**Station: DUNCAN, OK** 

## 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: 342660

Climate Division: OK 8 NWS Call Sign: Elevation: 1,125 Feet Lat: 34°30N Lon: 97°58W

									r	Гетр	eratur	re (°F)									
	Mea	<b>n</b> (1)						Extr	emes					Degree Base To	Days (1) emp 65		Mean	Numb	ber 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	49.6	26.7	38.2	84	1950	25	45.0	1990	-4+	1988	8	27.8	1979	833	0	.0	.0	16.9	3.4	21.8	.1
Feb	55.8	31.9	43.9	90	1996	23	53.7	1976	-2	1985	2	30.7	1978	598	0	.0	@	19.5	2.0	13.7	.1
Mar	64.3	40.0	52.2	95	1974	31	57.3	1974	2	1948	11	47.3	1996	399	2	.0	.1	27.6	.2	5.7	.0
Apr	72.9	48.9	60.9	100	1972	12	66.0	1981	26+	1957	13	55.5	1997	159	36	@	.4	29.6	.0	.7	.0
May	80.4	58.1	69.3	104	2000	24	75.1	1996	34	1960	1	66.0	1981	34	166	.1	3.6	31.0	.0	.0	.0
Jun	88.3	66.5	77.4	111	1980	28	81.9	1998	47+	1964	1	73.5	1983	1	372	.7	14.2	30.0	.0	.0	.0
Jul	93.9	70.9	82.4	110	1980	3	88.4	1980	55+	1952	8	78.7	1976	0	538	5.8	25.4	31.0	.0	.0	.0
Aug	93.3	69.7	81.5	111	1970	9	86.3	2000	55+	1962	26	75.7	1992	0	512	5.0	25.0	31.0	.0	.0	.0
Sep	85.4	62.2	73.8	108+	2000	4	81.8	1998	38	1984	30	66.6	1974	18	282	1.0	11.1	30.0	.0	.0	.0
Oct	75.4	50.6	63.0	102	1977	1	66.8	1998	19	1993	31	55.2	1976	120	58	@	1.7	30.8	.0	.6	.0
Nov	62.0	38.7	50.4	87+	1980	8	57.6	1999	14+	1959	17	44.4	1972	443	3	.0	.0	25.4	.1	7.2	.0
Dec	52.4	29.6	41.0	88	1955	24	45.8	1984	-7	1989	24	28.6	1983	744	0	.0	.0	20.2	1.7	18.4	.1
Ann	72.8	49.5	61.2	111+	Jun 1980	28	88.4	Jul 1980	-7	Dec 1989	24	27.8	Jan 1979	3349	1969	12.6	81.5	323.0	7.4	68.1	.3

<sup>+</sup> Also occurred on an earlier date(s)

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

Issue Date: February 2004 028-A

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

# 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: DUNCAN, OK COOP ID: 342660

Climate Division: OK 8 NWS Call Sign: Elevation: 1,125 Feet Lat: 34°30N Lon: 97°58W

