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: 348708

Station: TALOGA, OK

Climate Division: OK 4

NWS Call Sign:

Elevation: 1,705 Feet Lat: 36°02N Lon: 98°58W

	Max Min Daily(2) Mean Daily(2) Mean M																				
	Mea	n (1)						Extr	emes						•		Mean	Numb	er of D	Days (3)	
Month			Mean	-	Year	Day	Month(1)	Year		Year	Day	Month(1)	Year	Heating	Cooling	>=	>=	>=	<=	<=	<=
Jan	46.8	19.9	33.4	83	1967	22	41.6	1986	-15	1984	19	21.5	1979	982	0	.0	.0	16.1	4.5	27.5	.6
Feb	53.0	24.6	38.8	91	1996	22	48.3	1976	-17	1996	4	27.1	1978	734	0	.0	@	18.4	2.2	20.3	.4
Mar	61.2	32.7	47.0	93	1994	17	52.4	1972	-5+	1948	11	40.6	1996	559	0	.0	.2	26.3	.2	12.0	.0
Apr	70.4	42.6	56.5	99	1972	12	61.8	1981	17	1975	3	50.4	1997	277	22	.0	.7	29.3	.0	3.1	.0
May	79.4	54.3	66.9	103+	1953	26	72.0	1996	30+	1954	3	61.6	1995	69	126	.3	4.3	31.0	.0	.1	.0
Jun	88.7	64.1	76.4	110+	1953	14	81.0	1990	41	1964	1	71.7	1982	5	347	2.0	16.5	30.0	.0	.0	.0
Jul	94.7	67.7	81.2	112	1954	25	86.1	1980	44	1950	14	77.9	1989	0	503	8.6	26.8	31.0	.0	.0	.0
Aug	93.0	66.4	79.7	112	1964	6	84.6	2000	46	1962	27	73.5	1992	1	457	7.2	24.0	31.0	.0	.0	.0
Sep	84.6	58.1	71.4	109	2000	4	78.8	1998	29+	2000	26	64.6	1974	31	221	1.4	12.0	30.0	.0	.2	.0
Oct	73.5	44.8	59.2	99+	1956	8	63.7	1979	9	1993	31	53.5	1976	203	21	.0	1.6	30.5	@	2.7	.0
Nov	58.9	31.5	45.2	89	1980	7	52.9	1999	4	1991	3	39.8	1972	594	0	.0	.0	24.1	.1	14.8	.0
Dec	48.6	22.6	35.6	91	1955	24	39.9	1975	-16	1989	23	22.2	1983	911	0	.0	.0	16.9	2.5	25.7	.6
Ann	71.1	44.1	57.6	112+	Aug 1964	6	86.1	Jul 1980	-17	Feb 1996	4	21.5	Jan 1979	4366	1697	19.5	86.1	314.6	9.5	106.4	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 094-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)										
	Me	ans/	P	recipi	itatio	on Total					ean N of D	ays (3	3)	Proba	ability tl		nonthly/	annual j	precipita ated an	babilit ation will nount vs Probal	ll be equ		less tha	an the
	Medi	ans(1)				Extremes	,			"	any Fie	стриацо	11		Th	ese value	s were det	termined	from the	incomplet	e gamma	distribut	ion	
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	.81	.59	1.87	1982	30	2.00+	1990	.00+	1986	3.4	2.0	.5	@	.00	.11	.26	.39	.52	.66	.82	1.01	1.27	1.70	2.10
Feb	1.07	.75	1.70+	1948	27	2.84	1990	.00+	1995	3.4	2.4	.7	.1	.00	.00	.25	.44	.62	.82	1.06	1.35	1.72	2.36	2.98
Mar	2.35	2.08	3.42	1988	3	8.89	1973	.00+	1997	5.0	3.9	1.5	.7	.00	.13	.46	.82	1.21	1.66	2.20	2.88	3.84	5.45	7.04
Apr	2.76	2.40	3.50	1970	18	8.38	1997	.00	1996	5.8	4.6	1.9	.7	.16	.42	.85	1.26	1.69	2.17	2.72	3.41	4.34	5.88	7.37
May	5.06	4.61	4.16	1982	17	14.20	1982	.59	1984	7.7	6.2	3.2	1.6	.82	1.26	1.99	2.69	3.41	4.19	5.08	6.18	7.63	10.00	12.26
Jun	3.65	3.49	3.42	1981	30	7.56	1995	.17	1998	6.9	5.7	2.6	1.1	.70	1.03	1.56	2.06	2.56	3.10	3.71	4.45	5.43	7.01	8.51
Jul	2.32	1.74	5.70	1979	24	11.53	1979	.00+	1983	4.6	3.5	1.5	.7	.00	.12	.45	.79	1.18	1.62	2.16	2.84	3.79	5.40	6.99
Aug	2.52	1.96	3.74	1974	28	11.21	1974	.00	2000	5.2	4.2	1.9	.6	.11	.33	.70	1.07	1.47	1.92	2.45	3.10	4.00	5.49	6.95
Sep	2.78	2.88	3.95	1997	23	7.31	1996	.00	2000	5.3	4.2	1.8	.8	.08	.27	.64	1.04	1.48	2.00	2.61	3.40	4.49	6.33	8.16
Oct	2.58	1.64	5.42	1986	3	8.96	1986	.06	1987	4.5	3.5	1.8	.6	.08	.18	.44	.76	1.15	1.64	2.24	3.05	4.20	6.23	8.28
Nov	1.98	1.84	4.46	1974	3	5.84	1992	.00+	1995	4.3	3.1	1.2	.5	.00	.14	.45	.75	1.08	1.46	1.90	2.45	3.21	4.49	5.74
Dec	1.00	.59	1.50	1997	24	2.91	1984	.00+	1988	3.5	2.4	.6	.1	.00	.08	.24	.39	.56	.75	.97	1.24	1.62	2.25	2.86
Ann	28.88	28.95	5.70	Jul 1979	24	14.20	May 1982	.00+	Sep 2000	59.6	45.7	19.2	7.5	21.38	22.86	24.73	26.15	27.41	28.61	29.86	31.23	32.88	35.27	37.32

