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

COOP ID: 342993

Lon: 95°35W

Station: EUFAULA 6 SSW, OK

Climate Division: OK 6 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 48.4 29.5 39.0 78+ 1950 24 47.6 1990 -7 1977 10 27.3 1979 809 0 .0 15.8 3.1 19.3 .2 Jan 22 54.7 34.1 44.4 90 1996 53.0 1999 0 1979 9 31.9 1978 586 0 .0 @ 19.1 1.9 12.2 @ Feb Mar 64.6 42.8 53.7 95 1974 31 58.7 1974 -2 1948 12 47.9 1975 357 7 .0 .1 27.7 .1 4.9 0. 22 57.0 1983 Apr 73.9 51.4 62.7 94 1972 12 68.9 1981 1975 3 127 56 .0. .3 29.9 .0 .0. May 80.8 60.3 70.6 98 1956 19 74.7 1998 35 1960 1 65.4 1976 23 196 .0 1.3 31.0 .0 0. .0 78.3 1953 22 83.2 49 74.7 Jun 88.2 68.4 105 1990 1954 4 1982 1 400 .1 10.7 30.0 .0 .0 .0 Jul 94.2 73.0 83.6 110+ 1954 16 89.8 51 1975 13 79.7 1989 0 576 4.3 22.2 31.0 0. .0 1998 .0 93.7 71.6 82.7 110 +1956 15 89.1 2000 53 1971 20 76.5 1992 549 5.8 24.1 31.0 .0 .0 .0 Aug 35 Sep 84.9 64.3 74.6 114 2000 1 83.0 1998 1984 30 65.9 1974 19 306 1.0 9.7 30.0 .0 .0 .0 74.5 23 31 57.0 Oct 53.8 64.2 100 1963 9 67.3 1998 1993 1976 98 71 .0 .8 30.8 .0 .3 .0 42.6 51.8 87 1955 13 62.3 1999 11 +1959 17 45.1 1972 406 10 .0 26.0 5.0 .0 Nov 61.0 .0 .1 Dec 51.5 33.3 42.4 82+ 1948 13 48.4 1984 -3+ 1989 22 29.0 1983 701 0 .0 .0 18.8 1.7 14.5 .2 Sep Jul Jan Jan 72.5 52.1 62.3 114 2000 89.8 1998 -7 1977 10 27.3 1979 3128 2171 11.2 69.2 321.1 6.9 56.5 .4 Ann

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

Issue Date: February 2004 034-A

(1) From the 1971-2000 Monthly Normals

Elevation: 620 Feet Lat: 35°12N

- (2) Derived from station's available digital record: 1948-2001
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

[@] Denotes mean number of days greater than 0 but less than .05

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Climate Division: OK 6 NWS Call Sign: Elevation: 620 Feet Lat: 35°12N Lon: 95°35W

										Pı	recipi	tation	(incl	nes)														
			P	recip	itatio	on Total	s			M	lean N of D	Numbo Pays (3		Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount														
		ans/				Extremes	S			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	2.16	1.84	3.40	1998	4	7.77	1998	.02	1986	6.6	4.1	1.3	.5	.18	.33	.62	.92	1.25	1.62	2.07	2.63	3.41	4.70	5.98				
Feb	2.38	1.99	2.52	1985	23	5.40	1990	.33	1976	6.4	4.2	1.5	.8	.37	.57	.92	1.25	1.59	1.96	2.38	2.90	3.60	4.74	5.82				
Mar	4.16	3.44	4.20	1977	27	10.27	1990	.58	1971	7.9	5.8	2.9	1.4	1.04	1.44	2.04	2.58	3.11	3.66	4.29	5.02	5.99	7.52	8.95				
Apr	4.02	3.96	4.73	1974	30	9.95	1990	.42	1987	8.1	6.5	2.7	1.3	1.14	1.52	2.10	2.60	3.09	3.60	4.17	4.84	5.71	7.07	8.34				
May	5.83	6.06	4.74	1954	2	11.13	1990	1.26	1988	9.8	7.3	3.8	1.7	2.23	2.77	3.55	4.19	4.81	5.43	6.11	6.89	7.89	9.42	10.81				
Jun	4.75	4.60	3.60	2001	28	11.99	2000	1.18	1988	8.3	6.5	3.2	1.6	1.43	1.88	2.55	3.14	3.70	4.29	4.94	5.70	6.68	8.22	9.65				
Jul	3.01	2.77	4.70	1950	29	8.89	1996	.00+	1999	5.6	4.0	1.9	1.1	.00	.00	.77	1.29	1.81	2.37	3.02	3.81	4.84	6.56	8.21				
Aug	2.63	1.91	3.90	1977	29	6.14	1996	.00	2000	5.7	3.8	1.7	.6	.29	.61	1.05	1.43	1.81	2.22	2.69	3.25	3.99	5.18	6.31				
Sep	4.92	3.53	7.15	1998	14	11.62	1991	.30	1978	8.1	6.1	3.5	1.6	.85	1.28	2.00	2.68	3.36	4.11	4.97	6.00	7.38	9.61	11.74				
Oct	4.46	3.91	5.98	1981	14	15.63	1981	.56	1978	6.4	4.9	2.7	1.4	.77	1.17	1.82	2.43	3.05	3.73	4.51	5.45	6.70	8.72	10.65				
Nov	4.28	3.97	4.85	1996	7	13.15	1996	.82	1976	7.1	5.3	3.0	1.5	1.03	1.43	2.05	2.61	3.16	3.75	4.40	5.18	6.20	7.82	9.34				
Dec	3.33	2.70	3.60	2001	16	9.53	1987	.12	1981	6.6	4.2	2.2	.9	.46	.73	1.21	1.67	2.16	2.69	3.31	4.07	5.10	6.78	8.40				
Ann	45.93	45.08	7.15	Sep 1998	14	15.63	Oct 1981	.00+	Aug 2000	86.6	62.7	30.4	14.4	31.31	34.09	37.69	40.43	42.88	45.26	47.72	50.45	53.78	58.63	62.84				

