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: MC COOK, TX **COOP ID: 415721**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 220 Feet** **Lat: 26˚29N** **Lon: 98˚23W**

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	68.8	46.9	57.9	96	1971	31	65.5	1998	10	1962	12	50.7	1978	278	50	.0	.5	27.8	.0	2.5	.0
Feb	73.4	50.3	61.9	100+	1996	21	70.4	1999	16	1951	3	52.9	1978	157	68	.1	1.3	26.7	.1	1.3	.0
Mar	81.1	57.1	69.1	105+	1954	30	75.3	2000	28	1996	8	63.5	1987	36	164	.4	5.3	30.8	.0	.2	.0
Apr	86.2	63.2	74.7	108+	1989	9	79.5	1999	36	1987	3	69.9	1987	2	293	.7	10.3	30.0	.0	.0	.0
May	90.4	69.7	80.1	109	1999	5	84.2	1998	47	1954	4	75.7	1976	0	467	.9	18.7	31.0	.0	.0	.0
Jun	95.1	73.0	84.1	113	1998	16	90.0	1998	56+	1989	16	81.1	1974	0	571	4.1	26.1	30.0	.0	.0	.0
Jul	97.7	73.7	85.7	109	1998	7	90.6	1998	65+	1989	23	81.5	1976	0	642	10.0	29.2	31.0	.0	.0	.0
Aug	98.4	73.2	85.8	109	1998	15	89.6	1998	62+	1976	24	82.3	1973	0	646	12.1	29.5	31.0	.0	.0	.0
Sep	93.8	70.4	82.1	110	2000	6	84.6	1980	48	1942	28	78.3	1975	0	513	3.8	23.0	30.0	.0	.0	.0
Oct	86.8	63.5	75.2	100+	1969	13	78.1	1984	30	1993	31	67.7	1976	4	318	.0	11.8	30.9	.0	@	.0
Nov	78.1	55.8	67.0	98+	1949	29	74.0	1994	29+	1951	3	58.1	1976	91	149	.0	2.8	29.5	.0	.2	.0
Dec	70.4	48.7	59.6	97	1977	6	67.5	1984	14	1989	23	49.4	1989	221	52	.0	.6	28.9	.1	1.4	.0
Ann	85.0	62.1	73.6	113	Jun 1998	16	90.6	Jul 1998	10	Jan 1962	12	49.4	Dec 1989	789	3933	32.1	159.1	357.6	.2	5.6	.0

\+ 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: 1941-2001

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

Issue Date: February 2004

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: MC COOK, TX **COOP ID: 415721**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 220 Feet** **Lat: 26˚29N** **Lon: 98˚23W**

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	1.03	.83	4.60	1958	5	4.20	1992	.00	1999
Feb	1.21	.89	3.05	1950	13	4.62	1973	.02	1976
Mar	.82	.60	3.20	1997	19	4.63	1997	.01	1978
Apr	1.17	.99	3.57	1954	9	4.33	1990	.00+	1998
May	2.59	1.97	5.65	1982	22	9.24	1982	.00	1998
Jun	2.99	2.80	5.89	1993	21	11.32	1993	.00	1980
Jul	1.61	1.03	2.52	1983	13	7.93	1975	.00+	2000
Aug	1.90	1.14	4.01	1977	29	6.61	1980	.00+	1997
Sep	3.55	3.09	6.28	1967	21	10.21	1973	.42	1989
Oct	2.82	2.23	6.78	1971	6	9.88	1971	.00	1979
Nov	.93	.46	3.78	1995	17	4.10	1995	.00+	1994
Dec	1.07	.80	1.70	1979	3	3.53	1986	.03	1977
Ann	21.69	21.02	6.78	Oct 1971	6	11.32	Jun 1993	.00+	Jul 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.1	2.6	.3	.1
Feb	6.5	2.5	.6	.2
Mar	5.1	1.8	.5	.2
Apr	5.2	2.3	.7	.2
May	6.0	3.3	1.5	.9
Jun	5.7	4.1	1.8	.9
Jul	4.5	2.7	1.0	.3
Aug	5.3	3.0	1.0	.5
Sep	7.6	5.0	2.2	1.1
Oct	6.7	3.7	1.4	.8
Nov	5.7	1.7	.4	.1
Dec	7.8	2.9	.4	.1
Ann	74.2	35.6	11.8	5.4

