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: OKLAHOMA CITY AP, OK **COOP ID: 346661**

Climate Division: OK 5 **NWS Call Sign: OKC** **Elevation: 1,304 Feet** **Lat: 35˚23N** **Lon: 97˚36W**

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	47.1	26.2	36.7	81	1950	24	45.9	1990	-4+	1959	4	25.4	1979	884	0	.0	.0	14.5	4.7	22.5	.3
Feb	53.5	31.1	42.3	92	1996	22	52.2	1976	-3+	1979	9	29.4	1978	648	1	.0	@	17.5	2.6	14.9	.2
Mar	62.5	39.4	51.0	93	1967	11	55.5	1986	1	1948	11	46.0	1996	446	7	.0	.1	26.3	.3	7.3	.0
Apr	71.2	48.1	59.7	100	1972	12	65.6	1981	20	1957	13	54.0	1983	197	38	@	.4	29.5	.0	1.1	.0
May	78.9	57.9	68.4	104	1985	30	73.8	1996	32	1954	3	63.6	1976	43	145	.1	2.1	31.0	.0	.0	.0
Jun	87.2	66.4	76.8	106	1953	14	82.0	1990	47	1954	4	72.2	1982	1	360	.5	10.9	30.0	.0	.0	.0
Jul	93.1	70.8	82.0	110	1996	6	88.3	1980	53	1971	31	78.0	1975	0	527	4.3	22.3	31.0	.0	.0	.0
Aug	92.5	69.8	81.2	110	1980	2	88.0	1980	51	1956	21	74.8	1992	0	497	4.5	22.6	31.0	.0	.0	.0
Sep	84.1	62.2	73.2	108+	2000	2	81.2	1998	36	1989	24	65.5	1974	30	271	.9	9.6	30.0	.0	.0	.0
Oct	73.4	50.6	62.0	96+	1951	2	65.7	1979	16	1993	31	56.5	1976	152	58	.0	.9	30.5	.0	.6	.0
Nov	59.6	38.2	48.9	87	1980	8	56.8	1999	11+	1959	17	43.3	2000	482	3	.0	.0	23.9	.2	8.5	.0
Dec	49.8	29.2	39.5	86	1955	24	44.1	1991	-8	1989	23	25.8	1983	780	0	.0	.0	16.6	2.6	19.6	.2
Ann	71.1	49.2	60.1	110+	Jul 1996	6	88.3	Jul 1980	-8	Dec 1989	23	25.4	Jan 1979	3663	1907	10.3	68.9	311.8	10.4	74.5	.7

\+ 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: 1948-2001

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

Issue Date: February 2004

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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	1.28	1.16	2.02	1998	4	4.09	1998	.00+	1986
Feb	1.56	1.29	2.21	1978	12	4.63	1990	.02	1996
Mar	2.90	2.62	2.84	1988	28	7.85	1988	.07	1971
Apr	3.00	2.91	3.79	1999	25	6.92	1999	.17	1989
May	5.44	4.62	6.64	1993	8	12.07	1982	1.07	1988
Jun	4.63	3.72	4.56	1989	13	14.66	1989	.88	1976
Jul	2.94	2.14	5.60	1981	27	11.90	1996	.00	1983
Aug	2.48	2.24	2.87	1966	18	5.85	1996	.00	2000
Sep	3.98	3.59	7.53	1970	22	11.85	1991	.72	1979
Oct	3.64	2.47	5.45	1983	20	13.18	1983	.47	1993
Nov	2.11	2.00	2.17+	1986	4	5.72	1994	.06	1999
Dec	1.89	1.47	2.55	1984	31	8.14	1984	.00	1996
Ann	35.85	37.44	7.53	Sep 1970	22	14.66	Jun 1989	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.6	2.4	.8	.3
Feb	5.6	3.4	1.1	.3
Mar	7.4	5.2	1.9	1.0
Apr	7.6	4.8	2.0	.8
May	10.3	7.2	3.4	1.5
Jun	8.5	5.9	2.8	1.6
Jul	5.8	4.0	1.8	1.0
Aug	6.2	4.2	1.9	.8
Sep	7.6	5.2	2.8	1.2
Oct	7.3	4.4	2.4	1.1
Nov	6.3	3.4	1.6	.7
Dec	5.6	3.2	1.1	.6
Ann	83.8	53.3	23.6	10.9

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	.00	.08	.27	.47	.68	.93	1.22	1.58	2.08	2.93	3.76
Feb	.07	.15	.33	.54	.78	1.06	1.42	1.87	2.52	3.64	4.76
Mar	.47	.72	1.14	1.54	1.95	2.40	2.91	3.54	4.37	5.73	7.03
Apr	.67	.95	1.39	1.79	2.18	2.60	3.07	3.64	4.38	5.56	6.67
May	1.16	1.66	2.46	3.19	3.91	4.69	5.57	6.61	8.00	10.21	12.30
Jun	.98	1.40	2.08	2.70	3.32	3.98	4.73	5.63	6.81	8.71	10.50
Jul	.08	.28	.67	1.09	1.55	2.10	2.75	3.58	4.74	6.69	8.63
Aug	.29	.60	1.01	1.37	1.73	2.11	2.54	3.06	3.74	4.84	5.88
Sep	.62	.96	1.54	2.09	2.66	3.28	3.99	4.86	6.03	7.92	9.74
Oct	.46	.74	1.26	1.77	2.30	2.90	3.59	4.45	5.61	7.51	9.36
Nov	.16	.30	.58	.87	1.19	1.56	2.00	2.56	3.34	4.64	5.93
Dec	.07	.22	.49	.77	1.07	1.41	1.81	2.32	3.02	4.20	5.35
Ann	24.68	26.82	29.57	31.67	33.54	35.35	37.23	39.31	41.84	45.53	48.73