										Pı	recipi	tation	(incl	nes)										
			P	recip	itatio	n Total	s			M	ean N	lumbo ays (3	_	Proba	ability th		nonthly/	annual j indic	precipita ated am	ount	ll be equ		less tha	ın the
	Medi					Extremes	i			D	aily Pre	cipitatio	n		Th		-		-		bility Leve te gamma		on	
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	1.40	1.44	2.01	1982	30	2.94	1973	.01+	1986	5.1	2.8	.9	.4	.04	.09	.23	.40	.61	.88	1.21	1.65	2.29	3.41	4.55
Feb	1.86	1.64	2.90	1993	15	5.53	1997	.00	1996	5.4	3.3	1.2	.4	.07	.23	.50	.77	1.06	1.40	1.79	2.29	2.97	4.10	5.22
Mar	2.79	2.54	2.98	1963	31	7.77	1973	.09	1971	6.8	4.6	2.1	.9	.46	.70	1.11	1.49	1.89	2.32	2.81	3.41	4.21	5.51	6.76
Apr	3.39	3.04	3.10	1990	20	9.59	1990	.32	1989	6.8	5.0	2.2	1.0	.53	.81	1.31	1.77	2.26	2.79	3.39	4.13	5.13	6.74	8.29
May	5.27	5.17	9.85	1955	19	14.56	1982	.34	1988	8.4	6.1	3.1	1.6	.74	1.17	1.93	2.66	3.42	4.27	5.24	6.43	8.04	10.67	13.20
Jun	4.52	4.08	4.40	1985	5	11.79	1989	1.34	1980	7.7	5.7	3.2	1.6	1.31	1.74	2.39	2.95	3.49	4.06	4.69	5.43	6.39	7.89	9.29
Jul	2.52	1.60	4.32	1989	14	7.02	1991	.00	1980	5.0	3.5	1.6	.8	.03	.16	.45	.78	1.18	1.66	2.26	3.03	4.12	6.01	7.91
Aug	2.50	2.27	4.07	1953	18	6.20	1996	.00+	2000	6.0	4.3	1.6	.7	.00	.55	1.07	1.46	1.83	2.22	2.64	3.11	3.76	4.77	5.73
Sep	3.99	3.55	4.43	1970	23	10.07	1991	.01	2000	7.6	5.6	2.6	1.4	.31	.58	1.10	1.65	2.26	2.96	3.79	4.85	6.30	8.75	11.17
Oct	3.87	3.24	4.30	1972	31	11.87	2000	.68	1978	6.8	4.9	2.2	1.3	.62	.96	1.52	2.05	2.60	3.20	3.89	4.72	5.84	7.66	9.39
Nov	2.34	1.93	2.76	1994	5	6.81	2000	.11	1989	6.1	4.0	1.6	.6	.29	.48	.81	1.14	1.48	1.86	2.31	2.86	3.61	4.84	6.03
Dec	1.96	1.54	2.80	1991	20	6.92	1991	.10	1977	5.7	3.4	1.3	.5	.11	.21	.45	.71	1.01	1.37	1.80	2.36	3.14	4.48	5.82
Ann	36.41	37.08	9.85	May 1955	19	14.56	May 1982	.00+	Aug 2000	77.4	53.2	23.6	11.2	24.09	26.41	29.41	31.72	33.78	35.79	37.87	40.19	43.02	47.16	50.77

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

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

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

## 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: 342660** 

**Station: DUNCAN, OK** 

Climate Division: OK 8 NWS Call Sign:

Elevation: 1,125 Feet Lat: 34°30N Lon: 97°58W

		Snow (inches)  Snow Totals  Means/Medians (1)  Extremes (2)  Highest																					
						Sno	ow To	tals									Mea	n Nu	mber	of Da	<b>ys</b> (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	1.8	.1	#	0	10.0	1988	7	13.5	1988	13	1988	7	1	1988	.8	.4	.2	.1	.1	.1	.1	.1	.0
Feb	1.2	.0	#	0	5.0	1979	7	5.0	1979	5	1979	7	2	1975	.7	.4	.1	.1	.0	.1	.1	.1	.0
Mar	.3	.0	#	0	3.5	1994	2	3.5	1994	7	1989	6	1	1989	.2	.1	.1	.0	.0	.2	.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	.5	1993	30	.5	1993	1	1996	21	#	1996	.1	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.1	.0	#	0	2.0	1972	21	2.0	1972	3	1980	17	#+	1997	@	@	.0	.0	.0	@	.0	.0	.0
Dec	.5	.0	#	0	3.6	1971	3	3.6	1971	3+	1997	26	#+	1997	.2	.1	.1	.0	.0	.1	.1	.0	.0
Ann	3.9	.1	N/A	N/A	10.0	Jan 1988	7	13.5	Jan 1988	13	Jan 1988	7	2	Feb 1975	2.0	1.0	.5	.2	.1	.5	.3	.2	.0

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

## Climatography of the United States No. 20

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

**COOP ID: 342660** 

1971-2000

**Station: DUNCAN, OK** 

Climate Division: OK 8 NWS Call Sign:

