

# Climatology of the United States

No. 20

1971-2000

Station: WAURIKA, OK

COOP ID: 349395

Climate Division: OK 8

NWS Call Sign:

Elevation: 875 Feet

Lat: 34°10N

Lon: 98°00W

## 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	54.0	29.8	41.9	90	1911	31	48.8	1990	-10	1947	4	33.1	1979	716	0	.0	.0	20.1	2.0	19.8	.1
Feb	60.3	34.4	47.4	93	1996	22	55.7	1976	-8	1985	2	34.8	1978	504	9	.0	@	21.7	1.0	13.5	.1
Mar	69.1	42.2	55.7	100	1916	21	62.6	1974	5+	1943	3	49.4	1975	299	10	.0	.4	29.1	.1	5.7	.0
Apr	77.0	50.7	63.9	102	1925	18	69.3	1981	21	1971	7	58.5	1983	105	70	.0	1.3	30.0	.0	.9	.0
May	84.6	60.4	72.5	108+	1927	28	78.6	1996	33	1979	12	67.8	1976	16	248	.4	6.9	31.0	.0	.0	.0
Jun	92.1	68.4	80.3	115	1980	28	85.7	1998	48+	1919	3	75.9	1989	0	457	2.6	19.4	30.0	.0	.0	.0
Jul	97.6	72.6	85.1	112+	1936	19	92.2	1980	51	1970	23	80.9	1976	0	624	9.6	28.0	31.0	.0	.0	.0
Aug	96.6	71.6	84.1	116	1964	6	90.0	2000	49	1915	31	78.7	1992	0	592	8.9	26.8	31.0	.0	.0	.0
Sep	88.8	64.8	76.8	114	2000	4	84.1	1998	35	1912	26	69.6	1974	8	362	2.1	14.6	30.0	.0	.0	.0
Oct	78.9	53.7	66.3	104	1951	3	70.8	1979	17	1917	30	58.7	1976	66	106	.2	2.9	30.9	.0	.6	.0
Nov	65.3	41.5	53.4	92	1965	25	59.2	1999	10	1976	29	47.4	1976	357	9	.0	.0	27.3	.1	7.0	.0
Dec	56.0	32.4	44.2	88+	1951	30	49.6	1984	-10	1989	23	31.3	1983	644	0	.0	.0	22.5	1.3	17.1	.1
Ann	76.7	51.9	64.3	116	Aug 1964	6	92.2	Jul 1980	-10+	Dec 1989	23	31.3	Dec 1983	2715	2487	23.8	100.3	334.6	4.5	64.6	.3

+ 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](http://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: 1910-2001

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

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## No. 20 1971-2000

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

**Station: WAURIKA, OK**

**COOP ID: 349395**

**Climate Division: OK 8**

**NWS Call Sign:**

**Elevation: 875 Feet Lat: 34°10N**

**Lon: 98°00W**

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	1.26	1.05	2.38	1946	5	4.17	1998	.00+	1996	3.7	2.6	.9	.2	.00	.00	.17	.36	.57	.83	1.14	1.54	2.10	3.06	4.03
Feb	1.72	1.49	4.14	1938	15	5.17+	1997	.00+	1996	4.1	3.3	1.2	.4	.00	.15	.44	.71	.99	1.31	1.68	2.14	2.77	3.81	4.82
Mar	2.57	2.44	2.85	1933	5	6.83	1985	.19	1971	5.1	4.1	1.7	.8	.37	.58	.95	1.31	1.68	2.09	2.56	3.14	3.93	5.20	6.42
Apr	2.89	2.67	4.70	1967	12	8.07	1990	.50	1989	5.1	3.9	2.1	.9	.49	.75	1.17	1.56	1.97	2.41	2.91	3.52	4.33	5.65	6.91
May	4.53	3.88	4.48	1993	9	14.09	1982	.33	1998	6.6	5.3	2.8	1.5	.61	.97	1.62	2.25	2.91	3.64	4.49	5.53	6.94	9.24	11.47
Jun	3.83	3.35	5.70	1928	15	10.77	1989	.35	1971	5.4	4.5	2.5	1.3	.64	.97	1.53	2.05	2.60	3.18	3.85	4.67	5.76	7.53	9.22
Jul	1.84	2.02	3.67	1951	2	4.66	1991	.00+	1999	3.6	2.8	1.2	.6	.00	.09	.35	.62	.93	1.28	1.71	2.25	3.01	4.30	5.57
Aug	2.41	2.25	4.10	1914	27	8.29	1971	.00	2000	4.6	3.5	1.8	.9	.19	.45	.84	1.19	1.56	1.96	2.42	2.98	3.73	4.96	6.13
Sep	3.25	2.42	7.57	1925	14	11.65	1986	.08	2000	5.4	4.4	2.0	1.0	.30	.53	.97	1.42	1.91	2.47	3.13	3.96	5.09	6.99	8.84
Oct	3.17	2.48	5.06	1941	30	7.96	1984	.00	1992	5.1	4.3	2.0	.9	.05	.22	.59	1.03	1.53	2.13	2.86	3.82	5.17	7.48	9.80
Nov	1.90	1.51	3.80	1913	22	5.34	2000	.00	1999	4.4	3.2	1.3	.6	.14	.34	.64	.92	1.21	1.53	1.89	2.34	2.95	3.93	4.88
Dec	1.96	1.21	3.38	1932	23	7.05	1984	.00	1996	3.7	3.0	1.2	.6	.03	.14	.37	.64	.95	1.32	1.77	2.36	3.19	4.61	6.03
Ann	31.33	30.61	7.57	Sep 1925	14	14.09	May 1982	.00+	Aug 2000	56.8	44.9	20.7	9.7	21.80	23.63	25.98	27.77	29.36	30.90	32.49	34.26	36.41	39.53	42.23

