

Climatography of the United States

No. 20

1971-2000

Station: KINSLEY, KS

COOP ID: 144333

Climate Division: KS 8

NWS Call Sign:

Elevation: 2,167 Feet Lat: 37° 55N

Lon: 99° 24W

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	42.5	17.2	29.9	88	1967	23	39.7	1986	-15	1988	7	14.6	1979	1089	0	.0	.0	11.0	8.4	29.9	2.4
Feb	48.8	21.2	35.0	88	1981	21	43.9	1999	-18+	1989	3	21.0	1978	840	0	.0	.0	14.1	5.1	24.2	1.6
Mar	57.6	30.0	43.8	92	1989	11	51.1	1986	-7	1960	3	37.1	1980	657	0	.0	.1	21.6	1.5	17.8	.1
Apr	67.5	39.4	53.5	99+	1989	24	62.1	1981	12	1997	9	46.7	1983	358	12	.0	.7	27.2	.1	5.8	.0
May	76.2	50.5	63.4	103	1996	18	68.8	1998	28+	1954	3	56.6	1995	134	84	.2	2.6	30.8	.0	.1	.0
Jun	87.2	60.5	73.9	110+	1974	30	78.6	1990	40+	1964	1	67.3	1982	16	281	2.7	13.3	30.0	.0	.0	.0
Jul	93.1	65.6	79.4	109	1971	14	84.7	1980	46	1952	8	75.8	1972	0	444	6.7	22.3	31.0	.0	.0	.0
Aug	91.3	63.7	77.5	110	1962	10	83.4	2000	42	1950	21	71.8	1992	4	391	4.3	19.9	31.0	.0	.0	.0
Sep	83.1	54.5	68.8	106	1998	7	76.5	1998	21	2000	25	61.2	1974	52	165	1.1	9.8	29.8	.0	.3	.0
Oct	72.1	41.8	57.0	98+	1963	2	60.4	1998	14	2000	9	50.8	1976	261	10	.0	1.4	29.8	@	3.8	.0
Nov	56.4	28.8	42.6	90	1980	9	52.0	1999	-4	1952	28	35.9	1985	673	0	.0	@	20.3	1.3	18.9	.0
Dec	46.0	19.9	33.0	85	1955	25	37.7	1999	-19+	1989	23	17.3	1983	994	0	.0	.0	12.7	5.4	29.0	1.2
Ann	68.5	41.1	54.8	110+	Jun 1974	30	84.7	Jul 1980	-19+	Dec 1989	23	14.6	Jan 1979	5078	1387	15.0	70.1	289.3	21.8	129.8	5.3

+ 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/normal/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

054-A

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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: KINSLEY, KS

COOP ID: 144333

Climate Division: KS 8

NWS Call Sign:

Elevation: 2,167 Feet Lat: 37°55N

Lon: 99°24W

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	.60	1.27	2001	28	2.07	1979	.00+	1986	3.3	2.1	.4	.0	.00	.05	.16	.27	.38	.51	.66	.84	1.10	1.52	1.94
Feb	.84	.68	1.29	1993	11	2.79	1993	.00+	1999	3.3	2.0	.6	.1	.00	.00	.07	.17	.31	.48	.70	.99	1.42	2.17	2.94
Mar	2.34	1.89	2.30	1987	23	9.59	1973	.00	1997	5.9	4.6	1.5	.6	.06	.21	.52	.85	1.22	1.66	2.18	2.85	3.79	5.37	6.94
Apr	2.46	1.82	3.43	1976	28	8.42	1976	.30	1982	6.2	4.4	1.6	.6	.39	.60	.96	1.29	1.65	2.03	2.47	3.00	3.72	4.89	6.00
May	3.86	3.55	4.94	1995	20	11.28	1995	.56	1994	8.7	6.2	2.7	.8	.89	1.24	1.81	2.32	2.82	3.36	3.96	4.67	5.62	7.11	8.53
Jun	3.56	2.84	4.13	1987	30	9.73	1987	.66	1998	7.7	6.2	2.4	.9	.92	1.25	1.77	2.23	2.68	3.15	3.68	4.30	5.11	6.40	7.60
Jul	3.65	3.13	3.87	1988	19	9.77	1979	.50	1974	6.7	5.3	2.5	1.3	.50	.80	1.32	1.83	2.36	2.94	3.62	4.45	5.58	7.41	9.19
Aug	3.49	2.80	5.50	1987	4	10.23	1996	.00	2000	6.2	4.8	1.8	1.1	.15	.45	.97	1.48	2.03	2.65	3.38	4.29	5.54	7.62	9.65
Sep	1.93	1.53	5.87	1973	26	11.44	1973	.02	1980	5.4	3.9	1.3	.4	.11	.22	.45	.71	1.01	1.36	1.78	2.33	3.09	4.39	5.69
Oct	1.88	1.61	3.92	1998	2	5.89	1998	.00	1975	4.5	3.3	1.1	.6	.05	.18	.43	.69	1.00	1.34	1.76	2.30	3.04	4.30	5.54
Nov	1.22	.87	2.70	1971	17	4.63	1971	.00+	1989	3.9	2.7	.7	.1	.00	.00	.17	.36	.57	.81	1.11	1.49	2.02	2.94	3.84
Dec	.89	.65	2.70	1984	15	4.95	1984	.00	1996	3.8	2.1	.5	.2	.03	.09	.21	.34	.48	.65	.84	1.09	1.44	2.02	2.59
Ann	26.80	26.46	5.87	Sep 1973	26	11.44	Sep 1973	.00+	Aug 2000	65.6	47.6	17.1	6.7	16.14	18.08	20.62	22.60	24.39	26.15	27.99	30.06	32.60	36.34	39.64

