

Climatology of the United States

No. 20

1971-2000

Station: WAMEGO, KS

COOP ID: 148563

Climate Division: KS 3

NWS Call Sign:

Elevation: 1,010 Feet Lat: 39°13N Lon: 96°20W

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	39.1	18.3	28.7	73+	1981	24	40.1	1990	-19	1959	4	15.1	1979	1126	0	.0	.0	7.4	9.8	28.3	3.2
Feb	46.1	23.5	34.8	84	1972	29	44.1	1999	-22	1982	6	20.6	1979	845	0	.0	.0	11.6	5.9	21.8	1.8
Mar	57.7	33.2	45.5	88	1966	31	51.7	1986	-11	1998	12	38.7	1975	607	0	.0	.0	21.8	.9	15.3	.2
Apr	68.6	43.3	56.0	95	1956	27	64.0	1981	1	1975	3	48.7	1983	289	18	.0	.5	28.2	@	4.6	.0
May	77.3	53.7	65.5	100+	1956	21	71.0	1998	28	1976	3	60.4	1995	93	108	.0	1.3	31.0	.0	.2	.0
Jun	85.9	63.5	74.7	110	1953	11	78.2	1980	39	1982	1	69.9	1992	5	295	.4	9.2	30.0	.0	.0	.0
Jul	90.8	68.4	79.6	114+	1954	13	86.3	1980	46	1972	5	74.7	1971	0	452	2.8	18.4	31.0	.0	.0	.0
Aug	89.6	66.6	78.1	108+	1983	17	85.5	1983	46+	1988	29	72.6	1992	4	411	2.6	16.2	31.0	.0	.0	.0
Sep	81.8	57.7	69.8	109	2000	2	75.6	1998	26	1984	30	63.5	1974	40	182	.5	6.7	29.9	.0	.2	.0
Oct	70.7	46.0	58.4	96+	1963	5	62.3	1973	13	1993	31	51.6	1976	228	21	.0	.6	29.9	.0	3.4	.0
Nov	54.4	33.2	43.8	84+	1999	13	53.0	1999	-3	1976	28	36.5	1976	636	0	.0	.0	19.7	1.0	15.3	.1
Dec	42.5	22.7	32.6	73	1975	5	37.8	1999	-24	1989	23	14.6	1983	1004	0	.0	.0	8.8	5.6	26.8	1.6
Ann	67.0	44.2	55.6	114+	Jul 1954	13	86.3	Jul 1980	-24	Dec 1989	23	14.6	Dec 1983	4877	1487	6.3	52.9	280.3	23.2	115.9	6.9

+ 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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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: WAMEGO, KS

COOP ID: 148563

Climate Division: KS 3

NWS Call Sign:

Elevation: 1,010 Feet Lat: 39°13N

Lon: 96°20W

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	.85	.80	1.46	1949	4	2.40	1990	.00	1986	4.8	2.6	.4	@	.05	.14	.27	.40	.53	.67	.84	1.05	1.33	1.79	2.23	
Feb	1.02	.92	2.02	1997	21	3.16	1997	.02	1991	4.6	2.4	.6	.1	.09	.17	.30	.44	.60	.77	.98	1.24	1.59	2.19	2.77	
Mar	2.44	2.08	2.34	1980	30	8.17	1973	.28	1997	6.9	4.6	2.0	.5	.47	.68	1.04	1.37	1.71	2.07	2.48	2.97	3.63	4.68	5.68	
Apr	2.89	2.67	2.44	1974	21	8.36	1999	.64	1990	8.8	5.6	1.8	.6	.73	1.01	1.43	1.80	2.16	2.55	2.98	3.49	4.16	5.21	6.20	
May	4.74	4.30	3.66	1962	29	13.42	1995	1.11	1992	9.9	7.0	3.2	1.4	1.40	1.85	2.52	3.11	3.68	4.27	4.92	5.69	6.68	8.24	9.69	
Jun	4.91	4.65	5.40	1983	5	8.68	1981	1.33	1997	8.7	6.3	3.0	1.6	1.75	2.21	2.88	3.44	3.98	4.53	5.13	5.82	6.71	8.09	9.35	
Jul	4.26	3.54	6.00	1958	3	15.40	1993	.00	1983	8.2	5.8	2.6	1.2	.36	.84	1.53	2.15	2.80	3.49	4.29	5.26	6.56	8.67	10.69	
Aug	3.56	3.67	4.05	1985	4	7.62	1985	.24	1971	8.1	5.4	2.2	1.0	.54	.84	1.36	1.85	2.36	2.92	3.57	4.35	5.41	7.13	8.78	
Sep	3.68	3.03	5.19	1977	13	11.80	1973	.51	1979	7.0	4.7	2.2	1.2	.52	.83	1.36	1.87	2.40	2.99	3.66	4.49	5.61	7.43	9.19	
Oct	2.58	2.38	4.88	1973	11	6.04	1986	.13	1999	6.3	4.3	1.5	.7	.27	.46	.81	1.17	1.56	2.00	2.51	3.15	4.03	5.48	6.89	
Nov	2.18	1.67	2.51	1992	19	5.78	1981	.00	1989	6.1	3.9	1.5	.6	.16	.39	.74	1.06	1.39	1.76	2.18	2.69	3.38	4.51	5.60	
Dec	1.21	.87	1.96	1972	30	3.33	1973	.00	1976	4.6	2.5	.8	.2	.03	.11	.27	.44	.64	.86	1.13	1.48	1.96	2.78	3.59	
Ann	34.32	32.94	6.00	Jul 1958	3	15.40	Jul 1993	.00+	Nov 1989	84.0	55.1	21.8	9.1	22.90	25.06	27.85	29.99	31.90	33.76	35.69	37.84	40.46	44.28	47.61	