⁺ 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: TALOGA, OK

Climate Division: OK 4 NWS Call Sign:

Elevation: 1,705 Feet Lat:

Lat: 36°02N Lon: 98°58W

										Snov	w (inc	hes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)		
	Mean	s/Medi	ans (1))					Extre	mes (2)							ow Fa					Depth esholo	
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	4.1	3.0	#	#	7.0	1987	18	15.1	1973	12	1987	19	4	1988	2.3	2.0	.6	.2	.0	3.5	1.4	.6	.1
Feb	4.0	2.0	1	#	6.0	1971	21	19.5	1975	12	1971	22	3	1978	1.6	1.5	.6	.2	.0	3.6	2.1	.8	.1
Mar	1.5	.0	#	#	10.0	1994	9	10.0	1994	10	1994	9	1	1995	.7	.6	.1	.1	@	.7	.2	.1	@
Apr	.5	.0	#	0	8.0	1973	8	10.0	1973	8	1973	8	1	1973	.2	.2	@	@	.0	.2	.1	@	.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	.1	.0	#	0	2.0	1991	31	2.0	1991	2	1991	31	#	1991	@	@	.0	.0	.0	@	.0	.0	.0
Nov	1.3	.0	#	0	7.0	1972	21	12.5	1972	8	1972	21	1	1988	.7	.6	.1	.1	.0	.5	.2	.1	.0
Dec	3.5	2.0	#	#	8.5	1971	3	18.0	1987	11	1987	15	2	1987	1.6	1.5	.5	.2	.0	2.8	1.2	.4	.1
Ann	15.0	7.0	N/A	N/A	10.0	Mar 1994	9	19.5	Feb 1975	12+	Jan 1987	19	4	Jan 1988	7.1	6.4	1.9	.8	@	11.3	5.2	2.0	.3