+ 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

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Station: KINSLEY, KS

COOP ID: 144333

Climate Division: KS 8

NWS Call Sign:

Elevation: 2,167 Feet

Lat: 37°55N

Lon: 99°24W

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	5.5	1	#	8.0	2000	4	13.5	2000	12	1988	7	4	1979	1.9	1.5	.8	.3	.0	.8	.4	.2	.1
Feb	2.7	.5	1	#	9.0	1978	13	13.5	1982	12	1982	12	9	1978	1.2	1.1	.5	.2	.0	.4	.2	.1	.0
Mar	3.6	.0	#	0	14.0	1980	24	18.0	1980	14	1980	24	3	1995	.9	.8	.5	.2	.1	.6	.4	.2	.2
Apr	.8	.0	#	0	10.5	1983	4	10.5	1983	2+	1997	12	#+	1997	.2	.2	.1	@	@	.2	.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	#	1995	21	#	1995	#	1995	21	#	1995	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	#	0	.5	1997	26	.5	1997	1	1997	26	#	1997	@	.0	.0	.0	.0	@	.0	.0	.0
Nov	.7	.0	#	0	4.5	1982	28	5.5	1987	5	1987	28	#+	1997	.3	.2	.2	.0	.0	.3	.1	@	.0
Dec	3.3	2.0	#	#	5.0	1985	1	11.0	1987	7	1987	15	1	1997	1.6	1.2	.3	.1	.0	1.1	.3	.1	.0
Ann	16.5	8.0	N/A	N/A	14.0	Mar 1980	24	18.0	Mar 1980	14	Mar 1980	24	9	Feb 1978	6.1	5.0	2.4	.8	.1	3.4	1.4	.6	.3

+ 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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Climate Division: KS 8

NWS Call Sign:

Elevation: 2,167 Feet

Lat: 37°55N

Lon: 99°24W

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	4/30	4/27	4/24	4/21	4/17	4/11
32	4/26	4/22	4/20	4/17	4/15	4/13	4/11	4/08	4/04
28	4/20	4/15	4/12	4/09	4/07	4/04	4/01	3/29	3/24
24	4/09	4/05	4/02	3/30	3/28	3/26	3/23	3/20	3/16
20	4/02	3/28	3/24	3/20	3/17	3/14	3/10	3/06	2/28
16	3/31	3/23	3/17	3/12	3/07	3/03	2/26	2/20	2/12
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	9/27	10/01	10/04	10/07	10/10	10/13	10/17	10/22
32	9/27	10/03	10/07	10/11	10/14	10/17	10/20	10/24	10/30
28	10/09	10/15	10/19	10/23	10/26	10/30	11/02	11/07	11/13
24	10/19	10/26	10/30	11/03	11/07	11/11	11/15	11/19	11/25
20	10/28	11/03	11/08	11/13	11/16	11/20	11/24	11/29	12/06
16	11/02	11/10	11/17	11/22	11/27	12/02	12/07	12/13	12/22
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	184	176	171	166	162	158	153	148	140
32	201	194	189	185	181	177	173	167	161
28	225	217	212	207	202	198	193	187	179
24	246	238	233	228	223	219	214	208	200
20	268	260	254	249	244	239	234	228	220
16	299	287	278	271	264	257	249	241	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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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	1089	840	657	358	134	16	0	4	52	261	673	994	5078
60	934	708	504	234	63	4	0	0	16	139	525	839	3966
57	843	629	418	172	35	1	0	0	6	84	441	746	3375
55	783	577	361	136	23	0	0	0	3	58	387	685	3013
50	638	454	235	66	6	0	0	0	0	18	263	539	2219
32	214	139	18	0	0	0	0	0	0	0	27	134	532

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	148	223	384	645	973	1255	1467	1411	1103	772	344	163	8888
55	4	18	15	91	282	565	754	698	416	117	14	1	2975
57	2	13	9	66	233	506	692	636	359	81	9	0	2606
60	0	8	2	38	168	418	599	543	279	43	3	0	2101
65	0	0	0	12	84	281	444	391	165	10	0	0	1387
70	0	0	0	3	32	165	291	251	84	1	0	0	827

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	93	218	437	742	1035	1238	1184	881	546	180	45	34	127	345	782	1524	2559	3797	4981	5862	6408	6588	6633
45	6	44	131	305	587	885	1083	1029	732	401	104	13	6	50	181	486	1073	1958	3041	4070	4802	5203	5307	5320
50	0	12	65	189	437	735	928	874	587	267	45	3	0	12	77	266	703	1438	2366	3240	3827	4094	4139	4142
55	0	2	27	108	297	585	773	719	443	159	18	0	0	2	29	137	434	1019	1792	2511	2954	3113	3131	3131
60	0	0	9	51	177	438	618	564	313	74	2	0	0	0	9	60	237	675	1293	1857	2170	2244	2246	2246
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	46	95	170	290	461	672	806	769	562	357	145	60	46	141	311	601	1062	1734	2540	3309	3871	4228	4373	4433

(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