U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: LAKE EUFAULA, OK **COOP ID: 344975**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 850 Feet** **Lat: 35˚17N** **Lon: 95˚26W**

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	45.6	26.4	36.0	80	1986	21	44.4	1990	-4+	1977	10	24.9	1979	898	0	.0	.0	14.1	4.5	22.4	.2
Feb	52.4	31.1	41.8	91	1996	23	50.5	1976	-4	1996	5	29.1	1978	655	0	.0	@	17.3	2.7	14.3	.1
Mar	60.9	39.8	50.4	92	1995	23	55.2	1982	8	1996	8	43.2	1975	456	2	.0	@	25.8	.3	6.3	.0
Apr	70.6	48.3	59.5	95	1987	19	66.0	1981	25	1975	3	53.7	1983	191	25	.0	.3	29.6	.0	.4	.0
May	77.2	57.9	67.6	95	1974	24	72.3	1998	38	1996	2	62.6	1976	54	133	.0	.9	31.0	.0	.0	.0
Jun	84.6	66.1	75.4	101	1988	25	79.0	1977	51	1982	2	71.6	2000	3	313	.2	9.8	30.0	.0	.0	.0
Jul	90.8	70.7	80.8	109	1986	31	87.6	1980	54	1995	2	76.7	1994	0	488	4.4	22.0	31.0	.0	.0	.0
Aug	90.6	68.7	79.7	107+	1980	1	86.4	1980	54+	1986	29	73.2	1992	3	457	4.7	21.9	31.0	.0	.0	.0
Sep	82.3	61.5	71.9	107+	1998	5	79.9	1998	38+	1989	24	63.8	1974	33	241	1.1	8.7	30.0	.0	.0	.0
Oct	72.4	50.5	61.5	95+	1979	1	65.5	1971	20	1993	31	54.2	1976	158	48	.0	1.2	30.6	.0	.4	.0
Nov	58.6	39.9	49.3	86	1989	7	58.2	1999	14	1976	29	43.1	1972	478	5	.0	.0	24.4	.2	6.3	.0
Dec	49.2	30.1	39.7	80	1991	9	45.5	1982	-8	1989	23	25.9	1983	787	0	.0	.0	17.1	2.6	17.3	.2
Ann	69.6	49.3	59.5	109	Jul 1986	31	87.6	Jul 1980	-8	Dec 1989	23	24.9	Jan 1979	3716	1712	10.4	64.8	311.9	10.3	67.4	.5

\+ 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

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1970-2001

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

Issue Date: February 2004

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: LAKE EUFAULA, OK

COOP ID: 344975

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 850 Feet** **Lat: 35˚17N** **Lon: 95˚26W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	2.17	1.80	2.70	1990	17	8.34	1998	.04	1986
Feb	2.42	1.88	5.00	1975	22	7.43	1975	.05	1996
Mar	3.99	3.35	4.36	1978	24	9.08	1973	.59	1971
Apr	4.28	4.07	3.96	1974	30	10.26	1990	.82	1987
May	6.01	5.55	4.60	1986	24	11.94	1990	1.35	1988
Jun	4.80	4.32	4.05	1980	18	14.18	2000	.46	1990
Jul	2.63	2.57	3.31	1983	30	6.71	1992	.12	1993
Aug	2.58	2.34	3.69	1973	11	5.78	1974	.00	2000
Sep	5.24	5.18	6.14	1998	14	12.61	1992	.21	1994
Oct	4.43	3.91	6.90	1981	14	14.21	1981	.47	1992
Nov	4.11	3.94	3.80	1994	5	10.88	1996	.03	1989
Dec	2.95	2.38	4.43	1992	14	9.61	1987	.02	1989
Ann	45.61	44.88	6.90	Oct 1981	14	14.21	Oct 1981	.00	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.5	3.9	1.4	.6
Feb	5.6	4.0	1.5	.6
Mar	7.7	5.9	2.9	1.2
Apr	8.3	6.7	2.7	1.1
May	9.7	7.6	4.2	1.9
Jun	7.8	6.3	3.3	1.5
Jul	6.0	4.2	1.7	.9
Aug	5.8	3.9	1.9	.7
Sep	8.0	6.0	3.2	1.8
Oct	6.1	4.9	2.8	1.4
Nov	6.4	4.9	2.7	1.4
Dec	5.7	4.1	2.1	1.0
Ann	82.6	62.4	30.4	14.1

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.20	.35	.64	.94	1.27	1.64	2.08	2.64	3.40	4.68	5.93
Feb	.28	.47	.80	1.14	1.50	1.90	2.37	2.95	3.74	5.05	6.31
Mar	.96	1.33	1.92	2.43	2.95	3.50	4.11	4.83	5.79	7.30	8.72
Apr	1.11	1.52	2.14	2.68	3.22	3.79	4.42	5.17	6.15	7.68	9.12
May	1.95	2.52	3.36	4.08	4.77	5.48	6.26	7.17	8.35	10.18	11.87
Jun	1.14	1.58	2.29	2.91	3.53	4.19	4.93	5.81	6.97	8.80	10.52
Jul	.32	.53	.90	1.27	1.65	2.09	2.59	3.22	4.07	5.46	6.81
Aug	.05	.21	.53	.89	1.30	1.79	2.38	3.13	4.19	5.99	7.79
Sep	.88	1.33	2.10	2.82	3.56	4.36	5.28	6.40	7.89	10.31	12.62
Oct	.67	1.05	1.69	2.30	2.94	3.63	4.43	5.41	6.72	8.85	10.90
Nov	.58	.92	1.51	2.08	2.68	3.34	4.09	5.03	6.28	8.33	10.30
Dec	.27	.48	.88	1.29	1.73	2.24	2.84	3.60	4.64	6.37	8.07
Ann	31.21	33.96	37.50	40.20	42.61	44.96	47.38	50.07	53.34	58.11	62.25