⁺ 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	ze Data									
			Spri	ng Freeze D	ates (Month/	Day)								
Probability of 100														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	5/09	5/05	5/02	4/29	4/26	4/24	4/21	4/18	4/13					
32	4/29	4/24	4/20	4/17	4/14	4/12	4/09	4/05	3/31					
28	4/18	4/13	4/10	4/07	4/04	4/02	3/30	3/26	3/22					
24	4/09	4/03	3/29	3/26	3/22	3/19	3/15	3/11	3/05					
20	4/02	3/24	3/18	3/13	3/09	3/04	2/27	2/21	2/12					
16	3/21	3/12	3/06	2/28	2/23	2/18	2/13	2/07	1/29					
<u> </u>			Fal	l Freeze Da	tes (Month/D	ay)		1						
To (E)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	ed(*)						
temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	9/23	9/27	10/01	10/04	10/06	10/09	10/12	10/15	10/20					
32	9/30	10/05	10/09	10/12	10/15	10/18	10/21	10/25	10/30					
28	10/18	10/23	10/27	10/30	11/02	11/05	11/08	11/12	11/17					
24	10/23	10/29	11/03	11/07	11/11	11/14	11/18	11/23	11/29					
20	10/27	11/04	11/09	11/14	11/18	11/22	11/27	12/02	12/10					
16	11/07	11/15	11/21	11/25	11/30	12/04	12/09	12/15	12/22					
<u> </u>				Freeze F	ree Period		•							
Torrer (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)							
temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	179	173	169	166	162	159	156	152	146					
32	201	195	191	187	183	179	176	171	165					
28	233	225	220	215	211	207	202	197	189					
24	253	246	241	237	233	228	224	219	212					
20	286	275	267	260	254	247	240	232	221					
16	316	303	294	286	279	271	263	254	241					

^{*} 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.

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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	982	734	559	277	69	5	0	1	31	203	594	911	4366
60	827	599	407	166	24	0	0	0	8	95	445	756	3327
57	734	521	322	114	10	0	0	0	3	52	361	663	2780
55	673	469	268	85	5	0	0	0	0	33	308	602	2443
50	527	348	154	34	1	0	0	0	0	7	190	457	1718
32	125	68	4	0	0	0	0	0	0	0	9	82	288

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	166	258	469	735	1080	1332	1526	1479	1180	841	405	195	9666
55	2	15	19	130	372	642	813	766	490	161	14	1	3425
57	1	11	11	99	315	582	751	704	433	118	8	0	3033
60	0	5	3	61	235	492	658	611	348	68	2	0	2483
65	0	0	0	22	126	347	503	457	221	21	0	0	1697
70	0	0	0	6	53	216	349	307	123	4	0	0	1058

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (M	(Ionthly)								Growi	ng Degre	e Units (Accumu	lated Mo	onthly)			
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 40 60 145 320 551 850 1109 1309 1260 974 642 245 74													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	60 145 320 551 850 1109 1309 1260 974 642 245												60	205	525	1076	1926	3035	4344	5604	6578	7220	7465	7539
45	24 80 205 404 695 959 1154 1105 824 493 141												24	104	309	713	1408	2367	3521	4626	5450	5943	6084	6113
50	2 32 115 272 540 809 999 950 674 348 75												2	34	149	421	961	1770	2769	3719	4393	4741	4816	4825
55	0	8	54	162	389	659	844	795	527	221	28	0	0	8	62	224	613	1272	2116	2911	3438	3659	3687	3687
60	0	0	19	76	250	510	689	640	388	117	7	0	0	0	19	95	345	855	1544	2184	2572	2689	2696	2696
Base	e Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	0/86 76 131 231 360 552 731 844 819 633 420 178												76	207	438	798	1350	2081	2925	3744	4377	4797	4975	5050

(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