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: FORT STOCKTON, TX **COOP ID: 413280**

Climate Division: TX 5 **NWS Call Sign:** **Elevation: 3,000 Feet** **Lat: 30˚54N** **Lon: 102˚55W**

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	60.9	31.4	46.2	88	1954	27	53.9	1999	4+	1979	2	40.3	1984	584	0	.0	.0	24.5	1.0	17.7	.0
Feb	66.5	35.3	50.9	92	1996	23	58.7	2000	-6	1985	2	45.2	1978	397	2	.0	.1	25.2	.5	10.9	@
Mar	74.0	42.3	58.2	96+	1995	22	64.4	1974	12	1980	2	52.2	1987	233	21	.0	1.0	30.0	@	4.7	.0
Apr	82.1	49.9	66.0	103	1983	30	72.0	1986	23	1997	12	58.4	1997	86	115	.2	7.1	29.7	.0	1.0	.0
May	89.4	59.3	74.4	108+	2000	26	82.0	1996	35	1951	1	68.9	1976	16	307	2.8	16.0	31.0	.0	.0	.0
Jun	95.0	66.9	81.0	117	1994	29	87.0	1980	41+	1970	3	76.6	1979	0	477	6.7	23.6	30.0	.0	.0	.0
Jul	95.8	69.1	82.5	112	1989	3	87.8	1980	43	1942	14	78.3	1975	0	541	6.5	26.4	31.0	.0	.0	.0
Aug	94.5	67.5	81.0	108+	1951	10	85.5	1977	51	1944	31	75.7	1971	0	496	4.0	25.0	31.0	.0	.0	.0
Sep	88.8	62.1	75.5	106	1952	1	82.0	1977	34	1942	27	69.3	1974	6	319	1.5	16.0	30.0	.0	.0	.0
Oct	81.1	51.7	66.4	105	1977	1	70.9	1979	25	1993	31	60.1	1976	61	105	.1	5.4	30.7	.0	.5	.0
Nov	70.5	40.6	55.6	92	1988	9	60.4	1973	13+	1976	30	47.7	1976	303	20	.0	.1	27.6	.1	5.9	.0
Dec	62.3	33.2	47.8	94	1942	24	53.0	1977	1	1989	23	40.4	1989	535	0	.0	.0	25.6	.9	15.9	.0
Ann	80.1	50.8	65.5	117	Jun 1994	29	87.8	Jul 1980	-6	Feb 1985	2	40.3	Jan 1984	2221	2403	21.8	120.7	346.3	2.5	56.6	@

\+ 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: 1940-2001

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

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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	.50	.35	1.20	1946	7	1.69	1981	.00+	1997
Feb	.47	.27	1.90	1997	20	2.55	1997	.00+	1999
Mar	.38	.33	1.47	1999	28	1.60	1999	.00+	1988
Apr	.72	.36	2.62	1949	24	3.01	1982	.00+	2000
May	1.59	1.20	4.05	1989	12	5.84	1992	.00	2000
Jun	1.70	1.54	2.86	1941	6	4.17	1991	.00+	1994
Jul	1.34	1.26	3.23	1993	2	4.32	1993	.00	1983
Aug	1.95	1.87	2.68	1992	25	5.53	1990	.00	2000
Sep	2.75	2.41	4.28	1988	18	10.09	1980	.00	2000
Oct	1.45	.73	5.22	1986	5	8.33	1986	.00	1979
Nov	.61	.55	2.40	1969	28	2.28	1980	.00+	1999
Dec	.60	.34	1.39	1986	22	2.86	1986	.00+	1999
Ann	14.06	12.93	5.22	Oct 1986	5	10.09	Sep 1980	.00+	Sep 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.9	1.5	.3	@
Feb	3.2	1.3	.2	@
Mar	2.6	1.1	.1	@
Apr	2.7	1.5	.5	.2
May	5.5	3.2	1.1	.3
Jun	4.9	2.9	1.1	.4
Jul	5.1	2.7	.9	.2
Aug	5.6	3.8	1.2	.6
Sep	6.0	4.0	2.0	.9
Oct	4.9	3.0	.9	.3
Nov	2.6	1.5	.4	.1
Dec	3.4	1.4	.3	.1
Ann	50.4	27.9	9.0	3.1

