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: 341828

Station: CLAREMORE 2 ENE, OK

Climate Division: OK 3 NWS Call Sign: Elevation: 588 Feet Lat: 36°19N Lon: 95°35W

									r	Гетр	eratur	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	Days (1) emp 65		Mean	Numb	er of I	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	45.0	22.3	33.7	80	1950	24	42.2	1990	-20	1984	19	22.2	1979	971	0	.0	.0	11.9	5.8	26.3	.7
Feb	51.6	27.1	39.4	90	1996	23	48.3	1976	-16	1996	5	27.5	1979	718	0	.0	@	16.0	3.1	20.1	.5
Mar	60.8	36.5	48.7	93	1995	23	53.3	1973	-6	1948	12	42.8	1996	508	0	.0	.1	24.7	.5	10.9	.0
Apr	70.3	45.7	58.0	102	1972	13	64.7	1981	20	1957	13	52.3	1983	232	21	@	.3	29.3	.0	2.1	.0
May	77.8	55.6	66.7	95+	1951	29	71.8	1987	33+	1954	4	61.3	1976	71	123	.0	.8	31.0	.0	.0	.0
Jun	86.2	64.9	75.6	105	1952	29	79.6	1980	45	1983	1	71.6	1982	3	321	.1	9.6	30.0	.0	.0	.0
Jul	92.4	69.5	81.0	113	1954	14	86.5	1980	48	1971	31	77.9	1994	0	495	3.2	22.1	31.0	.0	.0	.0
Aug	92.2	67.4	79.8	112	1956	16	85.6	1983	48+	1950	21	73.5	1992	2	460	4.1	20.8	31.0	.0	.0	.0
Sep	83.7	60.0	71.9	107+	1985	2	79.1	1998	32	1984	30	64.5	1974	36	242	.9	8.9	30.0	.0	@	.0
Oct	73.2	47.3	60.3	98	1963	10	65.1	1971	17	1993	31	54.1	1976	181	35	.0	.8	30.4	.0	1.7	.0
Nov	59.5	36.2	47.9	86	1949	28	56.3	1999	4	1976	29	40.9	1976	519	4	.0	.0	23.2	.4	12.1	.0
Dec	49.1	26.7	37.9	80	1966	8	43.6	1984	-12+	1989	23	23.7	1983	841	0	.0	.0	15.3	3.0	22.0	.4
Ann	70.2	46.6	58.4	113	Jul 1954	14	86.5	Jul 1980	-20	Jan 1984	19	22.2	Jan 1979	4082	1701	8.3	63.4	303.8	12.8	95.2	1.6

