

Climatography of the United States

No. 20

1971-2000

Station: WAKEENEY, KS

COOP ID: 148495

Climate Division: KS 4

NWS Call Sign:

Elevation: 2,460 Feet Lat: 39°02N

Lon: 99°53W

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	39.9	16.1	28.0	79	1990	11	38.3	1986	-14+	1985	12	15.2	1979	1147	0	.0	.0	9.2	9.7	30.3	3.9
Feb	45.7	20.8	33.3	84	1970	18	41.7	1976	-14+	1989	4	19.7	1978	890	0	.0	.0	12.4	6.7	25.5	2.1
Mar	54.9	29.1	42.0	90	1972	12	47.8	1986	-9	1962	1	35.5	1996	712	0	.0	@	19.6	2.6	20.2	.4
Apr	65.6	39.0	52.3	102	1989	23	60.5	1981	11+	1997	12	46.3	1983	387	7	@	.6	26.1	.3	7.1	.0
May	75.0	50.0	62.5	100	1989	30	67.5	1998	27	1954	3	54.7	1995	146	69	@	1.7	30.5	.0	.4	.0
Jun	86.8	60.2	73.5	110	1988	21	80.2	1988	39	1951	3	66.8	1982	22	276	1.9	10.8	30.0	.0	.0	.0
Jul	92.9	65.4	79.2	110	1980	1	86.3	1980	47	1990	13	74.4	1992	0	438	5.0	19.6	31.0	.0	.0	.0
Aug	90.7	63.2	77.0	107+	1969	13	84.9	1983	47	1993	31	70.6	1992	7	377	2.9	17.4	31.0	.0	.0	.0
Sep	81.7	53.3	67.5	104+	2000	7	73.9	1998	24	1985	30	61.8	1974	67	142	.6	7.6	29.7	.0	.5	.0
Oct	69.8	40.6	55.2	98	2000	2	58.8	2000	12	1997	27	48.5	1976	310	6	.0	.8	29.0	.1	5.2	.0
Nov	52.7	27.8	40.3	89	1950	1	50.2	1999	-4	1976	28	32.3	1985	743	0	.0	.0	17.7	2.3	21.0	.1
Dec	42.5	19.3	30.9	79	1980	18	37.2	1999	-25	1989	22	14.4	1983	1057	0	.0	.0	10.1	7.3	29.8	1.8
Ann	66.5	40.4	53.5	110+	Jun 1988	21	86.3	Jul 1980	-25	Dec 1989	22	14.4	Dec 1983	5488	1315	10.4	58.5	276.3	29.0	140.0	8.3

+ 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: WAKEENEY, KS

COOP ID: 148495

Climate Division: KS 4

NWS Call Sign:

Elevation: 2,460 Feet Lat: 39°02N

Lon: 99°53W

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	.68	.49	1.22	1985	10	2.22	1985	.00+	1986	4.3	1.8	.3	@	.00	.04	.15	.25	.36	.49	.65	.84	1.11	1.56	2.01
Feb	.77	.56	1.41	1993	11	2.80	1993	.01+	1991	4.6	1.8	.5	.1	.03	.06	.14	.24	.36	.50	.68	.92	1.26	1.85	2.45
Mar	1.87	1.15	2.05	1984	19	7.05	1973	.00	1997	6.4	4.3	1.2	.3	.05	.19	.44	.71	1.01	1.35	1.77	2.29	3.02	4.24	5.45
Apr	2.17	1.97	2.39	1969	17	6.24	1984	.31	1992	7.6	4.3	1.3	.5	.58	.78	1.10	1.37	1.64	1.93	2.24	2.62	3.11	3.87	4.59
May	3.62	3.01	5.00	1951	22	12.12	1995	.37	1974	10.0	6.4	2.4	.9	.85	1.19	1.72	2.19	2.66	3.16	3.72	4.38	5.26	6.64	7.94
Jun	2.57	2.32	4.40	1957	17	5.41	1999	.18	1981	8.5	5.6	1.7	.5	.54	.77	1.15	1.49	1.84	2.21	2.62	3.12	3.78	4.83	5.83
Jul	3.64	3.56	2.92	1986	6	13.36	1993	.61	1974	8.2	5.4	2.6	1.1	.76	1.10	1.63	2.12	2.61	3.13	3.72	4.43	5.36	6.85	8.26
Aug	2.95	2.63	5.00	1960	24	6.84	1998	.28	1976	7.3	4.6	1.7	.9	.50	.75	1.18	1.59	2.01	2.46	2.98	3.60	4.44	5.80	7.10
Sep	2.02	1.48	3.87	1995	19	6.24	1995	.19+	1979	6.1	3.7	1.4	.5	.16	.30	.56	.84	1.15	1.50	1.92	2.45	3.19	4.42	5.63
Oct	1.33	.94	2.75	1965	18	5.24	1997	.00	1975	4.4	2.4	.9	.2	.03	.12	.29	.48	.69	.94	1.24	1.62	2.15	3.04	3.93
Nov	1.33	1.06	2.45	1996	16	4.05	1998	.00	1989	4.8	2.6	.9	.2	.05	.16	.36	.55	.76	1.00	1.28	1.64	2.13	2.94	3.74
Dec	.66	.43	1.42	1953	3	2.14	1973	.00	1976	3.8	1.9	.3	.0	.02	.06	.14	.24	.34	.46	.61	.80	1.06	1.51	1.96
Ann	23.61+	24.10+	5.00+	Aug 1960	24	13.36	Jul 1993	.00+	Mar 1997	76.0	44.8	15.2	5.2	15.20	16.77	18.81	20.38	21.79	23.17	24.60	26.20	28.16	31.03	33.54

