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: CANYON, TX **COOP ID: 411430**

Climate Division: TX 1 **NWS Call Sign:** **Elevation: 3,590 Feet** **Lat: 34˚59N** **Lon: 101˚56W**

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	52.2	23.7	38.0	79+	1986	20	44.9	1986	-12	1959	4	29.0	1979	840	0	.0	.0	19.7	2.9	26.4	.3
Feb	57.8	27.9	42.9	86	1962	12	50.6	1976	-14	1951	1	33.1	1978	620	0	.0	.0	21.2	1.8	19.4	.3
Mar	65.7	34.5	50.1	93	1989	11	55.6+	1974	0	1960	3	46.3	1990	462	1	.0	.1	28.4	.3	12.2	.0
Apr	74.1	42.7	58.4	97	1989	22	63.5	1981	19+	1997	12	52.0	1997	229	31	.0	1.0	29.1	.0	3.1	.0
May	81.9	52.5	67.2	103	2000	23	75.5	1996	27+	1991	1	62.6	1990	75	143	.6	6.3	30.9	.0	.1	.0
Jun	90.1	61.6	75.9	109+	1981	21	81.1	1998	40	1964	1	71.4	1989	4	330	3.4	16.6	30.0	.0	.0	.0
Jul	92.6	66.0	79.3	106+	1992	6	84.3	1980	51	1990	14	73.0	1990	0	442	3.2	22.4	31.0	.0	.0	.0
Aug	90.1	64.5	77.3	103+	1994	18	82.2	2000	50+	1962	25	72.5	1971	2	383	.6	18.7	31.0	.0	.0	.0
Sep	84.5	57.2	70.9	103	1995	5	77.0	1998	29	1983	21	64.4	1974	31	205	.5	9.9	29.9	.0	.1	.0
Oct	75.2	45.7	60.5	98	2000	3	64.2	1979	15	1993	30	54.5	1976	174	33	.0	1.1	30.4	.0	1.8	.0
Nov	61.5	33.3	47.4	90	1952	1	54.0	1999	3+	1957	23	40.3	1972	529	0	.0	.0	25.0	.4	14.2	.0
Dec	52.7	25.3	39.0	82+	1983	6	46.8	1980	-6+	1990	23	30.1	1983	805	0	.0	.0	19.8	2.1	25.1	.6
Ann	73.2	44.6	58.9	109+	Jun 1981	21	84.3	Jul 1980	-14	Feb 1951	1	29.0	Jan 1979	3771	1568	8.3	76.1	326.4	7.5	102.4	1.2

\+ 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: 1923-2001

(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	.46	.42	1.77	1939	8	1.70	1983	.00+	1986
Feb	.52	.45	1.22+	1990	20	1.51	1980	.00+	2000
Mar	.99	.76	2.45	1973	10	4.92	1973	.00	1997
Apr	1.08	.67	2.57	1953	5	5.62	1997	.00+	1996
May	2.89	2.31	6.36	1978	27	9.03	1978	.00	1984
Jun	2.96	2.77	4.82	1965	25	6.88	1984	.15	1998
Jul	2.39	2.06	3.60	1928	21	5.58	1993	.09	1980
Aug	2.84	2.56	7.87	1968	29	8.11	1974	.00	2000
Sep	1.97	1.89	3.47	1989	12	7.19	1985	.02	1998
Oct	1.78	.93	3.17	1923	4	8.28	1998	.00+	1992
Nov	.69	.78	2.30	1948	1	2.10	1971	.00+	1999
Dec	.62	.43	2.02	1943	10	3.59	1991	.00+	1996
Ann	19.19	19.33	7.87	Aug 1968	29	9.03	May 1978	.00+	Aug 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.0	1.5	.2	.0
Feb	3.1	1.5	.3	@
Mar	3.9	2.3	.6	.1
Apr	4.3	2.6	.6	.3
May	6.9	4.8	1.8	.7
Jun	7.3	4.8	2.0	.9
Jul	5.6	3.7	1.6	.8
Aug	6.7	4.4	2.0	.9
Sep	4.8	2.9	1.3	.6
Oct	4.5	3.1	1.1	.5
Nov	3.1	1.8	.4	@
Dec	3.2	1.7	.4	@
Ann	56.4	35.1	12.3	4.8

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	.02	.09	.16	.24	.33	.43	.57	.76	1.08	1.40
Feb	.00	.01	.05	.11	.19	.29	.42	.60	.87	1.34	1.83
Mar	.01	.06	.17	.31	.46	.65	.88	1.19	1.62	2.37	3.12
Apr	.00	.06	.22	.39	.57	.78	1.03	1.33	1.77	2.49	3.21
May	.26	.58	1.06	1.48	1.91	2.38	2.92	3.57	4.44	5.85	7.20
Jun	.46	.71	1.14	1.55	1.97	2.43	2.96	3.61	4.48	5.89	7.25
Jul	.34	.54	.88	1.21	1.56	1.94	2.38	2.92	3.64	4.82	5.96
Aug	.16	.42	.86	1.28	1.72	2.22	2.79	3.51	4.48	6.08	7.63
Sep	.09	.19	.41	.67	.97	1.33	1.78	2.36	3.18	4.60	6.01
Oct	.00	.00	.30	.58	.89	1.25	1.67	2.20	2.93	4.17	5.40
Nov	.00	.03	.13	.23	.35	.48	.64	.84	1.13	1.61	2.10
Dec	.00	.01	.06	.13	.22	.35	.51	.72	1.04	1.61	2.19
Ann	13.15	14.31	15.79	16.93	17.94	18.92	19.94	21.06	22.43	24.43	26.17