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 024-A

- (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

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

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										Pı	recipi	tation	(incl	hes)											
	M	ans/	P	recip	itatio	on Total	s			М	ean N	Numbo Pays (3		Proba	ability tl		nonthly/	annual j	precipita cated an	nount	ll be equ		· less tha	an the	
		ans/ ans(1)				Extremes	S			D	aily Pre	cipitatio	n	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	1.75	1.66	2.26	1985	1	3.99	1998	.00	1986	7.2	3.9	1.0	.3	.11	.28	.56	.82	1.09	1.39	1.74	2.16	2.74	3.70	4.62	
Feb	2.17	1.86	4.82	1985	23	6.25	1985	.42+	1996	7.0	4.0	1.4	.5	.44	.64	.96	1.25	1.54	1.85	2.21	2.63	3.20	4.10	4.95	
Mar	3.78	3.47	2.72	1998	8	10.12	1973	.21	1971	9.4	6.0	2.9	1.1	.68	1.02	1.57	2.09	2.61	3.18	3.83	4.61	5.66	7.34	8.95	
Apr	4.08	3.55	6.56	1992	12	9.61	1992	.14	1989	8.8	6.3	2.7	1.1	.81	1.18	1.78	2.32	2.88	3.48	4.15	4.96	6.04	7.77	9.40	
May	5.38	5.24	4.73	1993	9	12.05	1993	1.17	1988	11.7	7.8	4.0	1.7	1.82	2.33	3.07	3.70	4.31	4.93	5.62	6.41	7.44	9.02	10.48	
Jun	4.86	3.98	5.45	1974	9	10.19	1992	1.00	1988	10.0	7.1	3.2	1.4	1.17	1.62	2.33	2.97	3.59	4.26	5.00	5.89	7.05	8.89	10.61	
Jul	3.60	3.29	4.04	1976	4	10.59	1994	.02	1974	6.9	4.5	2.4	1.2	.22	.43	.87	1.36	1.92	2.56	3.35	4.35	5.76	8.14	10.52	
Aug	3.01	2.36	4.21	1987	27	9.12	1997	.00	2000	7.0	4.5	2.0	1.0	.44	.84	1.35	1.77	2.19	2.63	3.12	3.70	4.47	5.68	6.82	
Sep	4.90	4.29	6.41	1986	30	11.23	1986	.63	1979	8.6	6.0	2.9	1.6	1.21	1.67	2.39	3.02	3.65	4.31	5.05	5.93	7.08	8.90	10.61	
Oct	3.79	3.52	5.12	1959	2	7.84	1983	.49	1978	7.9	5.0	2.6	1.3	.78	1.13	1.68	2.19	2.70	3.25	3.86	4.60	5.58	7.15	8.63	
Nov	4.05	3.54	4.15	1996	7	8.79	1994	.02	1989	7.7	5.0	2.6	1.4	.48	.79	1.36	1.93	2.53	3.20	3.98	4.95	6.27	8.43	10.54	
Dec	2.61	2.06	2.80	1992	14	7.16	1987	.19	1981	7.2	4.3	1.9	.7	.24	.42	.77	1.14	1.53	1.98	2.51	3.18	4.10	5.62	7.12	
Ann	43.98	42.24	6.56	Apr 1992	12	12.05	May 1993	.00+	Aug 2000	99.4	64.4	29.6	13.3	30.95	33.47	36.69	39.14	41.32	43.43	45.61	48.03	50.96	55.21	58.89	

⁺ 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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Station: CLAREMORE 2 ENE, OK

Climate Division: OK 3 NWS Call Sign:

COOP ID: 341828 Elevation: 588 Feet Lat: 36°19N Lon: 95°35W

										Snov	w (incl	nes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	yS (1)		
	Mean	s/Medi	ians (1)	ı					Extre	mes (2)							ow Fa					Depth eshold	
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	4.2	3.7	#	#	9.0	1988	7	15.4	1979	9	1988	7	3	1979	2.0	1.1	.4	.1	.0	3.8	1.8	.6	.0
Feb	2.5	1.2	#	#	5.5	1980	8	10.8	1978	14	1975	24	3	1975	1.5	.9	.4	@	.0	2.3	1.2	.5	.0
Mar	1.2	.0	#	0	11.0	1989	6	11.3	1989	11	1989	6	1	1989	.5	.3	.1	.1	@	.4	.2	.2	.1
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	#	1996	23	#	1996	#	1996	23	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	4.0	2000	9	4.0	2000	4	2000	9	#+	2000	.3	.1	@	.0	.0	.1	.1	.0	.0
Dec	1.2	.0	#	#	5.5	1987	15	6.3	1990	10	2000	14	3	2000	1.0	.5	.1	.1	.0	1.2	.3	@	.0
Ann	9.5	4.9	N/A	N/A	11.0	Mar 1989	6	15.4	Jan 1979	14	Feb 1975	24	3+	Dec 2000	5.3	2.9	1.0	.3	@	7.8	3.6	1.3	.1

