

Climatography of the United States

No. 20

1971-2000

Station: BRENHAM, TX

COOP ID: 411048

Climate Division: TX 7

NWS Call Sign:

Elevation: 313 Feet Lat: 30° 10N Lon: 96° 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	61.9	39.3	50.6	86+	1972	24	57.0	1990	-2+	1930	19	41.0	1978	464	8	.0	.0	24.8	.6	7.3	.0
Feb	66.4	42.7	54.6	94	1986	21	61.7	1999	1	1949	1	43.7	1978	310	16	.0	.2	24.7	.4	4.1	.0
Mar	73.7	49.5	61.6	97	1946	30	67.3	1974	17	1943	3	55.2	1996	151	46	.0	.4	30.3	.0	1.2	.0
Apr	80.1	56.8	68.5	98	1951	20	73.0	1981	32+	1928	15	64.0	1997	36	139	.0	1.4	30.0	.0	.0	.0
May	86.8	64.9	75.9	101+	1996	30	80.5	1996	42	1954	4	71.4	1976	3	339	.1	9.4	31.0	.0	.0	.0
Jun	92.8	71.1	82.0	105	1980	28	86.7	1998	53+	1984	1	78.8	1983	0	509	1.2	22.8	30.0	.0	.0	.0
Jul	96.7	73.3	85.0	109	1917	11	89.1	1998	58+	1967	17	81.2	1976	0	621	6.9	28.7	31.0	.0	.0	.0
Aug	96.9	72.9	84.9	111	1909	19	88.7	1999	58	1967	13	81.1	1973	0	616	7.8	28.9	31.0	.0	.0	.0
Sep	91.3	67.9	79.6	113	2000	5	83.5	1998	43	1942	27	72.9	1974	0	438	1.6	20.4	30.0	.0	.0	.0
Oct	82.5	58.5	70.5	99	1937	4	72.8	1988	29+	1993	31	61.8	1976	22	191	.0	6.2	31.0	.0	@	.0
Nov	71.3	48.8	60.1	96+	1927	28	65.7	1973	21	1911	30	52.0	1976	203	53	.0	@	28.9	@	1.0	.0
Dec	63.7	41.4	52.6	87	1928	4	61.4	1984	4	1989	23	43.4	1983	400	13	.0	.0	26.3	.3	5.2	.0
Ann	80.3	57.3	68.8	113	Sep 2000	5	89.1	Jul 1998	-2+	Jan 1930	19	41.0	Jan 1978	1589	2989	17.6	118.4	349.0	1.3	18.8	.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: 1902-2001

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

040-A

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: BRENHAM, TX

COOP ID: 411048

Climate Division: TX 7

NWS Call Sign:

Elevation: 313 Feet

Lat: 30°10N

Lon: 96°24W

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	3.41	2.76	3.11	1949	16	7.93	1989	.19	1971	10.0	5.6	2.2	1.1	.43	.70	1.18	1.66	2.16	2.72	3.37	4.17	5.25	7.04	8.76
Feb	2.78	2.28	4.47	1904	19	8.23	1992	.22	1999	8.2	4.9	1.7	.8	.45	.69	1.10	1.48	1.87	2.30	2.80	3.40	4.20	5.50	6.75
Mar	2.93	2.82	7.28	1946	13	7.37	1983	.25	1971	9.2	4.9	1.8	.7	.60	.87	1.30	1.69	2.09	2.51	2.99	3.56	4.31	5.52	6.67
Apr	3.39	3.00	6.46	1972	28	8.34	1972	.21	1983	7.4	4.2	2.2	1.3	.45	.72	1.20	1.67	2.17	2.72	3.36	4.14	5.20	6.94	8.62
May	5.14	4.53	6.16	1965	11	10.53	2000	.09	1998	8.6	6.4	3.3	1.9	.93	1.39	2.14	2.84	3.56	4.33	5.21	6.27	7.69	9.97	12.14
Jun	4.66	4.38	7.08	1921	23	12.63	1987	.59	1990	7.2	5.1	2.7	1.3	.93	1.35	2.03	2.66	3.29	3.97	4.74	5.67	6.90	8.87	10.74
Jul	1.93	1.71	5.81	1906	18	7.84	1988	.09	1980	6.0	3.7	1.2	.4	.14	.27	.52	.78	1.08	1.42	1.82	2.34	3.05	4.26	5.44
Aug	3.14	2.65	6.08	1923	29	11.20	1974	.05+	1993	6.9	4.6	1.8	.8	.08	.20	.51	.90	1.37	1.96	2.71	3.70	5.13	7.65	10.21
Sep	4.83	4.75	6.85	1961	12	15.55	1998	.54	1999	7.6	5.3	2.6	1.6	.79	1.21	1.91	2.58	3.26	4.01	4.86	5.90	7.28	9.53	11.68
Oct	4.48	3.48	10.38	1994	17	17.51	1994	.37	1987	7.1	5.3	2.6	1.3	.43	.76	1.37	1.99	2.67	3.43	4.34	5.47	7.02	9.59	12.12
Nov	4.17	3.33	5.39	1998	13	10.02	1998	.75	1999	8.6	5.7	2.6	1.3	.83	1.21	1.82	2.39	2.95	3.56	4.25	5.08	6.17	7.93	9.59
Dec	3.29	2.88	4.25	1915	7	7.86	1991	.55	1989	9.7	5.6	2.3	.8	.83	1.14	1.62	2.04	2.46	2.90	3.39	3.98	4.74	5.95	7.08
Ann	44.15	43.72	10.38	Oct 1994	17	17.51	Oct 1994	.05+	Aug 1993	96.5	61.3	27.0	13.3	28.65	31.54	35.31	38.21	40.81	43.35	45.99	48.93	52.52	57.79	62.39

