

Climatology of the United States

No. 20

1971-2000

Station: BELLEVILLE, KS

COOP ID: 140682

Climate Division: KS 2

NWS Call Sign:

Elevation: 1,540 Feet Lat: 39° 50N Lon: 97° 38W

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	36.5	15.4	26.0	78	1990	10	36.3	1992	-19	1974	12	11.8	1979	1212	0	.0	.0	5.9	11.3	29.7	4.5
Feb	42.7	20.6	31.7	85	1972	29	41.4	1999	-16	1951	1	17.5	1978	934	0	.0	.0	9.5	7.6	24.4	2.5
Mar	53.4	30.1	41.8	87	1986	29	48.7	1986	-11	1978	4	34.1	1975	720	0	.0	.0	18.7	2.1	18.2	.3
Apr	64.3	40.6	52.5	97+	1989	24	59.9	1981	14	1975	3	46.1	1983	385	7	.0	.4	26.4	.2	5.8	.0
May	73.9	51.4	62.7	100	1956	12	67.9	1977	25	1967	2	56.7	1995	144	72	.0	1.0	30.9	.0	.2	.0
Jun	84.8	61.1	73.0	106+	1980	27	77.7	1988	40+	1983	1	66.6	1982	14	252	.8	8.8	30.0	.0	.0	.0
Jul	90.1	66.5	78.3	111	1980	11	84.5	1980	46	1972	5	73.7	1992	0	412	3.5	16.7	31.0	.0	.0	.0
Aug	87.8	64.4	76.1	109	1983	16	83.5	2000	41	1950	20	70.7	1992	10	354	2.1	13.2	31.0	.0	.0	.0
Sep	79.1	55.0	67.1	105+	2000	2	72.9	1998	25	1984	29	61.9	1993	65	127	.3	5.6	29.9	.0	.2	.0
Oct	67.1	42.8	55.0	95	1954	3	58.9	1975	14	1993	31	50.3	1976	317	5	.0	.4	28.9	.1	3.9	.0
Nov	50.6	29.1	39.9	85	1980	8	49.6	1999	-10	1952	28	30.9	1985	755	0	.0	.0	16.8	2.1	19.3	.2
Dec	39.1	19.2	29.2	80	1964	23	35.3	1991	-25	1989	23	10.6	1983	1112	0	.0	.0	6.8	8.3	29.0	2.2
Ann	64.1	41.4	52.8	111	Jul 1980	11	84.5	Jul 1980	-25	Dec 1989	23	10.6	Dec 1983	5668	1229	6.7	46.1	265.8	31.7	130.7	9.7

+ 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

007-A

**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: BELLEVILLE, KS

COOP ID: 140682

Climate Division: KS 2

NWS Call Sign:

Elevation: 1,540 Feet Lat: 39°50N

Lon: 97°38W

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	.70	.62	1.02	2001	30	1.68	1979	.00	1986	4.3	2.1	.4	@	.02	.07	.16	.26	.37	.50	.65	.85	1.12	1.59	2.05
Feb	.77	.66	1.65	1966	9	2.93	1971	.00+	1996	4.3	2.2	.3	.1	.00	.06	.19	.31	.44	.58	.75	.95	1.24	1.71	2.16
Mar	2.44	2.31	3.05	1976	30	9.66	1987	.09	1994	6.9	4.7	1.6	.6	.20	.37	.69	1.03	1.40	1.83	2.33	2.97	3.85	5.32	6.76
Apr	2.76	2.47	2.95	1987	14	7.55	1984	.04	1989	8.5	5.6	1.9	.5	.55	.80	1.20	1.57	1.95	2.35	2.81	3.36	4.09	5.26	6.36
May	4.40	4.02	2.56	1961	5	9.38	1995	.78	1998	10.7	7.8	3.2	1.1	1.10	1.51	2.15	2.72	3.28	3.87	4.53	5.32	6.34	7.96	9.48
Jun	4.22	4.12	2.90	1979	28	8.45	1994	.88	1996	8.6	6.3	3.1	1.2	1.39	1.79	2.38	2.88	3.36	3.86	4.40	5.04	5.85	7.12	8.30
Jul	4.19	3.95	3.71	1965	27	17.79	1993	.28	1974	7.9	5.8	3.0	1.3	.36	.65	1.20	1.78	2.42	3.15	4.01	5.10	6.60	9.10	11.56
Aug	3.81	3.35	2.94	1977	16	10.77	1977	.62	1994	7.8	5.6	2.6	1.2	.88	1.23	1.79	2.29	2.79	3.32	3.91	4.61	5.54	7.02	8.40
Sep	2.93	2.36	7.03	1958	5	11.14	1973	.44	1974	6.7	4.6	1.8	.7	.40	.64	1.05	1.46	1.89	2.36	2.91	3.58	4.48	5.97	7.40
Oct	2.13	1.62	4.18	1973	11	5.68	1979	.00	1999	5.7	3.8	1.3	.4	.05	.18	.45	.75	1.09	1.48	1.97	2.59	3.45	4.93	6.40
Nov	1.58	1.13	2.21	1996	17	4.85	1996	.00+	1989	5.4	3.4	.9	.3	.00	.15	.43	.68	.94	1.23	1.57	1.97	2.53	3.45	4.35
Dec	.96	.74	2.25	1984	16	3.41	1984	.00+	1996	3.8	2.4	.6	.1	.00	.08	.23	.38	.54	.72	.93	1.19	1.55	2.14	2.71
Ann	30.89	31.75	7.03	Sep 1958	5	17.79	Jul 1993	.00+	Oct 1999	80.6	54.3	20.7	7.5	18.30	20.57	23.56	25.90	28.01	30.09	32.27	34.71	37.73	42.18	46.11

