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: HARLINGEN, TX **COOP ID: 413943**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 38 Feet** **Lat: 26˚12N** **Lon: 97˚40W**

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	48.4	58.6	91	1946	6	66.1	1989	14	1962	12	51.2	1977	254	57	.0	.1	28.2	.0	1.6	.0
Feb	72.7	51.4	62.1	99	1940	28	69.3	2000	21	1951	1	53.1	1978	143	60	.0	.3	27.0	@	.8	.0
Mar	79.6	57.9	68.8	104	1984	28	73.6	2000	29+	1980	2	62.8	1996	38	154	.1	1.9	30.9	.0	.1	.0
Apr	83.9	63.5	73.7	107	1920	17	77.6	1999	37+	1987	1	69.0	1987	4	266	.1	5.4	30.0	.0	.0	.0
May	88.6	70.0	79.3	105	1974	12	82.5	1989	46+	1976	3	73.7	1976	0	443	.2	14.8	31.0	.0	.0	.0
Jun	92.5	73.5	83.0	106	1956	15	88.1	1998	57	1984	2	80.2	1976	0	540	.3	25.0	30.0	.0	.0	.0
Jul	94.5	74.3	84.4	107+	1954	28	88.1	1998	60+	1963	8	79.8	1976	0	601	1.1	28.3	31.0	.0	.0	.0
Aug	94.9	74.1	84.5	108	1915	18	87.6	1998	60+	1967	15	81.2	1976	0	605	1.3	28.4	31.0	.0	.0	.0
Sep	91.2	71.4	81.3	106+	2000	6	83.9	1980	52+	1942	28	77.2	1975	0	489	.3	21.0	30.0	.0	.0	.0
Oct	85.2	64.3	74.8	100+	1937	5	77.8	1984	33	1993	31	66.5	1976	5	307	.0	8.5	31.0	.0	.0	.0
Nov	77.4	57.0	67.2	97+	1988	5	74.1	1994	29	1969	20	56.8	1976	88	153	.0	.7	29.6	.0	@	.0
Dec	70.4	50.3	60.4	93+	1942	3	68.2	1984	15+	1989	24	49.5	1989	205	61	.0	.1	29.2	.1	1.0	.0
Ann	83.3	63.0	73.2	108	Aug 1915	18	88.1+	Jul 1998	14	Jan 1962	12	49.5	Dec 1989	737	3736	3.4	134.5	358.9	.1	3.5	.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: 1911-2001

(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	1.52	1.11	9.00	1941	28	4.56	1973	.00	1996
Feb	1.83	1.27	7.95	1982	20	9.50	1982	.00	1976
Mar	1.24	.65	2.50	1938	8	5.24	1997	.02	1978
Apr	2.37	1.08	9.79	1991	6	17.15	1991	.00	1983
May	2.72	2.08	6.09	1982	1	11.96	1982	.00	1998
Jun	2.93	2.61	5.01	1939	7	7.51	1973	.00	1982
Jul	1.81	1.08	4.93	1983	15	8.64	1975	.00+	2000
Aug	2.92	2.38	5.87	1916	19	8.96	1973	.21	1993
Sep	5.07	4.28	5.94	1975	1	17.70	1984	.72	2000
Oct	2.94	2.49	4.66	1998	7	9.09	1997	.15	1989
Nov	1.38	.78	3.50	1928	9	5.20	1998	.02	1984
Dec	1.40	1.22	5.50	1940	22	4.33	1986	.09	1990
Ann	28.13	27.40	9.79	Apr 1991	6	17.70	Sep 1984	.00+	Jul 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.2	3.3	.8	.3
Feb	6.2	2.7	.9	.5
Mar	4.7	2.1	.7	.5
Apr	4.4	2.4	1.1	.6
May	5.9	3.6	1.6	.8
Jun	6.6	4.2	1.8	.8
Jul	5.3	3.0	1.2	.4
Aug	7.0	4.6	1.9	.8
Sep	9.9	6.9	2.9	1.3
Oct	6.8	4.1	1.8	.9
Nov	6.4	2.7	.9	.3
Dec	8.1	2.9	.6	.3
Ann	79.5	42.5	16.2	7.5