+ 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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Station: WAMEGO, KS

COOP ID: 148563

Climate Division: KS 3

NWS Call Sign:

Elevation: 1,010 Feet

Lat: 39°13N

Lon: 96°20W

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	6.2	4.6	1	1	11.0	1985	10	20.4	1979	11	1985	11	7	1979	3.2	2.3	.6	.1	@	8.3	3.9	2.2	.0
Feb	4.4	3.1	1	#	10.0	1971	21	15.0	1971	10	1979	5	6	1983	2.1	1.5	.5	.2	@	5.6	2.5	1.1	.0
Mar	1.8	1.0	#	0	8.0	1975	10	8.0	1975	8	1975	11	1	1998	.8	.6	.2	.1	.0	1.3	.6	.2	.0
Apr	.3	.0	#	0	5.3	1975	2	5.3	1975	5	1975	3	#+	1995	.1	.1	@	@	.0	.2	.1	.1	.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	.2	.0	#	0	4.0	1996	23	4.0	1996	4	1996	23	#+	1996	.1	@	@	.0	.0	.1	@	.0	.0
Nov	1.0	.0	#	0	8.0	1975	26	8.0	1975	8	1975	27	1	1991	.6	.5	.1	@	.0	1.0	.3	.1	.0
Dec	3.0	1.6	#	#	7.0	1997	8	14.0	1997	9	1973	31	2+	2000	1.7	1.2	.3	.1	.0	4.0	.9	.3	.0
Ann	16.9	10.3	N/A	N/A	11.0	Jan 1985	10	20.4	Jan 1979	11	Jan 1985	11	7	Jan 1979	8.6	6.2	1.7	.5	@	20.5	8.3	4.0	.0

+ 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 3

NWS Call Sign:

Elevation: 1,010 Feet

Lat: 39° 13N

Lon: 96° 20W

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	5/10	5/06	5/03	4/30	4/27	4/23	4/19	4/14
32	5/01	4/27	4/24	4/21	4/19	4/16	4/14	4/10	4/06
28	4/20	4/15	4/12	4/09	4/06	4/03	3/31	3/28	3/23
24	4/12	4/07	4/03	3/30	3/27	3/24	3/21	3/17	3/11
20	4/01	3/27	3/22	3/19	3/16	3/12	3/09	3/04	2/27
16	3/29	3/21	3/15	3/10	3/05	2/28	2/23	2/17	2/09
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	9/17	9/23	9/27	9/30	10/04	10/07	10/10	10/14	10/20
32	9/27	10/03	10/07	10/11	10/15	10/18	10/22	10/26	11/01
28	10/08	10/14	10/19	10/23	10/27	10/30	11/03	11/08	11/14
24	10/18	10/25	10/29	11/02	11/06	11/09	11/13	11/18	11/24
20	10/29	11/05	11/10	11/14	11/18	11/22	11/26	12/01	12/08
16	11/07	11/14	11/18	11/23	11/26	11/30	12/04	12/09	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	181	173	166	161	156	151	146	140	131
32	200	192	187	182	178	174	169	164	156
28	228	219	213	208	203	198	192	186	177
24	252	242	235	228	223	217	211	204	194
20	274	265	258	252	247	241	236	229	220
16	301	289	280	273	266	259	251	242	230

* 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	1126	845	607	289	93	5	0	4	40	228	636	1004	4877
60	972	717	460	175	37	0	0	0	11	119	495	849	3835
57	881	639	374	120	18	0	0	0	4	73	413	758	3280
55	821	588	321	90	10	0	0	0	1	51	362	700	2944
50	678	467	206	36	2	0	0	0	0	17	248	557	2211
32	252	155	17	0	0	0	0	0	0	0	29	165	618

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	149	234	433	719	1038	1280	1475	1430	1133	817	382	184	9274
55	5	23	24	119	336	590	762	717	444	155	25	6	3206
57	3	18	15	89	281	530	700	655	386	115	17	2	2811
60	1	12	8	54	207	440	607	562	303	67	9	0	2270
65	0	0	0	18	108	295	452	411	182	21	0	0	1487
70	0	0	0	4	43	167	301	270	94	3	0	0	882

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	26	89	242	488	793	1045	1232	1181	893	571	188	41	26	115	357	845	1638	2683	3915	5096	5989	6560	6748	6789
45	4	43	151	350	638	895	1077	1026	743	420	106	14	4	47	198	548	1186	2081	3158	4184	4927	5347	5453	5467
50	0	16	85	232	484	745	922	871	593	290	55	6	0	16	101	333	817	1562	2484	3355	3948	4238	4293	4299
55	0	4	43	132	335	595	767	716	449	175	18	0	0	4	47	179	514	1109	1876	2592	3041	3216	3234	3234
60	0	0	10	68	206	448	612	561	314	89	4	0	0	0	10	78	284	732	1344	1905	2219	2308	2312	2312
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	26	72	168	311	509	706	830	792	588	364	122	34	26	98	266	577	1086	1792	2622	3414	4002	4366	4488	4522

(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