+ 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: 1948-2001

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

Complete documentation available from:
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Station: BELLEVILLE, KS

COOP ID: 140682

Climate Division: KS 2

NWS Call Sign:

Elevation: 1,540 Feet

Lat: 39° 50N

Lon: 97° 38W

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	5.2	3.0	1	#	8.0	1979	13	13.1	1983	10	1971	9	9	1993	2.1	1.8	.5	.2	.0	8.6	5.7	2.6	.6
Feb	4.6	3.5	1	0	14.5	1983	2	17.5	1983	16	1983	5	7	1980	1.7	1.4	.4	.2	.1	2.6	1.4	.9	.1
Mar	1.2	.0	#	0	10.0	1998	9	10.0	1998	10	1987	29	1	1978	.8	.7	.4	.2	@	.9	.8	.2	.0
Apr	.4	.0	#	0	10.0	1997	12	10.0	1997	3	1973	8	#+	1975	.3	.2	.1	.1	@	.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	.2	.0	#	0	4.0	1992	8	4.0	1992	5	1997	26	#	1997	.1	.1	@	.0	.0	.0	.0	.0	.0
Nov	2.5	.0	#	0	8.0	1975	26	12.6	1975	8	1975	28	1	1975	.8	.8	.4	.1	.0	2.0	1.0	.4	.0
Dec	4.1	3.0	#	#	5.0	1973	27	14.5	1973	5	1987	27	1+	2000	1.3	1.1	.5	.1	.0	2.7	1.7	.3	.0
Ann	18.2	9.5	N/A	N/A	14.5	Feb 1983	2	17.5	Feb 1983	16	Feb 1983	5	9	Jan 1993	7.1	6.1	2.3	.9	.1	17.0	10.7	4.4	.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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Station: BELLEVILLE, KS

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Climate Division: KS 2

NWS Call Sign:

Elevation: 1,540 Feet

Lat: 39° 50N

Lon: 97° 38W

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	5/14	5/09	5/06	5/03	4/30	4/28	4/25	4/22	4/17
32	5/04	4/29	4/26	4/23	4/20	4/17	4/14	4/10	4/06
28	4/21	4/16	4/14	4/11	4/09	4/06	4/04	4/01	3/28
24	4/12	4/08	4/04	4/02	3/30	3/27	3/24	3/21	3/17
20	4/07	4/01	3/27	3/23	3/20	3/16	3/13	3/08	3/02
16	3/31	3/23	3/17	3/12	3/08	3/03	2/26	2/20	2/13
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	9/14	9/19	9/23	9/26	9/29	10/02	10/05	10/09	10/14
32	9/28	10/03	10/06	10/10	10/13	10/15	10/19	10/22	10/27
28	10/11	10/15	10/18	10/21	10/24	10/26	10/29	11/01	11/06
24	10/18	10/24	10/28	10/31	11/03	11/06	11/10	11/14	11/19
20	10/25	10/31	11/04	11/08	11/11	11/14	11/18	11/22	11/28
16	11/05	11/12	11/16	11/21	11/24	11/28	12/02	12/07	12/14
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	173	165	160	155	151	146	142	136	128
32	194	187	183	179	175	171	167	162	156
28	213	207	204	200	197	194	191	187	182
24	240	233	227	222	217	213	208	202	194
20	263	253	246	241	235	230	224	217	208
16	293	282	274	267	261	255	248	240	229

* 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 2 NWS Call Sign: Elevation: 1,540 Feet Lat: 39° 50N Lon: 97° 38W

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	1212	934	720	385	144	14	0	10	65	317	755	1112	5668
60	1057	803	566	254	69	2	0	1	20	184	605	957	4518
57	965	724	480	187	39	0	0	0	8	120	519	864	3906
55	905	672	422	149	25	0	0	0	3	87	464	803	3530
50	760	546	290	73	7	0	0	0	0	33	332	659	2700
32	306	206	35	0	0	0	0	0	0	0	50	226	823

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	118	196	339	613	951	1228	1435	1368	1052	711	285	138	8434
55	3	18	13	72	263	538	722	655	366	85	9	1	2745
57	1	14	8	50	215	479	660	593	310	56	4	0	2390
60	0	9	2	27	152	391	567	501	232	27	0	0	1908
65	0	0	0	7	72	252	412	354	127	5	0	0	1229
70	0	0	0	1	25	138	266	223	58	0	0	0	711

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	15	57	176	393	715	997	1196	1129	827	484	132	22	15	72	248	641	1356	2353	3549	4678	5505	5989	6121	6143
45	0	24	99	263	560	847	1041	974	678	342	65	3	0	24	123	386	946	1793	2834	3808	4486	4828	4893	4896
50	0	5	48	158	410	697	886	819	530	221	25	0	0	5	53	211	621	1318	2204	3023	3553	3774	3799	3799
55	0	1	17	84	269	547	731	664	390	120	6	0	0	1	18	102	371	918	1649	2313	2703	2823	2829	2829
60	0	0	3	38	149	399	576	509	261	56	1	0	0	0	3	41	190	589	1165	1674	1935	1991	1992	1992
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	21	54	127	246	436	657	796	753	531	301	94	25	21	75	202	448	884	1541	2337	3090	3621	3922	4016	4041

(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