Elevation: 1,125 Feet Lat

Lat: 34°30N Lon: 97°58W

				Freez	e Data								
			Spri	ng Freeze D	ates (Month/	/Day)							
Probability of later date in spring (thru Jul 31) than indicated   3/10   3/1													
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90				
36	4/16	4/13	4/10	4/09	4/07	4/05	4/03	4/01	3/29				
32	4/12	4/06	4/02	3/30	3/26	3/23	3/20	3/16	3/10				
28	4/02	3/27	3/22	3/18	3/14	3/10	3/06	3/01	2/22				
24	3/22	3/14	3/08	3/04	2/27	2/23	2/18	2/12	2/04				
20	3/11	3/03	2/24	2/19	2/14	2/09	2/04	1/29	1/20				
16	3/03	2/21	2/14	2/08	2/02	1/27	1/20	1/11	12/26				
			Fal	l Freeze Da	tes (Month/D	Day)		1	1				
Tomp (E)		Pro	bability of ea	arlier date i	n fall (beginn	ning Aug 1) t	han indicate	ed(*)					
temp (F)	.10								.90				
36	10/16	10/21	10/24	10/27	10/30	11/02	11/05	11/08	11/13				
32	10/23	10/29	11/02	11/05	11/09	11/12	11/15	11/19	11/25				
28	11/03	11/09	11/13	11/17	11/20	11/23	11/27	12/02	12/08				
24	11/11	11/18	11/23	11/27	12/01	12/05	12/09	12/14	12/21				
20	11/15	11/24	11/30	12/05	12/10	12/15	12/20	12/26	1/04				
16	11/21	12/03	12/11	12/19	12/26	1/02	1/10	1/20	2/08				
		•		Freeze F	ree Period		•	1	1				
Tomas (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)						
temp (F)	.10	.20				,			.90				
36	221	216	212	209	205	202	199	195	190				
32	248	241	235	231	226	222	217	212	204				
28	277	268	262	256	251	245	240	233	224				
24	307	296	289	282	276	270	264	256	246				
20	331	318	310	303	296	290	283	275	264				
16	>365	>365	351	335	324	314	305	294	281				

<sup>\*</sup> 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 do

Complete documentation available from:

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**Station: DUNCAN, OK** 

**COOP ID: 342660** 

**Climate Division: OK 8** Elevation: 1,125 Feet Lat: 34°30N **NWS Call Sign:** Lon: 97°58W

	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	833	598	399	159	34	1	0	0	18	120	443	744	3349		
60	680	468	258	72	7	0	0	0	4	46	306	590	2431		
57	590	393	184	37	2	0	0	0	0	22	232	502	1962		
55	533	347	143	22	1	0	0	0	0	12	189	445	1692		
50	393	245	67	4	0	0	0	0	0	2	104	310	1125		
32	63	33	1	0	0	0	0	0	0	0	2	31	130		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	254	366	626	867	1155	1361	1561	1535	1254	960	552	310	10801
55	10	35	55	198	443	671	848	822	564	259	50	11	3966
57	5	26	34	154	382	611	786	760	504	208	32	6	3508
60	2	16	15	98	295	521	693	667	418	139	16	1	2881
65	0	0	2	36	166	372	538	512	282	58	3	0	1969
70	0	0	0	8	74	232	383	360	169	17	0	0	1243

										Gro	Growing Degree Units (2)  Base Growing Degree Units (Monthly) Growing Degree Units (Accumulated Monthly)														
Base					Growing	g Degree	Units (N	(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	114	227	426	656	936	1148	1342	1315	1040	741	357	158	114	341	767	1423	2359	3507	4849	6164	7204	7945	8302	8460	
45	52 140 297 507 781 998 1187 1160 890 586 235												52	192	489	996	1777	2775	3962	5122	6012	6598	6833	6910	
50	21 73 182 365 627 848 1032 1005 740 438 140											31	21	94	276	641	1268	2116	3148	4153	4893	5331	5471	5502	
55	3	30	96	237	473	698	877	850	595	298	72	7	3	33	129	366	839	1537	2414	3264	3859	4157	4229	4236	
60	0 7 43 131 324 548 722 695 448 175 28										0	0	7	50	181	505	1053	1775	2470	2918	3093	3121	3121		
Base	Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)				
50/86	<b>50/86</b> 89 154 263 406 616 785 896 876 694 468 220 10											109	89	243	506	912	1528	2313	3209	4085	4779	5247	5467	5576	

(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

- 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