

Climatology of the United States

No. 20

1971-2000

Station: HEBBRONVILLE, TX

COOP ID: 414058

Climate Division: TX 9

NWS Call Sign:

Elevation: 580 Feet

Lat: 27° 19N

Lon: 98° 41W

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	68.0	43.8	55.9	95+	1975	27	62.4	1998	12	1962	12	48.9	1985	317	35	.0	.3	27.5	.1	4.0	.0
Feb	72.5	47.5	60.0	99	1917	27	67.8	2000	15	1917	2	52.1	1978	182	43	.0	1.1	26.5	.1	1.7	.0
Mar	80.1	55.1	67.6	102	1984	27	72.1	2000	20	1917	5	61.6	1996	55	135	.1	3.5	30.8	.0	.6	.0
Apr	85.7	61.4	73.6	109+	1963	10	78.7	1986	33+	1987	3	68.4	1997	10	266	.6	9.2	30.0	.0	.0	.0
May	91.0	68.4	79.7	110	1995	14	84.1	1998	47	1917	8	74.9	1976	0	456	1.7	18.3	31.0	.0	.0	.0
Jun	95.3	72.4	83.9	111	1998	15	88.6	1998	53	1984	2	81.4	1974	0	566	4.5	26.3	30.0	.0	.0	.0
Jul	97.5	73.2	85.4	109	1998	14	89.6	1998	61	1935	16	80.3	1976	0	632	8.5	29.5	31.0	.0	.0	.0
Aug	97.7	72.9	85.3	108+	1999	16	88.2	1997	60	1967	14	81.7	1973	0	630	10.2	29.4	31.0	.0	.0	.0
Sep	92.9	69.6	81.3	110	2000	6	85.1	1986	48+	1981	19	76.7	1974	0	488	2.0	23.3	30.0	.0	.0	.0
Oct	85.8	61.3	73.6	100+	1986	11	77.5	1984	26	1993	31	65.9	1976	6	272	@	9.5	30.9	.0	@	.0
Nov	76.9	52.7	64.8	95+	1992	4	70.9	1973	27	1975	23	56.2	1976	114	108	.0	1.3	29.5	.0	.6	.0
Dec	69.2	45.3	57.3	93+	1977	5	66.5	1984	12	1989	23	47.0	1989	280	39	.0	.3	28.8	@	3.0	.0
Ann	84.4	60.3	72.4	111	Jun 1998	15	89.6	Jul 1998	12+	Dec 1989	23	47.0	Dec 1989	964	3670	27.6	152.0	357.0	.2	9.9	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

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

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Lon: **98° 41W**

Precipitation (inches)

		Precipitation Totals								Mean Number of Days (3)				Precipitation Probabilities (1)										
														Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
Means/Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels											
													These values were determined from the incomplete gamma distribution											
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.12	.81	3.80	1958	5	4.52	1992	.00+	1999	6.6	3.4	.6	.1	.00	.00	.24	.43	.63	.84	1.10	1.41	1.82	2.52	3.20
Feb	1.40	.89	2.15	1987	25	4.19	1992	.06	1974	5.3	3.0	.9	.3	.08	.16	.34	.52	.74	.99	1.30	1.69	2.24	3.18	4.10
Mar	1.14	.87	6.00	1923	26	3.77	1974	.00+	1989	4.2	2.2	.6	.2	.00	.03	.16	.32	.50	.73	1.01	1.37	1.89	2.79	3.70
Apr	1.69	1.03	3.70	1962	23	6.66	1979	.00+	1999	4.5	2.5	1.2	.5	.00	.00	.19	.44	.72	1.06	1.49	2.04	2.82	4.18	5.54
May	3.33	2.82	6.50	1982	24	15.25	1982	.00+	2000	5.6	3.9	2.0	1.1	.00	.00	.88	1.47	2.04	2.65	3.36	4.22	5.34	7.20	8.99
Jun	3.13	2.24	6.10	1973	22	13.76	1973	.11	1982	5.4	4.3	2.1	.9	.20	.39	.78	1.20	1.69	2.25	2.93	3.79	5.00	7.05	9.09
Jul	1.44	.79	3.68	1942	6	8.99	1976	.00+	1993	4.0	2.8	1.2	.3	.00	.00	.23	.45	.70	.99	1.34	1.78	2.39	3.43	4.46
Aug	2.28	1.16	4.75	1938	27	8.70	1973	.00+	1993	4.6	3.2	1.4	.6	.00	.00	.19	.48	.85	1.31	1.90	2.69	3.83	5.83	7.88
Sep	3.68	2.48	9.40	1971	12	16.58	1971	.03	1982	6.2	4.5	2.2	1.0	.16	.34	.75	1.23	1.80	2.47	3.31	4.41	5.96	8.63	11.32
Oct	2.22	1.98	3.00+	1995	29	7.15	1995	.00+	1989	5.0	3.1	1.5	.7	.00	.34	.78	1.13	1.48	1.86	2.28	2.78	3.45	4.53	5.56
Nov	1.22	.80	3.50	1995	17	4.60	1995	.00+	1994	4.0	2.3	.9	.2	.00	.00	.13	.38	.62	.88	1.19	1.56	2.06	2.88	3.72
Dec	1.10	.50	3.95	1991	22	7.94	1991	.00	1973	5.4	2.7	.5	.1	.02	.09	.22	.38	.55	.76	1.01	1.33	1.78	2.55	3.32
Ann	23.75	23.33	9.40	Sep 1971	12	16.58	Sep 1971	.00+	May 2000	60.8	37.9	15.1	6.0	11.76	13.77	16.51	18.70	20.73	22.75	24.90	27.35	30.40	35.00	39.12