\+ 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: 1923-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	2.5	1.0	#	#
Feb	2.9	.8	#	0
Mar	1.3	.0	#	0
Apr	.4	.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
Nov	1.5	.0	#	0
Dec	3.0	1.0	#	0
Ann	11.6	2.8	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	11.0	1983	21	13.0	1983	11	1987	18	1	1997
Feb	10.0	1983	1	18.0	1983	16	1986	9	2	1986
Mar	6.0	1987	23	8.0	1988	4	1998	8	#+	1999
Apr	8.0	1997	25	8.0	1997	1	1988	1	#+	2000
May	.0	0	0	.0	0	0	0	0	0	0
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	#	1993	29	#+	1993	0	0	0	0	0
Nov	6.0	1980	16	11.5	1980	6	2000	7	#+	2000
Dec	11.0	2000	26	16.0	1987	14	1987	14	1+	1999
Ann	11.0+	Dec 2000	26	18.0	Feb 1983	16	Feb 1986	9	2	Feb 1986

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	1.4	1.1	.4	.1	@
Feb	1.2	.9	.3	.2	@
Mar	.6	.4	.2	@	.0
Apr	.1	.1	@	@	.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	.7	.5	.2	.1	.0
Dec	1.3	.8	.4	.2	.1
Ann	5.3	3.8	1.5	.6	.1

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.9	.3	.0	.0
Feb	.8	.2	.2	.0
Mar	.4	.2	.0	.0
Apr	@	.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	.4	.1	@	.0
Dec	.9	.3	.2	.0
Ann	3.4	1.1	.4	.0

+ 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	5/09	5/05	5/01	4/28	4/25	4/23	4/20	4/16	4/11
32	4/27	4/22	4/19	4/16	4/13	4/10	4/07	4/03	3/29
28	4/15	4/11	4/07	4/04	4/02	3/30	3/27	3/24	3/20
24	4/06	3/30	3/26	3/21	3/17	3/14	3/09	3/05	2/26
20	3/31	3/23	3/17	3/12	3/08	3/03	2/27	2/21	2/13
16	3/23	3/14	3/07	3/01	2/24	2/19	2/13	2/06	1/28

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	9/26	10/02	10/06	10/10	10/13	10/16	10/20	10/24	10/30
32	10/04	10/10	10/14	10/18	10/22	10/25	10/29	11/02	11/08
28	10/19	10/24	10/28	10/31	11/04	11/07	11/10	11/14	11/19
24	10/31	11/04	11/08	11/11	11/14	11/17	11/20	11/24	11/29
20	11/05	11/11	11/15	11/19	11/22	11/26	11/29	12/04	12/09
16	11/09	11/17	11/23	11/28	12/03	12/07	12/12	12/18	12/26

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	190	183	178	174	170	166	162	157	150
32	211	204	199	195	191	187	183	178	171
28	236	229	224	219	215	211	206	201	193
24	264	256	250	245	241	236	231	225	217
20	285	276	269	264	259	253	248	241	232
16	316	304	295	288	281	274	266	258	246

***** 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)

Base — Heating Degree Days (1)

Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	840	620	462	229	75	4	0	2	31	174	529	805	3771
60	685	483	315	129	28	0	0	0	8	79	387	650	2764
57	593	405	233	83	13	0	0	0	2	43	307	559	2238
55	535	354	185	58	8	0	0	0	0	27	257	501	1925
50	393	237	91	19	1	0	0	0	0	6	154	360	1261
32	57	19	0	0	0	0	0	0	0	0	6	43	125

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	240	323	561	792	1092	1316	1465	1404	1165	882	467	261	9968
55	5	14	34	159	386	626	752	691	475	196	28	6	3372
57	2	9	20	124	330	566	690	629	417	150	18	2	2957
60	0	3	8	80	251	476	597	536	332	93	8	0	2384
65	0	0	1	31	143	330	442	383	205	33	0	0	1568
70	0	0	0	9	67	199	295	241	109	7	0	0	927

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	100	176	346	564	854	1084	1221	1166	928	645	270	109	100	276	622	1186	2040	3124	4345	5511	6439	7084	7354	7463
45	42	96	220	418	701	934	1066	1011	778	492	164	47	42	138	358	776	1477	2411	3477	4488	5266	5758	5922	5969
50	9	41	121	289	546	784	911	856	632	349	83	16	9	50	171	460	1006	1790	2701	3557	4189	4538	4621	4637
55	0	13	54	172	394	634	756	701	486	219	30	0	0	13	67	239	633	1267	2023	2724	3210	3429	3459	3459
60	0	0	17	86	254	484	601	546	344	108	7	0	0	0	17	103	357	841	1442	1988	2332	2440	2447	2447
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	106	162	260	382	540	700	805	772	606	419	202	108	106	268	528	910	1450	2150	2955	3727	4333	4752	4954	5062

(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:
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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