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	.11	.29	.49	.73	1.02	1.37	1.83	2.47	3.58	4.69
Feb	.02	.10	.30	.53	.82	1.17	1.61	2.18	3.01	4.43	5.87
Mar	.02	.05	.16	.29	.48	.71	1.02	1.43	2.04	3.14	4.27
Apr	.00	.03	.17	.40	.73	1.17	1.78	2.63	3.93	6.30	8.80
May	.08	.27	.63	1.02	1.46	1.96	2.56	3.32	4.38	6.17	7.94
Jun	.11	.34	.77	1.19	1.66	2.19	2.81	3.60	4.69	6.50	8.28
Jul	.00	.06	.28	.54	.84	1.19	1.63	2.19	2.99	4.36	5.74
Aug	.26	.46	.85	1.25	1.70	2.20	2.80	3.56	4.60	6.33	8.03
Sep	.99	1.45	2.20	2.88	3.57	4.32	5.16	6.17	7.52	9.68	11.72
Oct	.38	.61	1.03	1.44	1.87	2.35	2.91	3.60	4.53	6.05	7.53
Nov	.08	.17	.33	.52	.73	.98	1.28	1.66	2.20	3.11	4.01
Dec	.11	.20	.38	.57	.79	1.04	1.33	1.70	2.22	3.09	3.95
Ann	17.96	19.85	22.31	24.21	25.92	27.59	29.32	31.26	33.63	37.12	40.16

\+ 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: 1911-2001
(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	#	.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
Dec	.0	.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	#	1973	11	#	1973	0	0	0	0	0
Feb	.0	0	0	.0	0	0	0	0	0	0
Mar	.0	0	0	.0	0	0	0	0	0	0
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	#	1976	29	#	1976	0	0	0	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	#+	Nov 1976	29	#+	Nov 1976	0	0	0	0	0

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

@ 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	3/10	2/26	2/17	2/09	2/01	1/24	1/15	1/03	0/00
32	2/19	2/07	1/29	1/20	1/10	12/22	0/00	0/00	0/00
28	1/23	1/11	12/29	0/00	0/00	0/00	0/00	0/00	0/00
24	12/28	0/00	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	11/22	12/02	12/09	12/15	12/21	12/27	1/04	1/13	0/00
32	12/12	12/24	1/02	1/11	1/23	0/00	0/00	0/00	0/00
28	12/26	1/05	1/15	0/00	0/00	0/00	0/00	0/00	0/00
24	1/07	0/00	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	>365	>365	359	334	320	309	298	286	270
32	>365	>365	>365	>365	>365	357	338	325	312
28	>365	>365	>365	>365	>365	>365	>365	>365	355
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

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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	254	143	38	4	0	0	0	0	0	5	88	205	737
60	162	72	9	0	0	0	0	0	0	1	38	118	400
57	116	41	3	0	0	0	0	0	0	0	21	76	257
55	88	27	1	0	0	0	0	0	0	0	13	54	183
50	39	8	0	0	0	0	0	0	0	0	4	20	71
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	826	841	1139	1252	1466	1530	1624	1628	1479	1325	1056	879	15045
55	201	225	427	562	753	840	911	915	789	612	379	220	6834
57	167	183	367	502	691	780	849	853	729	550	326	181	6178
60	120	129	280	412	598	690	756	760	639	457	253	130	5224
65	57	60	154	266	443	540	601	605	489	307	153	61	3736
70	24	20	66	138	292	390	446	450	339	170	79	23	2437

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	595	655	901	1020	1228	1302	1385	1390	1247	1092	827	642	595	1250	2151	3171	4399	5701	7086	8476	9723	10815	11642	12284
45	447	514	747	870	1073	1152	1230	1235	1097	937	679	495	447	961	1708	2578	3651	4803	6033	7268	8365	9302	9981	10476
50	320	379	593	720	918	1002	1075	1080	947	783	532	359	320	699	1292	2012	2930	3932	5007	6087	7034	7817	8349	8708
55	206	256	444	571	763	852	920	925	797	628	391	238	206	462	906	1477	2240	3092	4012	4937	5734	6362	6753	6991
60	118	152	304	422	608	702	765	770	647	475	265	142	118	270	574	996	1604	2306	3071	3841	4488	4963	5228	5370
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	363	411	595	701	864	897	940	940	859	751	542	398	363	774	1369	2070	2934	3831	4771	5711	6570	7321	7863	8261

(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