+ 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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www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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Station: WAKEENEY, KS

COOP ID: 148495

Climate Division: KS 4

NWS Call Sign:

Elevation: 2,460 Feet

Lat: 39°02N

Lon: 99°53W

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	5.9	4.5	2	1	12.0	1985	10	23.0	1985	20	1985	10	12	1985	2.3	1.8	.6	.3	.1	7.8	4.8	2.8	1.3
Feb	4.4	2.0	1	#	10.0	1971	22	14.5	1971	13	1978	13	5	1978	2.1	1.7	.6	.3	.1	4.6	2.8	1.8	.4
Mar	6.3	6.0	#	#	13.0	1987	24	26.0	1987	25	1987	29	3	1987	1.5	1.4	.6	.4	.1	2.3	1.5	.9	.3
Apr	1.8	.0	#	0	10.0	1980	3	11.0	1997	10	1997	12	1	1997	.5	.5	.3	.1	@	.3	.2	@	.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	.3	.0	#	0	4.0	1985	29	4.0	1985	4	1985	29	#+	1995	.1	.1	.1	.0	.0	.1	.1	.0	.0
Oct	.8	.0	0	0	15.0	1997	26	15.0	1997	15	1997	26	1+	1997	.1	.1	.1	.1	@	.2	.2	.1	.1
Nov	2.6	1.0	#	#	8.0	1973	21	11.0	1972	11	1983	29	2	1992	.8	.7	.4	.2	.0	1.6	.9	.3	.0
Dec	5.8	4.0	1	#	8.0	1973	4	22.5	1973	11	1983	6	5	1983	2.1	1.8	.6	.1	.0	4.0	2.1	.8	@
Ann	27.9	17.5	N/A	N/A	15.0	Oct 1997	26	26.0	Mar 1987	25	Mar 1987	29	12	Jan 1985	9.5	8.1	3.3	1.5	.3	20.9	12.6	6.7	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

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Climate Division: KS 4

NWS Call Sign:

Elevation: 2,460 Feet

Lat: 39°02N

Lon: 99°53W

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	5/15	5/11	5/08	5/05	5/02	4/30	4/27	4/24	4/19
32	5/06	5/01	4/27	4/24	4/21	4/18	4/15	4/12	4/07
28	4/25	4/20	4/17	4/14	4/12	4/09	4/06	4/03	3/30
24	4/13	4/08	4/05	4/02	3/30	3/28	3/25	3/22	3/17
20	4/08	4/02	3/29	3/26	3/22	3/19	3/15	3/11	3/05
16	4/02	3/25	3/20	3/15	3/11	3/07	3/02	2/24	2/17
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	9/24	9/27	9/30	10/03	10/06	10/09	10/12	10/17
32	9/26	10/01	10/05	10/09	10/12	10/15	10/18	10/22	10/28
28	10/11	10/16	10/19	10/22	10/25	10/28	10/31	11/04	11/09
24	10/17	10/22	10/27	10/30	11/03	11/06	11/10	11/14	11/20
20	10/28	11/03	11/06	11/10	11/13	11/16	11/19	11/22	11/28
16	11/02	11/10	11/15	11/19	11/24	11/28	12/02	12/08	12/15
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	174	167	162	157	153	149	144	139	131
32	194	187	182	177	173	169	164	159	151
28	216	209	204	200	196	192	188	183	176
24	238	231	225	221	216	212	207	202	195
20	258	250	244	239	235	230	225	220	212
16	286	276	269	263	257	251	245	238	228

* 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 4 NWS Call Sign: Elevation: 2,460 Feet Lat: 39°02N Lon: 99°53W

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	1147	890	712	387	146	22	0	7	67	310	743	1057	5488
60	992	754	558	256	68	6	0	1	22	179	593	902	4331
57	900	677	469	189	38	2	0	0	9	116	509	809	3718
55	839	624	412	150	24	0	0	0	5	83	453	747	3337
50	694	497	277	74	6	0	0	0	0	31	322	601	2502
32	251	163	26	0	0	0	0	0	0	0	46	177	663

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	127	197	337	609	946	1244	1461	1394	1065	719	293	144	8536
55	2	14	10	70	257	554	748	681	380	89	11	0	2816
57	1	11	5	48	209	496	686	619	324	60	6	0	2465
60	0	5	0	26	146	410	593	526	247	30	0	0	1983
65	0	0	0	7	69	276	438	377	142	6	0	0	1315
70	0	0	0	1	25	165	288	241	69	1	0	0	790

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	23	77	180	382	684	985	1197	1135	818	479	136	35	23	100	280	662	1346	2331	3528	4663	5481	5960	6096	6131
45	3	32	104	262	533	835	1042	980	669	344	74	7	3	35	139	401	934	1769	2811	3791	4460	4804	4878	4885
50	0	10	48	157	385	685	887	825	525	220	28	0	0	10	58	215	600	1285	2172	2997	3522	3742	3770	3770
55	0	1	17	83	250	537	732	670	388	121	8	0	0	1	18	101	351	888	1620	2290	2678	2799	2807	2807
60	0	0	3	37	141	392	577	516	263	57	0	0	0	0	3	40	181	573	1150	1666	1929	1986	1986	1986
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	38	74	145	258	417	636	780	737	518	320	110	40	38	112	257	515	932	1568	2348	3085	3603	3923	4033	4073

(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