+ 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: 1910-2001

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

Complete documentation available from:  
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**NWS Call Sign:**

**Elevation: 875 Feet**

**Lat: 34°10N**

**Lon: 98°00W**

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	.0	#	0	3.5	1977	9	3.5	1977	3	1987	17	#+	2000	.6	.4	@	.0	.0	.1	.0	.0	.0
Feb	.9	.0	#	0	5.5	1982	26	10.0	1978	1+	1998	5	#+	1998	.4	.3	.1	@	.0	.1	.0	.0	.0
Mar	.1	.0	0	0	2.0	1971	3	2.0	1971	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.2	.0	#	0	2.5	1976	14	3.8	1976	#	2000	8	#	2000	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	.4	.0	#	0	4.0	1987	14	5.0	1987	3	1975	25	#+	1990	.2	.2	.1	.0	.0	.0	.0	.0	.0
Ann	2.2	.0	N/A	N/A	5.5	Feb 1982	26	10.0	Feb 1978	3+	Jan 1987	17	#+	Nov 2000	1.4	1.1	.2	@	.0	.2	.0	.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

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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	4/21	4/17	4/14	4/11	4/09	4/06	4/04	4/01	3/28
32	4/13	4/08	4/05	4/02	3/30	3/28	3/25	3/22	3/17
28	4/06	3/30	3/25	3/21	3/17	3/13	3/09	3/04	2/25
24	3/26	3/18	3/12	3/06	3/02	2/25	2/20	2/14	2/05
20	3/11	3/02	2/24	2/19	2/15	2/10	2/05	1/30	1/21
16	3/03	2/20	2/13	2/06	1/31	1/24	1/17	1/06	0/00
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	10/10	10/15	10/19	10/22	10/25	10/28	10/31	11/04	11/10
32	10/18	10/24	10/28	11/01	11/04	11/07	11/11	11/15	11/20
28	10/26	11/02	11/07	11/11	11/15	11/19	11/23	11/28	12/04
24	11/08	11/15	11/20	11/24	11/28	12/02	12/06	12/11	12/18
20	11/12	11/23	11/30	12/06	12/12	12/17	12/24	12/31	1/10
16	11/24	12/05	12/13	12/20	12/26	1/03	1/11	1/24	0/00
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	219	212	207	203	199	195	190	185	178
32	238	231	226	222	218	214	210	205	198
28	266	258	252	247	242	237	232	226	218
24	303	292	284	277	271	264	257	249	238
20	334	317	308	301	295	289	282	275	265
16	>365	>365	>365	340	327	317	307	297	284

\* 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	716	504	299	105	16	0	0	0	8	66	357	644	2715
60	564	378	174	40	3	0	0	0	0	21	231	497	1908
57	478	309	118	18	0	0	0	0	0	7	168	412	1510
55	420	267	87	9	0	0	0	0	0	4	132	357	1276
50	288	179	35	1	0	0	0	0	0	0	66	237	806
32	25	15	0	0	0	0	0	0	0	0	0	17	57

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	332	444	734	955	1255	1447	1647	1615	1345	1063	642	396	11875
55	14	52	108	274	542	757	934	902	655	353	84	23	4698
57	10	38	76	222	481	697	872	840	595	295	59	16	4201
60	3	23	40	154	390	607	779	747	505	215	32	8	3503
65	0	9	10	70	248	457	624	592	362	106	9	0	2487
70	0	0	0	22	132	311	469	438	234	40	0	0	1646

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	155	267	487	702	995	1193	1385	1346	1086	799	398	189	155	422	909	1611	2606	3799	5184	6530	7616	8415	8813	9002
45	81	166	345	555	840	1043	1230	1191	936	644	272	102	81	247	592	1147	1987	3030	4260	5451	6387	7031	7303	7405
50	32	94	222	412	685	893	1075	1036	786	494	164	45	32	126	348	760	1445	2338	3413	4449	5235	5729	5893	5938
55	9	44	123	272	530	743	920	881	638	347	88	19	9	53	176	448	978	1721	2641	3522	4160	4507	4595	4614
60	1	12	58	158	380	593	765	726	493	220	40	2	1	13	71	229	609	1202	1967	2693	3186	3406	3446	3448
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	123	191	324	455	661	802	901	878	717	517	253	139	123	314	638	1093	1754	2556	3457	4335	5052	5569	5822	5961

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)