U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ULYSSES, KS **COOP ID: 148287**

Climate Division: KS 7 **NWS Call Sign:** **Elevation: 3,050 Feet** **Lat: 37˚35N** **Lon: 101˚21W**

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	44.8	15.9	30.4	83	1986	21	39.5	1986	-27	1984	19	17.9	1979	1074	0	.0	.0	13.5	6.9	30.7	2.3
Feb	50.8	21.1	36.0	88	1981	21	44.7	1991	-19	1982	5	24.6	1978	814	0	.0	.0	16.5	4.0	25.9	1.3
Mar	59.1	28.0	43.6	96	1989	11	49.9	1972	-18	1948	11	37.5	1996	665	0	.0	.1	23.5	1.3	21.8	.1
Apr	68.8	36.7	52.8	103	1989	23	60.0	1981	10	1975	2	45.4	1973	379	11	.1	.9	27.8	.1	8.9	.0
May	77.4	48.1	62.8	103	1953	26	67.7	1977	26	1946	11	54.8	1995	148	78	.3	3.4	30.5	.0	.5	.0
Jun	88.2	59.3	73.8	110+	1985	9	78.7	1977	38+	1951	2	68.1	1992	16	278	3.3	14.3	30.0	.0	.0	.0
Jul	93.6	64.2	78.9	110	1978	18	83.6	1980	45	1952	8	75.5	1992	0	430	6.2	23.3	31.0	.0	.0	.0
Aug	91.2	62.9	77.1	109	1978	18	82.7	1983	42	1976	28	71.3	1992	3	377	4.1	20.3	31.0	.0	.0	.0
Sep	83.2	53.3	68.3	107+	1947	3	74.1	1998	25+	1984	30	62.8	1974	55	154	1.3	10.3	29.7	.0	.5	.0
Oct	72.6	40.1	56.4	99	1989	12	59.7	1978	10	1993	30	49.2	1976	280	11	.0	1.8	29.5	.1	6.7	.0
Nov	56.3	26.9	41.6	88	1980	9	48.2	1990	-8	1991	3	35.4	1992	703	0	.0	.0	20.7	1.3	23.3	.2
Dec	46.9	18.5	32.7	86+	1955	24	37.8	1980	-17	1989	23	20.6	1983	1001	0	.0	.0	14.6	4.5	30.0	1.8
Ann	69.4	39.6	54.5	110+	Jun 1985	9	83.6	Jul 1980	-27	Jan 1984	19	17.9	Jan 1979	5138	1339	15.3	74.4	298.3	18.2	148.3	5.7

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1939-2001

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ULYSSES, KS **COOP ID: 148287**

Climate Division: KS 7 **NWS Call Sign:** **Elevation: 3,050 Feet** **Lat: 37˚35N** **Lon: 101˚21W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	.42	.33	.87	1990	19	1.36	1990	.00+	1986
Feb	.42	.21	1.69	1946	18	1.54	1993	.00+	1988
Mar	1.09	.63	2.40	1980	28	4.35	2000	.00	1997
Apr	1.51	1.26	3.48	1942	18	4.88	1976	.03	1996
May	2.65	2.87	4.42	1955	19	5.92	1980	.40	1994
Jun	2.65	2.72	3.40	1995	29	8.55	1989	.20	1981
Jul	2.15	1.80	2.51+	1951	5	6.34	1990	.05	1983
Aug	2.75	2.11	4.75	1976	2	7.09	1996	.10	1984
Sep	1.52	1.08	2.29	1985	12	5.66	1985	.00+	1992
Oct	1.07	.87	3.05	1946	7	6.26	2000	.00	1975
Nov	.82	.49	2.32	1971	16	3.89	1971	.00+	1999
Dec	.34	.27	1.23	1944	4	.96	1984	.00+	2000
Ann	17.39	17.40	4.75	Aug 1976	2	8.55	Jun 1989	.00+	Dec 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.1	1.4	.2	.0
Feb	3.1	1.3	.1	.0
Mar	5.2	2.9	.5	.1
Apr	5.3	3.4	1.0	.3
May	8.0	5.1	1.8	.7
Jun	7.7	5.0	1.7	.6
Jul	6.5	4.0	1.5	.5
Aug	6.2	4.2	1.9	.7
Sep	4.8	2.8	.9	.4
Oct	3.3	2.0	.8	.2
Nov	3.3	2.1	.4	.1
Dec	3.0	1.2	.1	.0
Ann	59.5	35.4	10.9	3.6

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.00	.00	.05	.11	.18	.26	.37	.51	.70	1.04	1.38
Feb	.00	.00	.02	.08	.14	.23	.34	.49	.71	1.09	1.48
Mar	.02	.08	.21	.36	.54	.74	1.00	1.32	1.78	2.56	3.34
Apr	.12	.22	.42	.63	.86	1.12	1.44	1.84	2.39	3.31	4.23
May	.64	.89	1.28	1.62	1.96	2.32	2.73	3.20	3.83	4.82	5.76
Jun	.38	.60	.98	1.35	1.73	2.15	2.64	3.23	4.03	5.34	6.59
Jul	.26	.43	.73	1.03	1.35	1.71	2.12	2.63	3.32	4.46	5.57
Aug	.23	.42	.78	1.16	1.58	2.06	2.63	3.34	4.33	5.98	7.61
Sep	.00	.00	.26	.51	.77	1.08	1.44	1.89	2.50	3.55	4.58
Oct	.01	.04	.13	.26	.42	.63	.90	1.25	1.77	2.70	3.64
Nov	.00	.00	.11	.26	.41	.58	.77	1.02	1.37	1.93	2.49
Dec	.00	.00	.05	.13	.20	.27	.35	.44	.56	.75	.95
Ann	11.76	12.83	14.20	15.26	16.20	17.11	18.06	19.11	20.39	22.26	23.89