+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Climate Division: OK 5 **NWS Call Sign: OKC** **Elevation: 1,304 Feet** **Lat: 35°23N** **Lon: 97°36W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	3.1	1.0	#	0
Feb	2.2	1.0	#	0
Mar	.6	.0	#	0
Apr	.0	.0	0	0
May	.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	.6	.0	#	0
Dec	2.1	1.6	#	0
Ann	8.6	3.6	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	8.3	1987	18	12.1	1988	12+	1988	8	2+	1988
Feb	6.5	1986	7	12.0	1978	7+	1978	10	2	1978
Mar	4.0	1989	5	6.0	1994	4+	1995	3	#	1999
Apr	.6	1989	10	.6	1989	#	1973	8	0	0
May	.0	0	0	.0	0	#	1999	14	#	2000
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	.1	1993	30	.1	1993	#	1993	30	0	0
Nov	5.5	1972	18	7.5	1972	3	1980	17	#	1991
Dec	8.3	1987	14	8.3	1987	7	1987	15	1+	2000
Ann	8.3+	Dec 1987	14	12.1	Jan 1988	12+	Jan 1988	8	2+	Jan 1988

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.0	1.0	.3	.1	.0
Feb	1.6	.8	.2	.1	.0
Mar	.4	.2	.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	.5	.2	.1	@	.0
Dec	1.7	.7	.2	@	.0
Ann	6.2	2.9	.9	.2	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	3.4	1.7	.8	.1
Feb	2.0	.7	.3	.0
Mar	.4	.1	.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	.2	@	.0	.0
Dec	2.0	.4	.1	.0
Ann	8.0	2.9	1.2	.1

+ 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

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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	4/21	4/17	4/13	4/11	4/08	4/06	4/03	3/31	3/27
32	4/13	4/09	4/06	4/03	4/01	3/30	3/27	3/24	3/20
28	4/05	3/30	3/27	3/23	3/20	3/17	3/14	3/10	3/05
24	3/27	3/18	3/12	3/06	3/01	2/24	2/19	2/13	2/04
20	3/18	3/08	3/02	2/24	2/18	2/13	2/07	1/31	1/22
16	3/05	2/24	2/18	2/13	2/08	2/04	1/29	1/23	1/15

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	10/10	10/15	10/19	10/22	10/25	10/28	10/31	11/04	11/09
32	10/18	10/24	10/28	10/31	11/03	11/06	11/09	11/13	11/19
28	10/27	11/02	11/07	11/11	11/14	11/18	11/22	11/27	12/03
24	11/07	11/13	11/18	11/23	11/27	12/01	12/05	12/10	12/17
20	11/12	11/21	11/27	12/02	12/07	12/12	12/17	12/23	1/01
16	11/15	11/26	12/03	12/09	12/15	12/21	12/28	1/04	1/14

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	219	212	207	203	199	195	191	186	179
32	238	230	224	220	215	211	206	201	193
28	262	254	248	243	239	234	229	223	215
24	300	289	282	276	270	263	257	250	239
20	329	314	304	297	289	282	274	266	253
16	351	332	321	313	306	299	291	283	271

***** 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

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Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	884	648	446	197	43	1	0	0	30	152	482	780	3663
60	726	513	292	102	13	0	0	0	8	51	347	637	2689
57	636	438	213	61	5	0	0	0	3	25	270	549	2200
55	580	391	168	40	2	0	0	0	0	13	225	492	1911
50	438	285	83	11	0	0	0	0	0	2	132	354	1305
32	90	51	2	0	0	0	0	0	0	0	5	49	197

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	224	330	593	831	1127	1345	1548	1524	1234	931	510	280	10477
55	3	18	69	188	416	655	835	811	547	250	49	6	3847
57	2	11	50	147	357	595	773	749	490	201	34	3	3412
60	1	5	28	96	271	505	680	656	406	138	17	1	2804
65	0	1	7	38	145	360	527	497	271	58	3	0	1907
70	0	0	1	10	60	214	371	348	162	19	0	0	1185

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	93	190	371	601	891	1114	1309	1288	1002	693	302	121	93	283	654	1255	2146	3260	4569	5857	6859	7552	7854	7975
45	41	105	246	455	736	964	1154	1133	852	541	194	54	41	146	392	847	1583	2547	3701	4834	5686	6227	6421	6475
50	11	52	146	314	581	814	999	978	702	393	109	21	11	63	209	523	1104	1918	2917	3895	4597	4990	5099	5120
55	1	22	75	195	429	664	844	823	554	254	52	3	1	23	98	293	722	1386	2230	3053	3607	3861	3913	3916
60	0	4	28	101	281	514	689	668	413	143	18	0	0	4	32	133	414	928	1617	2285	2698	2841	2859	2859
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	70	126	228	368	579	768	884	863	666	425	184	77	70	196	424	792	1371	2139	3023	3886	4552	4977	5161	5238

(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