+ 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

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Lon: **98° 41W**

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	#	.0	0	0	#	1985	2	#+	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	#	.0	0	0	#	1989	6	#+	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	0	0	#	1997	12	#+	1997	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#+	Dec 1997	12	#+	Dec 1997	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0

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

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-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	3/28	3/18	3/12	3/06	2/28	2/23	2/17	2/10	1/31
32	3/12	3/01	2/21	2/14	2/08	2/01	1/25	1/17	1/04
28	2/24	2/14	2/06	1/31	1/24	1/17	1/07	0/00	0/00
24	1/17	1/09	1/02	12/24	0/00	0/00	0/00	0/00	0/00
20	12/30	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	11/13	11/18	11/22	11/25	11/29	12/02	12/05	12/09	12/15
32	11/17	11/25	12/01	12/06	12/11	12/16	12/21	12/27	1/06
28	11/29	12/11	12/20	12/28	1/05	1/15	1/29	0/00	0/00
24	12/18	12/26	1/02	1/10	0/00	0/00	0/00	0/00	0/00
20	12/29	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	306	295	286	279	273	266	259	251	239
32	361	338	326	316	307	298	289	279	265
28	>365	>365	>365	>365	354	338	327	315	302
24	>365	>365	>365	>365	>365	>365	>365	362	341
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)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	317	182	55	10	0	0	0	0	0	6	114	280	964
60	209	101	16	1	0	0	0	0	0	1	53	177	558
57	158	64	6	0	0	0	0	0	0	0	30	128	386
55	126	45	3	0	0	0	0	0	0	0	20	99	293
50	61	15	0	0	0	0	0	0	0	0	6	44	126
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	741	785	1103	1246	1479	1556	1655	1653	1478	1289	984	782	14751
55	155	185	393	556	766	866	942	940	788	576	314	168	6649
57	124	149	334	496	704	806	880	878	728	514	264	135	6012
60	82	102	251	406	611	716	787	785	638	422	197	91	5088
65	35	43	135	266	456	566	632	630	488	272	108	39	3670
70	14	14	56	146	306	416	477	475	338	142	46	15	2445

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	495	586	846	999	1228	1312	1404	1404	1240	1045	753	547	495	1081	1927	2926	4154	5466	6870	8274	9514	10559	11312	11859
45	365	447	693	849	1073	1162	1249	1249	1090	890	605	404	365	812	1505	2354	3427	4589	5838	7087	8177	9067	9672	10076
50	244	319	543	699	918	1012	1094	1094	940	735	457	272	244	563	1106	1805	2723	3735	4829	5923	6863	7598	8055	8327
55	143	204	397	552	763	862	939	939	790	584	326	171	143	347	744	1296	2059	2921	3860	4799	5589	6173	6499	6670
60	73	116	263	408	608	712	784	784	640	431	215	93	73	189	452	860	1468	2180	2964	3748	4388	4819	5034	5127
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	314	369	552	670	834	882	928	921	833	703	488	343	314	683	1235	1905	2739	3621	4549	5470	6303	7006	7494	7837

(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/normal/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
- 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

- U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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