

# Climatology of the United States

No. 20

1971-2000

Station: HEREFORD, TX

COOP ID: 414098

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,820 Feet Lat: 34°49N

Lon: 102°24W

## 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	49.8	21.1	35.5	84	1908	27	41.7	1986	-15	1963	13	26.3	1979	917	0	.0	.0	17.2	4.3	29.0	.2
Feb	55.1	24.6	39.9	83+	1989	26	47.4	1976	-17	1951	1	31.3	1978	703	0	.0	.0	18.5	2.5	22.9	.4
Mar	63.6	30.9	47.3	98+	1907	20	53.3	1974	1	1909	13	43.7	1987	550	0	.0	@	26.3	.7	16.8	.0
Apr	72.0	39.4	55.7	98	1989	23	61.0	1981	14	1940	12	48.9	1973	297	17	.0	.8	28.4	.1	6.0	.0
May	80.2	49.7	65.0	103	2000	24	71.7	1996	16	1909	1	61.5	1980	98	98	.3	4.7	30.8	.0	.2	.0
Jun	88.9	59.1	74.0	111	1910	8	79.8	1980	40	1975	1	69.0	1989	11	281	2.2	14.3	30.0	.0	.0	.0
Jul	91.6	63.5	77.6	107	1940	26	81.6	1998	51	1961	11	74.2	1976	0	390	1.8	19.7	31.0	.0	.0	.0
Aug	89.3	62.1	75.7	105+	1944	2	79.4	2000	40	1905	2	70.8	1971	1	333	.3	15.8	31.0	.0	.0	.0
Sep	82.6	54.3	68.5	102+	1945	4	74.4	1998	31+	2000	25	62.0	1974	44	147	.1	7.8	29.7	.0	.1	.0
Oct	72.9	42.5	57.7	97	2000	4	60.4	1998	15	1991	31	51.5	1976	236	8	.0	.7	30.0	@	2.8	.0
Nov	59.7	30.1	44.9	87	1980	9	51.2	1999	0+	1991	4	38.0	1972	604	0	.0	.0	22.8	.9	18.2	.1
Dec	50.6	22.6	36.6	80+	1939	11	43.2	1980	-12	1911	27	26.7	1983	881	0	.0	.0	17.1	3.4	27.8	.6
Ann	71.4	41.7	56.5	111	Jun 1910	8	81.6	Jul 1998	-17	Feb 1951	1	26.3	Jan 1979	4342	1274	4.7	63.8	312.8	11.9	123.8	1.3

+ 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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1905-2001

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

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National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, North Carolina 28801  
www.ncdc.noaa.gov

**Station: HEREFORD, TX**

**COOP ID: 414098**

**Climate Division: TX 1**

**NWS Call Sign:**

**Elevation: 3,820 Feet Lat: 34°49N**

**Lon: 102°24W**

### Precipitation (inches)

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days <sup>(3)</sup>				Precipitation Probabilities <sup>(1)</sup> Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians <sup>(1)</sup>		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily <sup>(2)</sup>	Year	Day	Highest Monthly <sup>(1)</sup>	Year	Lowest Monthly <sup>(1)</sup>	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.50	.28	2.17	1939	8	2.13	1999	.00+	1996	3.0	1.3	.2	.1	.00	.00	.05	.11	.19	.30	.42	.59	.84	1.26	1.70
Feb	.50	.33	1.20	1911	17	1.59	1986	.00+	2000	3.4	1.8	.2	.0	.00	.00	.05	.14	.24	.35	.48	.64	.85	1.20	1.57
Mar	.98	.60	1.87	1992	28	3.38	1973	.00	1996	4.2	2.2	.6	.2	.01	.04	.14	.26	.42	.60	.84	1.15	1.61	2.40	3.21
Apr	1.02	.86	2.25	1905	23	5.20	1997	.00+	1996	4.7	2.4	.6	.1	.00	.00	.17	.33	.51	.71	.95	1.26	1.68	2.39	3.09
May	2.12	2.23	3.70	1947	15	5.39	1995	.00	1998	6.8	4.2	1.6	.4	.12	.32	.65	.96	1.29	1.66	2.09	2.62	3.34	4.52	5.67
Jun	2.90	2.79	3.96	1999	21	6.54	1999	.00	1990	7.4	5.1	2.1	.7	.20	.50	.96	1.38	1.83	2.32	2.88	3.57	4.51	6.03	7.51
Jul	2.06	1.49	5.30	1950	17	5.81	1982	.22	1974	6.4	3.8	1.2	.5	.24	.40	.69	.98	1.28	1.63	2.03	2.52	3.19	4.31	5.39
Aug	3.22	3.25	5.30	1976	3	8.31	1986	.23	2000	7.7	4.9	1.9	.9	.47	.73	1.20	1.64	2.11	2.62	3.21	3.93	4.90	6.48	8.01
Sep	2.25	1.90	3.26	1999	15	5.45	1985	.00	2000	6.0	3.9	1.4	.4	.22	.49	.86	1.19	1.52	1.88	2.28	2.78	3.43	4.48	5.49
Oct	1.59	1.05	4.70	1998	31	7.89	1998	.00	1975	4.7	2.6	1.1	.4	.03	.13	.32	.55	.80	1.10	1.46	1.93	2.59	3.71	4.83
Nov	.77	.64	3.25	1940	25	2.45	1971	.00+	1999	3.5	2.0	.4	.1	.00	.00	.10	.22	.35	.50	.69	.94	1.27	1.86	2.44
Dec	.74	.45	2.30	1943	9	2.68	1991	.00+	1981	3.8	1.9	.4	.1	.00	.00	.09	.21	.34	.50	.68	.91	1.24	1.78	2.33
Ann	18.65+	17.13+	5.30+	Aug 1976	3	8.31	Aug 1986	.00+	Sep 2000	61.6	36.1	11.7	3.9	11.77	13.04	14.70	15.98	17.13	18.25	19.43	20.74	22.35	24.71	26.77

