

Climatography of the United States

No. 20

1971-2000

Station: WAGONER, OK

COOP ID: 349247

Climate Division: OK 3

NWS Call Sign:

Elevation: 590 Feet

Lat: 35° 58N

Lon: 95° 22W

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	47.7	27.1	37.4	80	1950	25	47.5	1990	-9+	1977	10	23.4	1979	856	0	.0	.0	14.3	3.7	21.5	.5
Feb	54.1	31.9	43.0	88	1962	13	52.6	1976	-8	1996	4	30.1	1978	623	0	.0	.0	18.0	2.3	14.7	.3
Mar	63.8	40.6	52.2	94+	1974	31	56.9	1974	-6	1948	12	46.2	1975	399	3	.0	.1	27.4	.2	7.3	.0
Apr	72.7	49.4	61.1	95+	1960	6	67.6	1981	19	1972	1	55.7	1983	152	33	.0	.2	29.8	.0	1.1	.0
May	79.0	58.6	68.8	95+	1951	29	73.8	1987	35+	1952	11	63.7	1976	42	161	.0	.9	31.0	.0	.0	.0
Jun	86.4	67.0	76.7	105	1953	21	80.5	1977	46+	1954	4	72.5	1974	2	352	.1	9.6	30.0	.0	.0	.0
Jul	92.2	71.5	81.9	115	1954	13	87.4	1980	50+	1971	30	76.8	1971	0	521	3.1	23.0	31.0	.0	.0	.0
Aug	91.9	70.1	81.0	114	1956	14	86.5	1983	48+	1949	22	74.8	1992	1	498	4.0	21.8	31.0	.0	.0	.0
Sep	83.8	62.9	73.4	108	1998	4	81.7	1998	33	1984	30	65.1	1974	23	275	.6	8.1	30.0	.0	.0	.0
Oct	73.8	51.8	62.8	99	1953	1	66.8	1979	18	1952	29	56.8	1976	122	54	.0	.6	30.7	.0	.6	.0
Nov	60.7	40.5	50.6	84+	1955	15	58.7	1999	6	1950	24	43.4	1976	440	8	.0	.0	24.9	.1	7.8	.0
Dec	50.7	30.8	40.8	80	1951	31	46.6	1984	-11	1989	23	27.1	1983	753	0	.0	.0	17.4	2.3	17.8	.4
Ann	71.4	50.2	60.8	115	Jul 1954	13	87.4	Jul 1980	-11	Dec 1989	23	23.4	Jan 1979	3413	1905	7.8	64.3	315.5	8.6	70.8	1.2

+ 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

098-A

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: WAGONER, OK

COOP ID: 349247

Climate Division: OK 3

NWS Call Sign:

Elevation: 590 Feet Lat: 35°58N

Lon: 95°22W

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	1.95	1.58	2.81	1969	30	5.80	1990	.00	1986	5.1	4.2	1.1	.4	.13	.33	.64	.93	1.23	1.56	1.94	2.41	3.04	4.07	5.07
Feb	2.27	2.34	2.10	1985	23	4.46	1990	.35	1996	5.1	4.3	1.5	.8	.43	.63	.96	1.27	1.58	1.92	2.30	2.76	3.38	4.36	5.30
Mar	3.63	3.19	2.60	1959	5	9.96	1973	.06	1971	6.8	5.8	2.7	.9	.54	.84	1.36	1.87	2.39	2.96	3.62	4.43	5.52	7.30	9.00
Apr	4.20	4.16	4.67	1970	30	10.60	1995	.31	1989	7.0	6.1	2.8	1.4	.85	1.23	1.84	2.41	2.98	3.59	4.28	5.11	6.20	7.96	9.63
May	5.50	5.42	6.21	1950	9	10.51	1999	2.63	1972	8.5	7.3	3.7	1.5	2.53	3.01	3.68	4.22	4.72	5.23	5.77	6.39	7.16	8.34	9.39
Jun	5.30	4.98	5.10	1974	9	11.28	1973	.57	1990	7.7	6.7	3.2	1.8	1.04	1.52	2.29	3.01	3.73	4.51	5.39	6.45	7.86	10.11	12.25
Jul	2.95	2.18	6.15	1961	15	7.28+	1994	.12	1999	4.5	3.8	2.0	1.0	.17	.34	.70	1.10	1.56	2.09	2.73	3.56	4.72	6.68	8.64
Aug	2.87	2.68	3.62	1987	27	8.12	1997	.00	2000	4.5	4.0	2.1	1.0	.43	.81	1.30	1.70	2.09	2.51	2.97	3.52	4.24	5.38	6.45
Sep	4.98	4.33	6.48	1986	30	11.77	1993	.39	1978	6.9	6.3	3.0	1.3	1.16	1.63	2.35	3.01	3.66	4.34	5.12	6.04	7.24	9.16	10.97
Oct	4.32	3.09	7.41	1986	1	11.85	1986	.78	1995	5.6	4.9	2.5	1.3	.65	1.01	1.63	2.23	2.85	3.53	4.32	5.28	6.56	8.66	10.68
Nov	4.21	4.04	5.13	1959	4	8.67	1972	.37	1989	6.3	5.6	2.7	1.3	1.03	1.43	2.04	2.59	3.13	3.70	4.34	5.10	6.09	7.66	9.14
Dec	2.92	2.49	3.88	1992	14	8.17	1984	.23	1996	5.0	4.2	2.2	.9	.36	.59	1.00	1.40	1.83	2.31	2.87	3.56	4.50	6.04	7.53
Ann	45.10	46.20	7.41	Oct 1986	1	11.85	Oct 1986	.00+	Aug 2000	73.0	63.2	29.5	13.6	32.56	35.00	38.11	40.47	42.56	44.58	46.66	48.96	51.75	55.77	59.25