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	.00	.06	.13	.21	.32	.44	.61	.84	1.25	1.66
Feb	.00	.01	.06	.12	.20	.29	.41	.56	.78	1.17	1.56
Mar	.00	.00	.00	.08	.15	.24	.34	.47	.65	.96	1.26
Apr	.00	.00	.02	.13	.25	.41	.60	.86	1.23	1.87	2.52
May	.22	.43	.70	.92	1.14	1.38	1.64	1.96	2.37	3.02	3.64
Jun	.00	.15	.44	.70	.99	1.30	1.66	2.11	2.72	3.74	4.73
Jul	.05	.15	.34	.53	.74	.99	1.28	1.64	2.14	2.98	3.81
Aug	.07	.21	.49	.77	1.08	1.43	1.86	2.39	3.13	4.36	5.58
Sep	.16	.42	.84	1.25	1.67	2.15	2.70	3.39	4.32	5.85	7.34
Oct	.01	.04	.15	.32	.53	.81	1.17	1.67	2.40	3.71	5.06
Nov	.00	.00	.00	.05	.20	.36	.54	.77	1.09	1.63	2.15
Dec	.00	.00	.06	.14	.24	.36	.51	.72	1.01	1.53	2.05
Ann	7.23	8.40	9.97	11.22	12.38	13.52	14.74	16.12	17.84	20.41	22.71

\+ 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: 1940-2001
(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	1.7	.0	#	0
Feb	.0	.0	0	0
Mar	.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	1.2	.0	0	0
Dec	.5	.0	#	0
Ann	3.4	.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	8.2	1985	2	13.2	1985	5	1981	18	#+	2000
Feb	.0	0	0	.0	0	0	0	0	0	0
Mar	.0	0	0	.0	0	2	1988	3	#	1988
Apr	.0	0	0	.0	0	0	0	0	0	0
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	.0	0	0	.0	0	0	0	0	0	0
Nov	15.0	1980	17	15.0	1980	0	0	0	0	0
Dec	2.5	1987	15	2.5	1987	#	1997	11	#	1997
Ann	15.0	Nov 1980	17	15.0	Nov 1980	5	Jan 1981	18	#+	Jan 2000

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.4	.4	.1	.1	.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	.2	.2	.2	.2	.1
Dec	.2	.2	.0	.0	.0
Ann	.8	.8	.3	.3	.1

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

@ 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	4/16	4/12	4/09	4/06	4/03	3/31	3/27	3/22
32	4/16	4/09	4/04	3/31	3/26	3/22	3/18	3/13	3/05
28	4/10	4/01	3/25	3/20	3/15	3/10	3/05	2/26	2/17
24	3/30	3/19	3/11	3/05	2/27	2/20	2/14	2/06	1/26
20	3/06	2/22	2/13	2/06	1/30	1/22	1/14	1/04	12/15
16	2/20	2/06	1/26	1/16	1/05	12/21	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	10/13	10/20	10/25	10/29	11/03	11/07	11/11	11/16	11/23
32	10/23	10/30	11/04	11/08	11/12	11/16	11/20	11/26	12/03
28	11/01	11/08	11/12	11/16	11/20	11/23	11/27	12/02	12/08
24	11/07	11/15	11/21	11/26	11/30	12/05	12/10	12/16	12/24
20	11/21	11/29	12/06	12/11	12/17	12/22	12/29	1/07	0/00
16	11/26	12/09	12/19	12/29	1/09	1/24	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	233	225	219	214	210	205	200	194	186
32	256	247	240	235	230	225	219	213	204
28	282	271	262	255	249	242	235	227	216
24	319	305	294	285	276	267	258	248	233
20	>365	>365	348	331	320	311	301	291	277
16	>365	>365	>365	>365	>365	353	326	308	289

***** 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	584	397	233	86	16	0	0	0	6	61	303	535	2221
60	436	268	124	32	4	0	0	0	0	18	189	384	1455
57	350	199	76	15	1	0	0	0	0	7	135	300	1083
55	296	159	52	9	0	0	0	0	0	4	105	247	872
50	181	81	15	0	0	0	0	0	0	0	47	137	461
32	6	0	0	0	0	0	0	0	0	0	0	0	6

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	445	529	811	1019	1314	1467	1564	1519	1303	1067	707	489	12234
55	22	44	149	338	601	777	851	806	613	358	121	22	4702
57	14	28	112	284	540	717	789	744	553	299	92	13	4185
60	7	13	67	211	449	627	696	651	463	217	56	5	3462
65	0	2	21	115	307	477	541	496	319	105	20	0	2403
70	0	0	4	50	186	331	386	342	189	36	5	0	1529

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	246	344	558	769	1054	1217	1308	1256	1052	801	461	275	246	590	1148	1917	2971	4188	5496	6752	7804	8605	9066	9341
45	142	223	413	621	899	1067	1153	1101	902	647	331	166	142	365	778	1399	2298	3365	4518	5619	6521	7168	7499	7665
50	69	130	278	476	744	917	998	946	752	497	208	86	69	199	477	953	1697	2614	3612	4558	5310	5807	6015	6101
55	22	63	164	338	590	767	843	791	604	357	115	34	22	85	249	587	1177	1944	2787	3578	4182	4539	4654	4688
60	1	23	78	214	440	617	688	636	457	221	50	3	1	24	102	316	756	1373	2061	2697	3154	3375	3425	3428
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	203	257	384	495	669	785	848	823	685	513	313	216	203	460	844	1339	2008	2793	3641	4464	5149	5662	5975	6191

(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

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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