⁺ 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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				Freez	e Data									
			Spri	ng Freeze D	ates (Month/	(Day)								
Probability of later date in spring (thru Jul 31) than indicated (*) 10 20 30 40 50 60 70 80 90 32 4/17 4/13 4/09 4/06 4/04 4/01 3/29 3/25 3/21 28 4/11 4/06 4/02 3/30 3/27 3/24 3/21 3/17 3/12 28 4/11 4/06 4/02 3/30 3/27 3/24 3/21 3/17 3/12 24 3/31 3/25 3/21 3/17 3/13 3/10 3/06 3/02 2/23 20 3/20 3/12 3/07 3/02 2/26 2/22 2/17 2/12 2/04 16 3/09 3/01 2/24 2/19 2/14 2/10 2/05 1/30 1/22 Temp (F)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	5/01	4/27	4/24	4/22	4/19	4/17	4/14	4/11	4/07					
32	4/17	4/13	4/09	4/06	4/04	4/01	3/29	3/25	3/21					
28	4/11	4/06	4/02	3/30	3/27	3/24	3/21	3/17	3/12					
24	3/31	3/25	3/21	3/17	3/13	3/10	3/06	3/02	2/23					
20	3/20	3/12	3/07	3/02	2/26	2/22	2/17	2/12	2/04					
16	3/09	3/01	2/24	2/19	2/14	2/10	2/05	1/30	1/22					
•		•	Fal	l Freeze Da	tes (Month/D	ay)	1	1	•					
T (E)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	ed(*)						
Temp (F)	.10								.90					
36	9/30	10/05	10/09	10/12	10/15	10/18	10/21	10/25	10/30					
32	10/13	10/18	10/22	10/25	10/28	10/31	11/03	11/07	11/12					
28	10/24	10/30	11/04	11/08	11/12	11/16	11/20	11/25	12/02					
24	10/31	11/07	11/12	11/16	11/20	11/24	11/28	12/03	12/10					
20	11/07	11/15	11/20	11/25	11/29	12/03	12/08	12/13	12/20					
16	11/18	11/27	12/03	12/08	12/13	12/19	12/24	12/30	1/08					
				Freeze F	ree Period		•		•					
Tomas (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days))						
temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	198	191	186	182	178	174	170	165	158					
32	226	219	214	210	207	203	199	194	187					
28	254	246	240	234	229	225	219	213	205					
24	275	267	261	256	251	246	241	235	226					
20	303	294	287	281	275	270	264	257	247					
16	334	318	310	303	297	291	285	278	269					

^{*} 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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				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	971	718	508	232	71	3	0	2	36	181	519	841	4082
60	816	586	361	126	24	0	0	0	12	85	381	691	3082
57	724	508	278	78	10	0	0	0	5	48	305	604	2560
55	665	456	228	53	6	0	0	0	2	31	259	547	2247
50	522	338	128	16	0	0	0	0	0	7	163	410	1584
32	134	66	4	0	0	0	0	0	0	0	11	85	300

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	186	271	519	779	1075	1308	1518	1482	1196	877	485	267	9963
55	3	18	30	143	367	618	805	769	508	195	44	15	3515
57	1	13	18	108	310	558	743	707	451	150	29	10	3098
60	0	7	8	65	231	468	650	614	368	94	16	4	2525
65	0	0	0	21	123	321	495	460	242	35	4	0	1701
70	0	0	0	5	51	186	340	313	144	8	0	0	1047

										Gro	Growing Degree Units (2) Crowing Degree Units (Monthly) Growing Degree Units (Accumulated Monthly)														
Base													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	57 139 316 549 838 1079 1279 1245 965 637 280 24 76 202 408 693 929 1124 1090 815 483 180													196	512	1061	1899	2978	4257	5502	6467	7104	7384	7485	
45	24 76 202 408 683 929 1124 1090 815 483 180												24	100	302	710	1393	2322	3446	4536	5351	5834	6014	6065	
50	5	36	116	279	528	779	969	935	665	344	100	22	5	41	157	436	964	1743	2712	3647	4312	4656	4756	4778	
55	1	12	57	168	379	629	814	780	517	217	51	6	1	13	70	238	617	1246	2060	2840	3357	3574	3625	3631	
60	0 0 1 25 88 238 479 659 625 379 120 18										1	0	1	26	114	352	831	1490	2115	2494	2614	2632	2633		
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)			
50/86	0/86 55 108 209 349 543 742 861 830 640 413 180 7											74	55	163	372	721	1264	2006	2867	3697	4337	4750	4930	5004	

(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