

Climatography of the United States

No. 20

1971-2000

Station: PERRY LAKE, KS

COOP ID: 146333

Climate Division: KS 3

NWS Call Sign:

Elevation: 960 Feet

Lat: 39°07N

Lon: 95°25W

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	36.7	16.1	26.4	72+	1996	14	37.3	1989	-18	1974	12	12.1	1979	1197	0	.0	.0	5.4	11.7	29.3	3.8
Feb	43.2	21.9	32.6	78	1981	26	43.7	1976	-23	1979	1	19.1+	1979	909	0	.0	.0	9.2	7.7	22.6	2.5
Mar	54.3	32.2	43.3	88	1986	30	48.3	1986	-9+	1998	12	35.5	1975	675	0	.0	.0	19.1	1.7	15.8	.2
Apr	65.0	43.1	54.1	93	1989	27	62.4	1981	9	1975	3	47.4	1983	340	11	.0	.3	26.8	.0	3.6	.0
May	74.4	53.3	63.9	96	1998	31	70.0	1998	29	1976	3	57.8	1995	127	93	.0	.7	30.9	.0	.1	.0
Jun	83.6	62.6	73.1	110	1980	28	77.0	1986	41+	1993	5	67.4	1982	11	256	.3	6.1	30.0	.0	.0	.0
Jul	89.3	67.5	78.4	111	1980	15	87.2	1980	45	1972	5	74.9	1994	0	416	2.0	15.1	31.0	.0	.0	.0
Aug	88.1	65.2	76.7	112	1980	2	84.0	1983	45	1986	28	70.4	1992	8	369	1.9	14.1	31.0	.0	.0	.0
Sep	79.9	56.1	68.0	108	2000	3	74.3	1978	28	1984	30	61.2	1974	66	155	.4	4.8	30.0	.0	.2	.0
Oct	68.5	43.9	56.2	94	1976	2	61.6	1971	13	1993	31	50.5	1976	285	11	.0	.4	29.4	.0	3.6	.0
Nov	52.9	32.5	42.7	84	1980	9	51.9	1999	1	1976	28	36.0	1976	669	0	.0	.0	17.6	1.6	15.4	.0
Dec	40.6	21.1	30.9	74+	2001	6	36.4	1991	-23	1989	23	13.4	1983	1059	0	.0	.0	7.6	7.8	27.3	1.6
Ann	64.7	43.0	53.9	112	Aug 1980	2	87.2	Jul 1980	-23+	Dec 1989	23	12.1	Jan 1979	5346	1311	4.6	41.5	268.0	30.5	117.9	8.1

+ 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: 1967-2001

(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: PERRY LAKE, KS

COOP ID: 146333

Climate Division: KS 3

NWS Call Sign:

Elevation: 960 Feet Lat: 39°07N

Lon: 95°25W

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	.96	.89	1.49	1982	30	2.79	1979	.00	1986	5.4	2.4	.4	.2	.05	.14	.29	.43	.58	.74	.94	1.18	1.51	2.05	2.58
Feb	.97	.86	2.05	1997	21	3.00	1997	.07	1991	5.2	2.4	.4	.1	.15	.23	.37	.51	.64	.79	.97	1.18	1.46	1.92	2.37
Mar	2.48	1.85	2.25	2001	15	7.81	1973	.33	1997	7.8	4.9	1.8	.5	.43	.64	1.00	1.34	1.69	2.07	2.50	3.02	3.72	4.85	5.93
Apr	3.33	3.12	2.45+	1997	11	8.08	1999	.81	1971	10.7	6.2	2.4	.6	.94	1.26	1.74	2.15	2.56	2.98	3.45	4.00	4.72	5.85	6.90
May	5.24	5.06	3.48	1982	6	12.18	1982	.95	1998	11.8	7.7	3.8	1.7	1.62	2.12	2.86	3.50	4.11	4.75	5.45	6.28	7.34	9.00	10.54
Jun	5.19	4.54	5.30	1991	16	11.23	1977	1.42	1988	10.6	7.0	3.4	1.6	1.48	1.97	2.72	3.37	4.00	4.66	5.39	6.25	7.36	9.11	10.74
Jul	3.97	2.82	5.25	1981	27	16.30	1993	.33	1983	9.1	6.3	2.3	1.1	.44	.74	1.29	1.84	2.44	3.10	3.88	4.85	6.17	8.35	10.47
Aug	3.72	3.39	4.27	1977	5	9.22	1985	.51	1983	9.0	5.6	2.4	1.0	.67	1.00	1.55	2.05	2.57	3.13	3.77	4.54	5.56	7.21	8.78
Sep	4.45	3.68	6.59	1989	9	12.39	1973	1.11	1990	8.3	5.6	2.6	1.4	1.08	1.50	2.15	2.72	3.30	3.90	4.58	5.39	6.45	8.12	9.69
Oct	3.04	3.18	3.85	1998	5	6.61	1998	.02	1995	7.9	5.2	2.0	.8	.37	.61	1.04	1.47	1.92	2.42	3.00	3.72	4.70	6.30	7.86
Nov	2.46	2.48	3.24	1998	1	7.82	1998	.00	1989	7.1	4.2	1.6	.7	.21	.48	.88	1.24	1.61	2.01	2.47	3.03	3.78	5.00	6.17
Dec	1.50	1.31	2.20	1980	7	4.37	1980	.00	1979	5.4	2.8	.9	.3	.11	.26	.50	.72	.95	1.21	1.50	1.86	2.34	3.12	3.88
Ann	37.31	36.09	6.59	Sep 1989	9	16.30	Jul 1993	.00+	Nov 1989	98.3	60.3	24.0	10.0	23.06	25.67	29.10	31.75	34.15	36.49	38.94	41.68	45.04	50.00	54.34