+ 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:
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Station: WAGONER, OK

COOP ID: 349247

Climate Division: OK 3

NWS Call Sign:

Elevation: 590 Feet

Lat: 35°58N

Lon: 95°22W

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	3.2	2.0	#	#	9.0	1977	9	14.5	1979	12	1988	8	3	1979	1.3	1.1	.3	.1	.0	3.4	1.6	.6	.2
Feb	2.1	.8	#	#	8.0	1975	24	12.5	1975	10	1975	24	1	1993	1.0	.8	.2	.1	.0	1.8	1.0	.2	@
Mar	1.2	.0	#	0	8.5	1989	6	12.0	1989	11	1989	6	1	1989	.5	.3	.1	.1	.0	.4	.2	.1	@
Apr	#	.0	0	0	#	1973	10	#	1973	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.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	#	.0	0	0	#	1993	30	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	2.0	1972	19	2.0+	1980	2	1975	26	#+	1991	.2	.2	.0	.0	.0	.1	.0	.0	.0
Dec	.6	.0	#	0	3.5	1987	15	3.5	1987	4	1987	15	#+	1997	.5	.5	@	.0	.0	.8	.1	.0	.0
Ann	7.5	2.8	N/A	N/A	9.0	Jan 1977	9	14.5	Jan 1979	12	Jan 1988	8	3	Jan 1979	3.5	2.9	.6	.3	.0	6.5	2.9	.9	.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:

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Climate Division: OK 3

NWS Call Sign:

Elevation: 590 Feet

Lat: 35° 58N

Lon: 95° 22W

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	4/27	4/23	4/20	4/17	4/15	4/12	4/10	4/07	4/02
32	4/14	4/10	4/06	4/03	4/01	3/29	3/26	3/23	3/18
28	4/05	3/30	3/26	3/23	3/20	3/16	3/13	3/09	3/03
24	3/27	3/21	3/16	3/12	3/08	3/04	2/28	2/23	2/17
20	3/19	3/10	3/04	2/26	2/21	2/16	2/11	2/05	1/27
16	3/08	2/27	2/21	2/15	2/10	2/04	1/30	1/23	1/14
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	10/04	10/10	10/15	10/18	10/22	10/25	10/29	11/02	11/08
32	10/20	10/25	10/29	11/01	11/04	11/07	11/10	11/13	11/18
28	10/25	11/01	11/06	11/10	11/14	11/18	11/22	11/27	12/04
24	11/06	11/12	11/17	11/22	11/25	11/29	12/04	12/09	12/15
20	11/13	11/20	11/26	11/30	12/04	12/08	12/12	12/18	12/25
16	11/14	11/26	12/04	12/11	12/18	12/24	12/31	1/09	1/20
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	210	203	198	194	189	185	181	176	168
32	237	230	225	220	216	212	208	203	196
28	265	256	250	244	239	233	228	221	212
24	288	279	273	267	262	256	251	244	235
20	319	307	299	292	285	278	271	262	251
16	>365	329	317	309	302	296	290	282	272

* 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: OK 3 NWS Call Sign: Elevation: 590 Feet Lat: 35° 58N Lon: 95° 22W

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	856	623	399	152	42	2	0	1	23	122	440	753	3413
60	707	492	259	64	10	0	0	0	6	47	307	605	2497
57	621	418	187	31	4	0	0	0	2	23	238	519	2043
55	564	371	147	17	1	0	0	0	0	12	198	463	1773
50	428	267	72	2	0	0	0	0	0	2	116	333	1220
32	99	43	1	0	0	0	0	0	0	0	5	51	199

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	265	351	628	871	1142	1340	1544	1519	1241	955	562	322	10740
55	18	35	61	198	430	650	831	806	551	254	65	20	3919
57	13	26	39	152	370	590	769	744	493	203	46	14	3459
60	6	16	18	95	284	500	676	651	407	134	25	7	2819
65	0	0	3	33	161	352	521	498	275	54	8	0	1905
70	0	0	0	7	73	213	367	350	167	14	0	0	1191

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	105	200	406	643	904	1113	1308	1284	1009	716	343	146	105	305	711	1354	2258	3371	4679	5963	6972	7688	8031	8177
45	50	120	279	495	749	963	1153	1129	859	561	229	74	50	170	449	944	1693	2656	3809	4938	5797	6358	6587	6661
50	17	64	174	354	594	813	998	974	709	411	137	36	17	81	255	609	1203	2016	3014	3988	4697	5108	5245	5281
55	5	26	93	223	440	663	843	819	560	274	70	11	5	31	124	347	787	1450	2293	3112	3672	3946	4016	4027
60	0	9	41	125	296	513	688	664	417	161	32	0	0	9	50	175	471	984	1672	2336	2753	2914	2946	2946
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	69	135	254	404	595	772	890	863	680	452	204	88	69	204	458	862	1457	2229	3119	3982	4662	5114	5318	5406

(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