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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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COOP ID: 342993

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Climate Division: OK 6 NWS Call Sign: Elevation: 620 Feet Lat: 35°12N Lon: 95°35W

										Snov	w (incl	hes)											
						Sn	ow To	tals									Mea	n Nu	mber	of Day	VS (1)		
	Mean	s/Medi	ians (1))					Extre	mes (2)				ow Fa	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	4.4	.0	#	0	7.5	1988	7	13.0	1988	8	1977	10	2	1979	1.1	.7	.4	.1	.0	1.9	.9	.4	.0
Feb	.7	.0	#	0	6.0	1979	25	6.0	1979	6	1975	24	1	1979	.5	.4	.1	.1	.0	.6	.3	.0	.0
Mar	.2	.0	0	0	3.0	1971	3	3.0	1971	0	0	0	0	0	.1	.1	.1	.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	.3	.0	#	0	2.0	1975	26	2.0	1975	2	1975	26	#+	1995	.3	.2	.0	.0	.0	.2	.0	.0	.0
Dec	.4	.0	#	0	5.0	2000	13	5.0+	2000	2+	2000	26	#+	2000	.2	.2	.2	.1	.0	.0	.0	.0	.0
Ann	6.0	.0	N/A	N/A	7.5	Jan 1988	7	13.0	Jan 1988	8	Jan 1977	10	2	Jan 1979	2.2	1.6	.8	.3	.0	2.7	1.2	.4	.0

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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NWS Call Sign: Climate Division: OK 6

> Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 4/19 4/14 4/09 4/06 4/03 3/30 3/27 3/22 3/17 32 3/31 3/22 3/19 4/05 3/28 3/25 3/16 3/13 3/08 28 3/29 3/22 3/18 3/14 3/11 3/07 3/03 2/27 2/20 3/09 3/03 1/24 24 3/18 2/25 2/20 2/14 2/09 2/02 20 3/09 2/28 2/22 2/11 2/06 1/31 1/25 1/16 2/16 2/25 2/08 1/25 16 3/09 2/16 2/01 1/18 1/09 12/27 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 10/23 36 10/10 10/18 10/27 11/01 11/05 11/09 11/14 11/22 32 10/27 11/02 11/07 11/10 11/14 11/17 11/21 11/25 12/01 28 11/05 11/11 11/15 11/19 11/22 11/26 11/29 12/03 12/09 24 11/12 11/19 11/24 11/29 12/03 12/07 12/11 12/16 12/23 20 11/11 11/23 12/01 12/09 12/16 12/22 12/30 1/07 1/19 11/25 12/21 12/27 1/03 16 12/06 12/14 1/09 1/17 1/28 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 222 238 229 217 211 200 193 184 36 206 32 258 251 245 240 236 232 227 221 214 28 279 271 261 256 252 247 241 233 266 24 323 310 301 293 285 278 270 261 248 329 277 20 >365 317 309 301 293 286 265 16 >365 >365 344 331 321 312 303 293 280

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

^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	809	586	357	127	23	1	0	1	19	98	406	701	3128
60	658	456	223	53	4	0	0	0	5	36	277	553	2265
57	573	384	158	26	1	0	0	0	0	16	212	467	1837
55	515	338	122	14	0	0	0	0	0	8	174	412	1583
50	381	240	56	2	0	0	0	0	0	1	98	286	1064
32	69	33	1	0	0	0	0	0	0	0	3	31	137

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	283	379	673	919	1196	1389	1599	1571	1277	996	597	353	11232
55	17	40	82	244	483	699	886	858	587	291	78	20	4285
57	12	30	56	195	422	639	824	796	527	237	56	14	3808
60	5	18	28	132	332	549	731	703	442	163	31	7	3141
65	0	0	7	56	196	400	576	549	306	71	10	0	2171
70	0	0	0	16	93	258	421	400	192	22	0	0	1402

										Gro	wing 1	Degre	e Uni	ts (2)											
Base					Growin	g Degree	Units (M	Ionthly)					Growing Degree Units (Accumulated Monthly)												
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
40	126	222	450	683	942	1144	1338	1324	1048	759	381	171	126	348	798	1481	2423	3567	4905	6229	7277	8036	8417	8588	
45	60	135	312	533	787	994	1183	1169	898	604	255	93	60	195	507	1040	1827	2821	4004	5173	6071	6675	6930	7023	
50	25	70	199	390	632	844	1028	1014	748	452	154	43	25	95	294	684	1316	2160	3188	4202	4950	5402	5556	5599	
55	5	32	108	254	478	694	873	859	601	311	82	18	5	37	145	399	877	1571	2444	3303	3904	4215	4297	4315	
60	0	12	50	143	328	544	718	704	453	186	34	0	0	12	62	205	533	1077	1795	2499	2952	3138	3172	3172	
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)				
50/86	6 79 140 270 427 634 797 911 887 705 482 216 100												79	219	489	916	1550	2347	3258	4145	4850	5332	5548	5648	

(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

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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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