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	.02	.09	.22	.37	.53	.72	.95	1.25	1.66	2.36	3.06
Feb	.06	.13	.27	.43	.61	.84	1.11	1.46	1.95	2.80	3.64
Mar	.03	.06	.15	.25	.37	.53	.72	.97	1.33	1.95	2.59
Apr	.00	.03	.15	.30	.49	.72	1.01	1.39	1.94	2.90	3.87
May	.24	.53	.96	1.34	1.73	2.14	2.62	3.20	3.97	5.22	6.42
Jun	.08	.27	.67	1.09	1.57	2.13	2.79	3.65	4.83	6.84	8.83
Jul	.00	.00	.06	.22	.47	.79	1.23	1.83	2.73	4.33	6.00
Aug	.00	.04	.21	.45	.75	1.12	1.60	2.24	3.16	4.79	6.44
Sep	.63	.94	1.46	1.95	2.44	2.98	3.59	4.32	5.31	6.89	8.40
Oct	.30	.64	1.11	1.52	1.93	2.38	2.88	3.49	4.29	5.59	6.83
Nov	.00	.02	.11	.24	.39	.57	.80	1.11	1.55	2.31	3.09
Dec	.10	.17	.31	.46	.62	.81	1.03	1.30	1.68	2.30	2.92
Ann	12.95	14.52	16.61	18.23	19.70	21.14	22.65	24.34	26.43	29.51	32.23

\+ 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: 1941-2001
(3) Derived from 1971-2000 serially complete daily data

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: MC COOK, TX **COOP ID: 415721**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 220 Feet** **Lat: 26°29N** **Lon: 98°23W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.0	.0	#	0
Feb	.0	.0	0	0
Mar	#	.0	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	.0	.0	0	0
Dec	#	.0	0	0
Ann	#	.0	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	.0	0	0	.0	0	#	1997	13	#	1997
Feb	.0	0	0	.0	0	0	0	0	0	0
Mar	#	1980	2	#	1980	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	#	1997	16	#	1997
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	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	#	1997	13	#	1997	0	0	0	0	0
Ann	#+	Dec 1997	13	#+	Dec 1997	#+	May 1997	16	#+	May 1997

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.0	.0	.0	.0	.0
Feb	.0	.0	.0	.0	.0
Mar	.0	.0	.0	.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	.0	.0	.0	.0	.0
Dec	.0	.0	.0	.0	.0
Ann	.0	.0	.0	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.0	.0	.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	.0	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	.0	.0	.0	.0

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

(1) Derived from Snow Climatology and 1971-2000 daily data

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

(2) Derived from 1971-2000 daily data

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

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

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: MC COOK, TX **COOP ID: 415721**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 220 Feet** **Lat: 26˚29N** **Lon: 98˚23W**

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	3/21	3/11	3/03	2/25	2/19	2/13	2/07	1/31	1/20
32	3/03	2/19	2/10	2/02	1/26	1/18	1/08	12/25	0/00
28	2/12	1/30	1/21	1/11	12/31	12/12	0/00	0/00	0/00
24	1/09	12/30	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00

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	11/16	11/23	11/28	12/02	12/05	12/09	12/13	12/18	12/25
32	11/26	12/06	12/13	12/19	12/25	1/01	1/09	1/25	0/00
28	12/16	12/26	1/02	1/10	1/20	0/00	0/00	0/00	0/00
24	12/25	1/07	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	327	314	304	296	288	281	273	263	250
32	>365	>365	>365	348	334	324	314	304	290
28	>365	>365	>365	>365	>365	>365	352	332	313
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

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

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: MC COOK, TX **COOP ID: 415721**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 220 Feet** **Lat: 26˚29N** **Lon: 98˚23W**

Degree Days to Selected Base Temperatures (˚F)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	278	157	36	2	0	0	0	0	0	4	91	221	789
60	183	86	9	0	0	0	0	0	0	1	40	130	449
57	135	53	3	0	0	0	0	0	0	0	22	87	300
55	106	37	2	0	0	0	0	0	0	0	14	62	221
50	50	13	0	0	0	0	0	0	0	0	4	24	91
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	801	835	1150	1281	1490	1561	1665	1669	1503	1337	1048	854	15194
55	194	228	439	591	777	871	952	956	813	624	372	203	7020
57	161	188	379	531	715	811	890	894	753	562	320	166	6370
60	116	137	291	441	622	721	797	801	663	470	248	117	5424
65	50	68	164	293	467	571	642	646	513	318	149	52	3933
70	24	26	72	161	315	421	487	491	363	179	75	19	2633

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	558	641	898	1042	1240	1318	1413	1416	1256	1087	809	613	558	1199	2097	3139	4379	5697	7110	8526	9782	10869	11678	12291
45	415	501	743	892	1085	1168	1258	1261	1106	932	659	463	415	916	1659	2551	3636	4804	6062	7323	8429	9361	10020	10483
50	294	369	593	742	930	1018	1103	1106	956	778	514	329	294	663	1256	1998	2928	3946	5049	6155	7111	7889	8403	8732
55	182	255	447	594	775	868	948	951	806	623	379	217	182	437	884	1478	2253	3121	4069	5020	5826	6449	6828	7045
60	99	152	310	447	620	718	793	796	656	470	255	127	99	251	561	1008	1628	2346	3139	3935	4591	5061	5316	5443
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	344	406	593	700	856	889	930	924	842	732	524	380	344	750	1343	2043	2899	3788	4718	5642	6484	7216	7740	8120

(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