	-9	1952	28	38.2	1976	627	0	.0	.0	20.7	.8	15.7	.1
Dec	43.9	22.9	33.4	78	1955	24	38.4	1988	-22	1989	23	17.6	1983	981	0	.0	.0	10.5	4.7	26.2	1.1
Ann	67.9	44.2	56.0	115+	Jul 1954	14	89.5	Jul 1980	-22	Dec 1989	23	15.5	Jan 1979	4750	1506	10.9	59.3	288.0	20.3	114.4	5.0

+ 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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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: FLORENCE, KS

COOP ID: 142773

Climate Division: KS 5

NWS Call Sign:

Elevation: 1,294 Feet Lat: 38°15N

Lon: 96°56W

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	.82	.64	1.35	1949	4	2.34	1973	.00+	1997	2.8	2.0	.6	.1	.00	.00	.19	.33	.47	.63	.81	1.04	1.34	1.84	2.32
Feb	.96	.83	1.99	1997	21	2.86	1997	.00+	1991	3.2	2.1	.6	.2	.00	.12	.30	.45	.61	.78	.97	1.20	1.52	2.03	2.53
Mar	2.52	1.95	2.85	1992	18	9.40	1973	.20	1997	5.6	4.4	1.6	.7	.26	.45	.79	1.15	1.52	1.95	2.45	3.08	3.94	5.36	6.74
Apr	2.82	2.28	2.50	1997	11	8.53	1999	.33	1982	5.9	4.5	2.2	.9	.45	.69	1.10	1.49	1.89	2.33	2.83	3.45	4.27	5.60	6.88
May	4.64	4.37	4.00	1959	17	12.38	1993	.31	1994	8.0	7.1	3.1	1.5	1.03	1.46	2.14	2.75	3.36	4.02	4.75	5.63	6.78	8.62	10.35
Jun	4.49	4.11	6.70	1975	17	13.48	1975	.52	1980	6.5	5.8	3.3	1.6	.91	1.32	1.98	2.58	3.19	3.84	4.58	5.47	6.64	8.51	10.29
Jul	3.79	2.83	5.47	1959	15	10.62	1993	.15	1984	5.5	4.9	2.4	1.4	.25	.49	.96	1.48	2.06	2.74	3.56	4.60	6.05	8.49	10.92
Aug	3.33	2.87	3.80	1975	29	8.24	1995	.00	2000	5.3	4.5	2.5	1.1	.19	.51	1.03	1.52	2.04	2.61	3.28	4.11	5.23	7.07	8.86
Sep	3.24	2.60	5.11	1969	15	8.79	1998	.58	1972	5.8	4.8	2.2	1.1	.65	.94	1.42	1.85	2.29	2.77	3.30	3.94	4.79	6.16	7.45
Oct	2.53	2.38	4.25	1960	28	6.28	1985	.10	1999	4.6	4.0	1.7	.7	.20	.37	.71	1.06	1.44	1.89	2.41	3.08	4.00	5.55	7.08
Nov	2.17	2.21	3.90	1964	16	6.94	1992	.00+	1995	3.9	3.4	1.4	.7	.00	.15	.50	.83	1.20	1.61	2.09	2.69	3.52	4.91	6.27
Dec	1.07	.72	2.32	1980	8	3.11	1984	.00	1976	3.0	2.3	.8	.2	.07	.17	.34	.50	.66	.85	1.06	1.32	1.68	2.26	2.82
Ann	32.38	32.14	6.70	Jun 1975	17	13.48	Jun 1975	.00+	Aug 2000	60.1	49.8	22.4	10.2	19.69	22.01	25.05	27.42	29.55	31.65	33.84	36.30	39.31	43.77	47.68

+ 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

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

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: FLORENCE, KS

COOP ID: 142773

Climate Division: KS 5

NWS Call Sign:

Elevation: 1,294 Feet

Lat: 38°15N

Lon: 96°56W

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	3.0	.0	0	0	7.0	1973	22	14.0	1987	3	1984	16	3	1984	1.2	1.1	.7	.3	.0	-9.9	-9.9	-9.9	-9.9
Feb	2.0	.0	0	0	16.0	1983	2	16.0	1983	0	0	0	0	0	.6	.6	.3	.2	.1	-9.9	-9.9	-9.9	-9.9
Mar	.9	.0	0	0	5.0	1975	10	5.0	1975	0	0	0	0	0	.2	.2	.2	@	.0	.0	.0	.0	.0
Apr	.2	.0	0	0	5.0	1983	4	5.0	1983	0	0	0	0	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	#	2000	22	#	2000	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	#	.0	#	0	#	1997	26	#	1997	#	1997	26	#	1997	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.9	.0	0	0	4.5	1975	26	4.5	1975	0	0	0	0	0	.4	.4	.1	.0	.0	.0	.0	.0	.0
Dec	1.6	.0	#	0	3.5	2000	13	7.5	2000	3	1995	19	#+	1995	.6	.6	.3	.0	.0	-9.9	-9.9	-9.9	-9.9
Ann	8.6	.0	N/A	N/A	16.0	Feb 1983	2	16.0	Feb 1983	3+	Dec 1995	19	3	Jan 1984	3.0	2.9	1.6	.5	.1	-9.9	-9.9	-9.9	-9.9

+ 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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1971-2000**

Station: FLORENCE, KS

COOP ID: 142773

Climate Division: KS 5

NWS Call Sign:

Elevation: 1,294 Feet

Lat: 38° 15N

Lon: 96° 56W

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	5/07	5/04	5/01	4/28	4/25	4/22	4/17
32	5/09	5/03	4/29	4/26	4/22	4/19	4/16	4/12	4/06
28	4/22	4/16	4/12	4/09	4/06	4/03	3/31	3/27	3/22
24	4/12	4/07	4/03	3/30	3/27	3/24	3/21	3/17	3/11
20	4/02	3/27	3/23	3/19	3/16	3/12	3/09	3/04	2/27
16	3/29	3/21	3/15	3/09	3/04	2/27	2/22	2/16	2/07
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	9/19	9/23	9/26	9/28	10/01	10/03	10/06	10/09	10/13
32	9/23	9/29	10/03	10/07	10/10	10/13	10/17	10/21	10/27
28	10/08	10/13	10/17	10/20	10/23	10/26	10/29	11/02	11/07
24	10/18	10/24	10/29	11/02	11/06	11/10	11/14	11/19	11/26
20	10/25	11/02	11/07	11/11	11/15	11/19	11/24	11/29	12/06
16	11/08	11/14	11/19	11/23	11/27	12/01	12/05	12/09	12/16
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	171	164	160	155	152	148	144	139	132
32	191	184	179	174	170	166	161	156	149
28	220	213	208	203	199	195	191	186	179
24	248	239	233	228	223	218	213	207	199
20	269	260	254	249	244	239	234	227	219
16	300	289	280	273	267	260	253	245	233

* 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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Climate Division: KS 5 NWS Call Sign: Elevation: 1,294 Feet Lat: 38°15N Lon: 96°56W

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	1092	811	586	280	93	8	0	5	49	218	627	981	4750
60	937	682	438	166	36	1	0	0	16	106	483	826	3691
57	846	604	352	112	17	0	0	0	7	61	401	734	3134
55	786	554	299	83	9	0	0	0	3	40	348	675	2797
50	642	434	185	31	2	0	0	0	0	11	233	531	2069
32	221	132	12	0	0	0	0	0	0	0	23	140	528

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	152	245	449	727	1030	1277	1487	1440	1134	822	386	182	9331
55	5	22	23	120	326	587	774	727	447	148	21	4	3204
57	2	17	14	89	272	527	712	665	390	107	14	1	2810
60	0	11	7	53	198	437	619	573	309	60	6	0	2273
65	0	0	0	17	100	294	464	422	193	16	0	0	1506
70	0	0	0	4	38	170	316	283	106	3	0	0	920

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	34	99	256	498	789	1048	1254	1207	910	592	201	47	34	133	389	887	1676	2724	3978	5185	6095	6687	6888	6935
45	9	53	154	359	635	898	1099	1052	760	447	120	20	9	62	216	575	1210	2108	3207	4259	5019	5466	5586	5606
50	0	22	87	236	481	748	944	897	611	309	60	5	0	22	109	345	826	1574	2518	3415	4026	4335	4395	4400
55	0	9	40	137	337	598	789	742	467	190	26	0	0	9	49	186	523	1121	1910	2652	3119	3309	3335	3335
60	0	1	11	67	202	450	634	587	333	99	4	0	0	1	12	79	281	731	1365	1952	2285	2384	2388	2388
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	33	81	178	311	508	703	834	799	597	382	136	43	33	114	292	603	1111	1814	2648	3447	4044	4426	4562	4605

(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