+ 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: 1905-2001

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

Complete documentation available from:

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**Climate Division: TX 1**

**NWS Call Sign:**

**Elevation: 3,820 Feet**

**Lat: 34° 49N**

**Lon: 102° 24W**

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	4.8	2.8	1	#	12.0	1983	21	15.0	1983	15	1983	22	3	1983	1.9	1.2	.6	.3	.1	3.1	1.8	1.0	.3
Feb	3.0	1.0	#	#	6.0	1983	1	15.5	1986	13	1986	10	3	1986	1.6	1.0	.4	.2	.0	2.0	1.1	.7	.3
Mar	1.5	.0	#	#	4.0	1991	31	7.5	1998	4	1998	8	#+	2000	.8	.6	.2	.0	.0	.6	.1	.0	.0
Apr	.8	.0	#	0	5.0	1997	25	8.8	1997	5	1997	26	1	1997	.4	.3	.1	@	.0	.3	.1	.1	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.3	.0	#	0	2.5	1991	31	2.5	1991	3	1991	31	#+	1999	.1	.1	.0	.0	.0	.1	@	.0	.0
Nov	1.7	.5	#	0	9.0	1992	24	13.0	1992	9	1992	24	2	1992	.8	.6	.1	.1	.0	1.1	.4	.2	.0
Dec	4.8	3.4	#	#	14.0	1987	14	20.5	1999	14	1987	14	2+	2000	2.0	1.4	.5	.2	@	3.5	1.5	1.0	.2
Ann	16.9	7.7	N/A	N/A	14.0	Dec 1987	14	20.5	Dec 1999	15	Jan 1983	22	3+	Feb 1986	7.6	5.2	1.9	.8	.1	10.7	5.0	3.0	.8

+ 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

Complete documentation available from:

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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	5/13	5/08	5/04	5/01	4/29	4/26	4/23	4/19	4/14
32	5/04	4/29	4/25	4/22	4/19	4/16	4/13	4/09	4/04
28	4/14	4/10	4/07	4/04	4/02	3/31	3/28	3/25	3/21
24	4/07	4/02	3/29	3/25	3/22	3/19	3/15	3/11	3/06
20	4/04	3/27	3/21	3/16	3/12	3/07	3/02	2/24	2/16
16	3/21	3/12	3/06	2/28	2/23	2/18	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	9/27	10/01	10/05	10/08	10/10	10/13	10/16	10/19	10/24
32	10/04	10/09	10/13	10/16	10/19	10/22	10/25	10/29	11/04
28	10/18	10/23	10/27	10/31	11/03	11/06	11/10	11/14	11/19
24	10/30	11/05	11/09	11/12	11/15	11/19	11/22	11/26	12/02
20	11/05	11/11	11/16	11/20	11/23	11/27	12/01	12/05	12/12
16	11/12	11/20	11/25	11/30	12/04	12/09	12/13	12/19	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	185	178	173	168	164	160	156	150	143
32	197	192	188	185	182	179	176	173	167
28	232	226	222	218	214	211	207	202	196
24	261	253	247	242	238	233	228	222	214
20	284	274	268	262	256	250	244	237	228
16	315	304	296	290	284	277	271	263	252

\* 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:  
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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	917	703	550	297	98	11	0	1	44	236	604	881	4342
60	762	563	397	181	39	2	0	0	11	114	456	726	3251
57	669	479	307	125	19	0	0	0	4	63	372	633	2671
55	607	427	252	94	11	0	0	0	1	40	319	571	2322
50	457	299	133	37	2	0	0	0	0	10	201	424	1563
32	69	28	1	0	0	0	0	0	0	0	10	54	162

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	176	248	474	710	1023	1261	1413	1354	1093	795	397	196	9140
55	0	4	12	115	320	571	700	641	404	122	15	1	2905
57	0	0	5	86	267	511	638	579	347	83	9	0	2525
60	0	0	1	51	194	422	545	486	264	41	3	0	2007
65	0	0	0	17	98	281	390	333	147	8	0	0	1274
70	0	0	0	4	38	161	238	188	66	1	0	0	696

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	67	128	272	479	776	1021	1163	1106	858	560	212	79	67	195	467	946	1722	2743	3906	5012	5870	6430	6642	6721
45	25	62	161	340	622	871	1008	951	708	409	118	30	25	87	248	588	1210	2081	3089	4040	4748	5157	5275	5305
50	0	23	78	219	468	721	853	796	562	276	49	3	0	23	101	320	788	1509	2362	3158	3720	3996	4045	4048
55	0	3	25	124	324	572	698	641	418	155	15	0	0	3	28	152	476	1048	1746	2387	2805	2960	2975	2975
60	0	0	4	55	195	424	543	486	282	67	2	0	0	0	4	59	254	678	1221	1707	1989	2056	2058	2058
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	88	140	233	337	488	655	764	732	548	365	180	94	88	228	461	798	1286	1941	2705	3437	3985	4350	4530	4624

(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](http://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.  
Complete documentation for the 1971-2000 Normals is available on the internet from:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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 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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)