

Climatology of the United States

No. 20

1971-2000

Station: OSKALOOSA 4 NE, KS

COOP ID: 146100

Climate Division: KS 3

NWS Call Sign:

Elevation: 918 Feet Lat: 39°15N Lon: 95°16W

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	36.1	18.1	27.1	71	1967	23	38.8	1990	-20	1982	10	12.5	1979	1174	0	.0	.0	6.0	10.6	27.6	3.5
Feb	42.9	23.7	33.3	82	1972	29	43.2	1976	-15	1996	2	19.5	1978	889	0	.0	.0	10.4	6.4	21.5	1.4
Mar	54.5	33.2	43.9	87	1966	31	49.6	1986	-11	1978	4	36.4	1984	655	0	.0	.0	20.5	1.0	14.9	.2
Apr	65.6	43.7	54.7	92	1965	23	62.9	1981	10	1975	3	46.9	1983	323	12	.0	.2	27.7	@	3.9	.0
May	75.0	53.4	64.2	94+	1967	24	70.3	1998	28+	1976	3	59.1	1995	113	88	.0	.6	31.0	.0	.1	.0
Jun	83.9	62.5	73.2	109	1980	27	77.2	1988	43+	2001	1	68.3	1982	8	255	.1	7.0	30.0	.0	.0	.0
Jul	89.0	67.5	78.3	110+	1980	30	86.6	1980	48+	1972	5	74.5	1971	0	411	1.8	16.3	31.0	.0	.0	.0
Aug	87.5	65.5	76.5	108+	1984	29	84.3	1983	42	1967	31	70.5	1992	8	364	1.8	14.8	31.0	.0	.0	.0
Sep	79.0	56.9	68.0	108	2000	2	73.5	1998	29	1983	23	61.4	1974	59	147	.2	4.8	30.0	.0	.1	.0
Oct	67.8	45.8	56.8	97	1963	5	61.6	1971	16	1993	31	51.5	1976	265	11	.0	.3	29.8	.0	2.4	.0
Nov	51.7	33.2	42.5	84	1980	8	52.3	1999	-1	1976	28	36.1	1976	677	0	.0	.0	18.6	1.7	14.3	@
Dec	39.7	22.3	31.0	70+	2001	5	36.6	1991	-24	1989	22	13.3	1983	1054	0	.0	.0	7.8	7.2	26.4	1.6
Ann	64.4	43.8	54.1	110+	Jul 1980	30	86.6	Jul 1980	-24	Dec 1989	22	12.5	Jan 1979	5225	1288	3.9	44.0	273.8	26.9	111.2	6.7

+ 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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1958-2001

(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: OSKALOOSA 4 NE, KS

COOP ID: 146100

Climate Division: KS 3

NWS Call Sign:

Elevation: 918 Feet Lat: 39°15N

Lon: 95°16W

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	1.06	1.06	1.75	1988	31	2.35	1979	.00+	2000	4.7	2.8	.6	.2	.00	.10	.29	.45	.63	.82	1.05	1.32	1.69	2.31	2.91
Feb	1.12	1.00	2.06	1997	21	3.04	1997	.04	1991	4.8	2.9	.5	.1	.17	.27	.43	.58	.74	.92	1.12	1.37	1.70	2.24	2.75
Mar	2.61	2.05	2.38	2001	15	10.00	1973	.18	1997	7.7	5.0	1.9	.5	.37	.58	.96	1.32	1.70	2.12	2.60	3.19	3.99	5.29	6.55
Apr	3.17	2.90	3.24	1969	5	6.73	1983	.53	2000	9.0	6.2	2.3	.8	.84	1.14	1.60	2.01	2.40	2.82	3.28	3.83	4.55	5.67	6.72
May	5.34	5.37	4.45	1985	27	11.79	1982	1.24	1994	10.8	7.9	3.6	1.5	1.47	1.97	2.75	3.42	4.08	4.77	5.53	6.44	7.61	9.46	11.19
Jun	4.96	4.06	4.60	1966	13	11.57	1996	1.28	1997	9.9	7.3	3.5	1.5	1.48	1.95	2.66	3.27	3.86	4.48	5.16	5.96	6.99	8.61	10.11
Jul	4.31	3.18	6.52	1981	27	15.95	1993	.10	1983	8.4	6.1	2.7	1.0	.35	.64	1.21	1.81	2.46	3.22	4.11	5.24	6.80	9.42	11.99
Aug	3.80	3.76	4.50	1960	18	9.92	1985	.29	2000	8.2	6.0	2.8	1.2	.65	.99	1.54	2.06	2.60	3.18	3.84	4.64	5.71	7.44	9.09
Sep	4.79	4.35	5.27	1989	9	10.63	1977	.73	1990	7.8	5.7	3.0	1.5	1.08	1.52	2.22	2.86	3.49	4.16	4.91	5.81	6.99	8.87	10.64
Oct	3.06	3.18	5.50	1961	13	8.03	1974	.32	1995	7.0	5.2	2.2	.7	.54	.81	1.26	1.68	2.10	2.57	3.09	3.73	4.59	5.96	7.27
Nov	2.53	2.52	4.09	1964	16	7.25	1998	.00	1989	6.4	4.4	1.9	.6	.22	.51	.92	1.29	1.67	2.09	2.56	3.13	3.89	5.13	6.32
Dec	1.52	1.28	2.00	1997	9	4.75	1997	.00	1979	5.1	3.1	1.1	.4	.08	.22	.45	.68	.91	1.18	1.49	1.87	2.39	3.25	4.09
Ann	38.27	36.47	6.52	Jul 1981	27	15.95	Jul 1993	.00+	Jan 2000	89.8	62.6	26.1	10.0	23.49	26.19	29.74	32.50	34.98	37.42	39.97	42.82	46.32	51.48	56.01