+ 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: 1967-2001

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

Complete documentation available from:
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Station: PERRY LAKE, KS

COOP ID: 146333

Climate Division: KS 3

NWS Call Sign:

Elevation: 960 Feet

Lat: 39°07N

Lon: 95°25W

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	4.3	4.3	1	1	9.0	1985	1	15.1	1977	15	1979	15	8	1979	3.4	1.9	.6	.2	.0	8.1	3.7	1.5	@
Feb	3.6	2.0	1	#	9.0	1978	13	15.7	1993	14	1979	6	8	1979	2.3	1.0	.5	.2	.0	4.1	1.8	.6	.0
Mar	2.1	.9	#	#	7.2	1990	24	7.4	1990	7	1990	24	1	1998	1.2	.8	.2	.1	.0	1.7	.6	.3	.0
Apr	.2	.0	#	0	2.0	1983	4	2.0+	1994	2	1994	6	#+	1997	.1	.1	.0	.0	.0	.1	.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	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.1	.0	#	0	3.0	1996	23	3.2	1996	#+	1996	23	#+	1996	.1	@	@	.0	.0	.0	.0	.0	.0
Nov	1.0	.0	#	#	6.5	1975	26	6.5	1975	7	1975	26	#+	2000	.7	.4	.2	.1	.0	.8	.2	.1	.0
Dec	3.4	2.1	1	#	6.5	1987	15	11.5	2000	9	1983	22	3+	2000	2.3	1.3	.4	.1	.0	4.1	1.5	.4	.0
Ann	14.7	9.3	N/A	N/A	9.0+	Jan 1985	1	15.7	Feb 1993	15	Jan 1979	15	8+	Feb 1979	10.1	5.5	1.9	.7	.0	18.9	7.8	2.9	@

+ 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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No. 20 1971-2000

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COOP ID: 146333

Climate Division: KS 3

NWS Call Sign:

Elevation: 960 Feet

Lat: 39°07N

Lon: 95°25W

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	5/10	5/06	5/03	5/01	4/29	4/26	4/24	4/21	4/17
32	4/28	4/23	4/20	4/17	4/14	4/11	4/08	4/04	3/30
28	4/14	4/10	4/07	4/05	4/02	3/31	3/29	3/26	3/22
24	4/12	4/06	4/01	3/28	3/25	3/21	3/17	3/13	3/07
20	4/01	3/25	3/20	3/15	3/11	3/07	3/02	2/25	2/18
16	3/26	3/17	3/11	3/05	2/28	2/23	2/18	2/11	2/03
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	9/26	9/30	10/02	10/05	10/08	10/10	10/14	10/18
32	9/29	10/04	10/08	10/11	10/14	10/17	10/21	10/24	10/30
28	10/11	10/18	10/22	10/26	10/29	11/02	11/06	11/10	11/16
24	10/22	10/28	11/02	11/05	11/09	11/12	11/16	11/21	11/27
20	11/03	11/09	11/14	11/18	11/22	11/25	11/29	12/04	12/10
16	11/13	11/18	11/22	11/26	11/29	12/03	12/06	12/10	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	175	169	165	162	159	156	152	148	143
32	205	198	192	187	183	178	174	168	160
28	230	223	218	213	209	205	201	196	188
24	252	244	238	233	228	224	219	213	205
20	284	274	267	260	255	249	243	235	225
16	307	295	287	280	273	267	260	251	240

* 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 3 NWS Call Sign: Elevation: 960 Feet Lat: 39°07N Lon: 95°25W

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	1197	909	675	340	127	11	0	8	66	285	669	1059	5346
60	1042	777	524	216	59	2	0	1	23	162	524	904	4234
57	951	698	438	155	33	0	0	0	10	105	441	811	3642
55	891	646	382	120	21	0	0	0	5	75	387	752	3279
50	747	521	257	54	6	0	0	0	0	27	266	608	2486
32	299	185	27	0	0	0	0	0	0	0	32	195	738

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	125	200	376	661	988	1234	1439	1384	1079	749	353	160	8748
55	3	17	17	91	296	544	726	671	394	111	18	3	2891
57	1	13	11	66	246	484	664	609	339	79	12	1	2525
60	0	8	4	37	180	396	571	517	262	43	5	0	2023
65	0	0	0	11	93	256	416	369	155	11	0	0	1311
70	0	0	0	2	37	139	270	235	78	2	0	0	763

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	18	69	205	439	741	998	1194	1143	841	512	179	34	18	87	292	731	1472	2470	3664	4807	5648	6160	6339	6373
45	2	34	121	306	587	848	1039	988	691	370	102	11	2	36	157	463	1050	1898	2937	3925	4616	4986	5088	5099
50	0	9	65	191	436	698	884	833	543	244	49	3	0	9	74	265	701	1399	2283	3116	3659	3903	3952	3955
55	0	2	32	109	292	548	729	678	405	144	19	0	0	2	34	143	435	983	1712	2390	2795	2939	2958	2958
60	0	0	9	54	172	400	574	523	277	70	4	0	0	0	9	63	235	635	1209	1732	2009	2079	2083	2083
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	21	54	137	259	459	675	812	770	543	320	112	30	21	75	212	471	930	1605	2417	3187	3730	4050	4162	4192

(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