\+ 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: 1970-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: LAKE EUFAULA, OK **COOP ID: 344975**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 850 Feet** **Lat: 35°17N** **Lon: 95°26W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	1.5	.0	#	0
Feb	.3	.0	#	0
Mar	.4	.0	#	0
Apr	#	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	.1	.0	#	0
Dec	.6	.0	#	0
Ann	2.9	.0	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	7.5	1977	9	11.5	1977	9	1977	11	2	1978
Feb	2.0	1982	9	2.2	1982	6	1978	19	2	1978
Mar	3.5	1971	3	3.6	1971	3	1971	3	#+	1998
Apr	#	1973	9	#	1973	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	2.0	1975	26	2.0	1975	2	1975	26	#+	1991
Dec	3.0	1971	3	3.0	1971	4	1984	5	#+	1997
Ann	7.5	Jan 1977	9	11.5	Jan 1977	9	Jan 1977	11	2+	Feb 1978

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.9	.5	.3	.2	.0
Feb	.4	.1	.0	.0	.0
Mar	.3	.1	.1	.0	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.1	.1	.0	.0	.0
Dec	.4	.2	.1	.0	.0
Ann	2.1	1.0	.5	.2	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.5	.3	.0	.0
Feb	.1	.0	.0	.0
Mar	@	@	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.1	.0	.0	.0
Dec	.6	.0	.0	.0
Ann	1.3	.3	.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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: LAKE EUFAULA, OK **COOP ID: 344975**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 850 Feet** **Lat: 35˚17N** **Lon: 95˚26W**

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	4/17	4/14	4/11	4/08	4/06	4/04	4/01	3/30	3/26
32	4/08	4/03	3/31	3/27	3/24	3/21	3/18	3/14	3/09
28	3/26	3/21	3/17	3/13	3/10	3/07	3/04	2/28	2/22
24	3/18	3/11	3/05	2/28	2/24	2/20	2/15	2/10	2/02
20	3/12	3/03	2/24	2/18	2/13	2/08	2/02	1/27	1/17
16	3/13	3/01	2/20	2/13	2/06	1/30	1/22	1/13	12/29

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	10/16	10/21	10/25	10/28	10/31	11/03	11/07	11/10	11/16
32	10/22	10/29	11/03	11/08	11/12	11/16	11/20	11/25	12/02
28	11/06	11/12	11/17	11/21	11/24	11/28	12/02	12/07	12/13
24	11/09	11/16	11/21	11/26	11/30	12/04	12/09	12/14	12/21
20	11/08	11/20	11/29	12/06	12/13	12/20	12/27	1/05	1/17
16	11/24	12/05	12/13	12/20	12/26	1/02	1/09	1/17	1/31

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	226	219	215	211	207	204	200	195	189
32	255	247	241	236	231	227	222	216	208
28	283	274	268	263	258	254	249	242	234
24	311	300	292	285	278	272	265	257	245
20	351	329	317	307	299	290	282	271	258
16	>365	>365	336	324	315	307	298	289	277

***** 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: LAKE EUFAULA, OK **COOP ID: 344975**

Climate Division: OK 6 **NWS Call Sign:** **Elevation: 850 Feet** **Lat: 35˚17N** **Lon: 95˚26W**

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	898	655	456	191	54	3	0	3	33	158	478	787	3716
60	745	524	314	93	15	0	0	0	10	73	342	636	2752
57	657	448	238	53	5	0	0	0	4	41	269	550	2265
55	600	399	194	33	2	0	0	0	1	26	226	493	1974
50	458	290	106	7	0	0	0	0	0	6	137	360	1364
32	106	49	3	0	0	0	0	0	0	0	6	60	224

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	230	322	572	823	1102	1300	1511	1478	1198	913	524	296	10269
55	11	28	50	167	391	610	798	765	509	226	54	17	3626
57	6	20	32	126	332	550	736	703	452	179	37	12	3185
60	1	13	15	77	248	460	643	610	368	118	20	5	2578
65	0	0	2	25	133	313	488	457	241	48	5	0	1712
70	0	0	0	5	55	181	337	314	141	14	0	0	1047

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	102	199	390	623	889	1101	1303	1282	1002	707	347	148	102	301	691	1314	2203	3304	4607	5889	6891	7598	7945	8093
45	46	114	262	477	734	951	1148	1127	852	555	230	75	46	160	422	899	1633	2584	3732	4859	5711	6266	6496	6571
50	18	59	164	339	579	801	993	972	702	410	142	33	18	77	241	580	1159	1960	2953	3925	4627	5037	5179	5212
55	2	27	90	215	428	651	838	817	554	271	73	8	2	29	119	334	762	1413	2251	3068	3622	3893	3966	3974
60	0	6	37	120	283	501	683	662	410	155	32	1	0	6	43	163	446	947	1630	2292	2702	2857	2889	2890
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	68	130	234	383	585	761	885	860	667	444	203	97	68	198	432	815	1400	2161	3046	3906	4573	5017	5220	5317

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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