\+ 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: 1939-2001
(3) Derived from 1971-2000 serially complete daily data

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: ULYSSES, KS **COOP ID: 148287**

Climate Division: KS 7 **NWS Call Sign:** **Elevation: 3,050 Feet** **Lat: 37°35N** **Lon: 101°21W**

Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	5.3	5.0	1	#	9.0	1990	19	16.0	1990	13	1990	20	2	1990	2.3	1.7	.6	.2	.0	5.0	2.0	1.0	.1
Feb	3.1	1.5	#	#	8.0	1971	21	13.5	1978	10	1978	13	4	1978	2.0	1.1	.3	.1	.0	3.5	1.7	.7	@
Mar	2.8	1.8	#	#	6.0	1983	23	14.9	1983	10	1983	23	2	1983	1.9	1.2	.3	.1	.0	1.7	.6	.4	.1
Apr	.7	.0	#	0	7.0	1988	2	7.0	1988	6	1988	2	#+	1997	.3	.2	@	@	.0	.3	@	@	.0
May	#	.0	#	0	#	1979	4	#	1979	#	1979	4	#	1979	.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	.1	.0	#	0	1.5	1984	29	1.5	1984	2	1984	29	#+	1995	@	@	.0	.0	.0	@	.0	.0	.0
Oct	.3	.0	#	0	8.0	1997	25	8.0+	1997	8	1997	25	#+	1997	.1	.1	.1	@	.0	.1	@	@	.0
Nov	2.0	.8	#	#	4.0	1972	18	15.0	1972	10	1991	1	2	1991	1.1	.9	.3	.0	.0	1.0	.3	@	.0
Dec	2.9	2.6	#	#	5.5	1971	2	7.6	1983	9	1997	25	2	1997	1.9	1.3	.3	@	.0	3.8	.9	.1	.0
Ann	17.2	11.7	N/A	N/A	9.0	Jan 1990	19	16.0	Jan 1990	13	Jan 1990	20	4	Feb 1978	9.6	6.5	1.9	.4	.0	15.4	5.5	2.2	.2

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ULYSSES, KS **COOP ID: 148287**

Climate Division: KS 7 **NWS Call Sign:** **Elevation: 3,050 Feet** **Lat: 37˚35N** **Lon: 101˚21W**

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	5/12	5/10	5/07	5/05	5/03	4/30	4/28	4/24
32	5/09	5/04	5/01	4/28	4/25	4/22	4/19	4/16	4/11
28	4/25	4/21	4/19	4/16	4/14	4/12	4/10	4/07	4/03
24	4/19	4/14	4/10	4/07	4/05	4/02	3/30	3/26	3/21
20	4/11	4/05	3/31	3/27	3/23	3/20	3/16	3/11	3/05
16	4/04	3/28	3/23	3/19	3/15	3/11	3/07	3/02	2/23

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	9/18	9/23	9/27	9/29	10/02	10/05	10/08	10/11	10/16
32	9/22	9/28	10/02	10/05	10/08	10/11	10/15	10/19	10/24
28	10/03	10/09	10/13	10/17	10/20	10/24	10/28	11/01	11/07
24	10/21	10/26	10/29	11/01	11/04	11/07	11/10	11/14	11/19
20	10/27	11/01	11/05	11/09	11/12	11/15	11/18	11/22	11/28
16	11/02	11/08	11/11	11/15	11/18	11/21	11/24	11/28	12/03

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	166	160	156	153	149	146	142	138	132
32	185	179	174	169	165	161	157	152	145
28	209	202	197	193	189	185	180	175	168
24	234	227	222	217	213	209	204	199	192
20	256	248	242	237	233	228	223	217	209
16	274	265	258	252	247	242	236	229	220

***** 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: ULYSSES, KS **COOP ID: 148287**

Climate Division: KS 7 **NWS Call Sign:** **Elevation: 3,050 Feet** **Lat: 37˚35N** **Lon: 101˚21W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1074	814	665	379	148	16	0	3	55	280	703	1001	5138
60	919	674	511	252	73	4	0	0	17	158	553	846	4007
57	826	593	420	187	43	1	0	0	7	101	467	753	3398
55	764	541	363	150	28	0	0	0	3	71	411	691	3022
50	615	412	228	75	8	0	0	0	0	25	281	541	2185
32	179	91	9	0	0	0	0	0	0	0	27	125	431

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	128	201	366	622	953	1252	1453	1397	1088	754	314	146	8674
55	0	7	8	82	268	562	740	684	402	112	9	0	2874
57	0	3	2	59	221	503	678	622	345	79	4	0	2516
60	0	0	1	34	158	415	585	529	265	43	1	0	2031
65	0	0	0	11	78	278	430	377	154	11	0	0	1339
70	0	0	0	2	30	162	277	235	75	2	0	0	783

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	28	83	208	425	728	1014	1208	1148	852	514	148	41	28	111	319	744	1472	2486	3694	4842	5694	6208	6356	6397
45	2	35	118	295	574	864	1053	993	703	369	76	12	2	37	155	450	1024	1888	2941	3934	4637	5006	5082	5094
50	0	10	56	180	424	714	898	838	557	245	29	1	0	10	66	246	670	1384	2282	3120	3677	3922	3951	3952
55	0	1	22	97	284	565	743	683	417	140	7	0	0	1	23	120	404	969	1712	2395	2812	2952	2959	2959
60	0	0	3	40	166	420	588	528	284	63	0	0	0	0	3	43	209	629	1217	1745	2029	2092	2092	2092
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	66	112	198	312	457	642	772	734	539	368	149	72	66	178	376	688	1145	1787	2559	3293	3832	4200	4349	4421

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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