+ 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: 1958-2001

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

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Station: OSKALOOSA 4 NE, KS

COOP ID: 146100

Climate Division: KS 3

NWS Call Sign:

Elevation: 918 Feet

Lat: 39°15N

Lon: 95°16W

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	5.6	3.9	2	1	9.0	1985	10	18.6	1985	18	1979	31	12	1979	3.0	2.2	.7	.1	.0	11.5	5.7	2.9	.3
Feb	4.3	2.0	1	#	9.0	1978	13	16.0	1978	18	1979	7	9	1985	2.2	1.7	.5	.2	.0	7.0	3.5	2.1	.6
Mar	2.5	.5	#	#	7.0	1975	10	10.0	1980	12	1978	4	5	1978	1.1	.9	.4	.1	.0	2.0	.9	.5	.2
Apr	.4	.0	#	0	4.0	1975	2	4.0	1975	4	1975	2	#+	1994	.2	.2	@	.0	.0	.1	@	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	#	1998	12	#	1998	.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	.3	.0	#	0	8.0	1996	23	8.0	1996	2	1996	23	#	1996	@	@	@	@	.0	@	.0	.0	.0
Nov	1.1	.0	#	#	7.0	1975	26	8.0	1975	7	1975	27	1	1975	.7	.6	.1	@	.0	.8	.1	.1	.0
Dec	3.5	2.0	1	#	7.0	1978	31	14.2	1983	13	1983	30	5	1983	2.0	1.4	.4	.2	.0	5.3	1.4	.4	.0
Ann	17.7	8.4	N/A	N/A	9.0+	Jan 1985	10	18.6	Jan 1985	18+	Feb 1979	7	12	Jan 1979	9.2	7.0	2.1	.6	.0	26.7	11.6	6.0	1.1

+ 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 3

NWS Call Sign:

Elevation: 918 Feet

Lat: 39° 15N

Lon: 95° 16W

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	5/09	5/05	5/02	4/29	4/27	4/24	4/21	4/18	4/14
32	4/30	4/24	4/20	4/17	4/14	4/11	4/08	4/04	3/29
28	4/20	4/15	4/12	4/08	4/06	4/03	3/31	3/27	3/22
24	4/11	4/06	4/01	3/29	3/26	3/23	3/19	3/15	3/09
20	4/03	3/27	3/21	3/17	3/12	3/08	3/03	2/26	2/19
16	3/27	3/19	3/13	3/08	3/03	2/26	2/21	2/15	2/07
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	9/23	9/28	10/02	10/06	10/09	10/12	10/15	10/19	10/25
32	9/30	10/05	10/09	10/12	10/15	10/18	10/21	10/25	10/30
28	10/14	10/20	10/24	10/27	10/31	11/03	11/06	11/10	11/16
24	10/20	10/27	11/01	11/05	11/09	11/13	11/17	11/22	11/28
20	11/02	11/08	11/13	11/17	11/20	11/24	11/28	12/02	12/09
16	11/08	11/14	11/19	11/23	11/26	11/30	12/04	12/08	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	185	178	173	169	165	161	156	151	144
32	204	197	192	187	183	179	175	170	163
28	230	222	217	212	207	203	198	192	184
24	254	245	238	232	227	222	216	210	201
20	282	272	264	258	252	246	240	232	222
16	300	289	281	274	268	261	254	246	235

* 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	1174	889	655	323	113	8	0	8	59	265	677	1054	5225
60	1019	756	505	201	48	1	0	1	18	146	532	899	4126
57	928	678	419	142	25	0	0	0	7	91	450	807	3547
55	868	626	363	109	15	0	0	0	3	64	396	747	3191
50	725	501	240	47	3	0	0	0	0	22	275	604	2417
32	286	171	23	0	0	0	0	0	0	0	36	194	710

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	136	206	391	680	998	1237	1434	1379	1079	769	349	164	8822
55	4	17	18	99	300	547	721	666	392	120	19	4	2907
57	2	13	12	72	248	487	659	604	336	85	13	1	2532
60	0	8	5	41	178	398	566	512	257	46	5	0	2016
65	0	0	0	12	88	255	411	364	147	11	0	0	1288
70	0	0	0	2	32	134	263	231	71	1	0	0	734

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	82	224	470	769	1016	1209	1158	864	549	180	37	28	110	334	804	1573	2589	3798	4956	5820	6369	6549	6586
45	6	40	138	335	614	866	1054	1003	714	401	102	10	6	46	184	519	1133	1999	3053	4056	4770	5171	5273	5283
50	0	14	75	218	462	716	899	848	566	269	51	4	0	14	89	307	769	1485	2384	3232	3798	4067	4118	4122
55	0	3	35	123	316	566	744	693	420	157	18	0	0	3	38	161	477	1043	1787	2480	2900	3057	3075	3075
60	0	1	6	62	185	418	589	538	288	75	4	0	0	1	7	69	254	672	1261	1799	2087	2162	2166	2166
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	20	58	145	284	485	689	822	779	561	333	105	28	20	78	223	507	992	1681	2503	3282	3843	4176	4281	4309

(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