+ 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: 1902-2001

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

Complete documentation available from:
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Station: BRENHAM, TX

COOP ID: 411048

Climate Division: TX 7

NWS Call Sign:

Elevation: 313 Feet

Lat: 30°10N

Lon: 96°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	.2	.0	#	0	3.0	1973	11	3.0	1973	3	1973	11	#+	1982	.1	.1	.1	.0	.0	@	@	.0	.0
Feb	#	.0	#	0	#	1982	6	#+	1982	3	1973	9	#+	1988	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1994	9	#	1994	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	.2	.0	0	0	2.0	1976	29	3.0	1976	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	0	0	#	1989	22	#	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.4	.0	N/A	N/A	3.0	Jan 1973	11	3.0+	Nov 1976	3+	Feb 1973	9	#+	Feb 1988	.2	.2	.1	.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

Complete documentation available from:

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NWS Call Sign:

Elevation: 313 Feet

Lat: 30° 10N

Lon: 96° 24W

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	3/31	3/23	3/17	3/12	3/07	3/02	2/25	2/19	2/11
32	3/18	3/09	3/02	2/25	2/20	2/14	2/09	2/02	1/25
28	3/06	2/22	2/13	2/06	1/30	1/23	1/15	1/05	12/22
24	2/24	2/11	2/01	1/23	1/13	1/02	12/12	0/00	0/00
20	2/08	1/29	1/21	1/13	1/02	0/00	0/00	0/00	0/00
16	1/20	1/07	12/21	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	10/30	11/06	11/11	11/15	11/19	11/23	11/28	12/03	12/09
32	11/14	11/21	11/27	12/01	12/05	12/10	12/14	12/19	12/27
28	11/28	12/05	12/10	12/15	12/19	12/23	12/28	1/02	1/10
24	12/04	12/16	12/26	1/03	1/13	1/25	0/00	0/00	0/00
20	12/26	1/06	1/15	1/26	2/12	0/00	0/00	0/00	0/00
16	12/29	1/11	1/27	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	285	275	268	262	257	251	245	238	228
32	320	309	301	294	288	282	275	267	256
28	>365	358	342	331	322	314	305	295	282
24	>365	>365	>365	>365	>365	345	331	319	305
20	>365	>365	>365	>365	>365	>365	>365	350	337
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

Complete documentation available from:
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Climate Division: TX 7 NWS Call Sign: Elevation: 313 Feet Lat: 30°10N Lon: 96°24W

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	464	310	151	36	3	0	0	0	0	22	203	400	1589
60	333	199	69	7	0	0	0	0	0	4	116	268	996
57	265	147	37	2	0	0	0	0	0	1	77	202	731
55	225	117	23	0	0	0	0	0	0	1	56	165	587
50	142	57	5	0	0	0	0	0	0	0	21	88	313
32	8	0	0	0	0	0	0	0	0	0	0	0	8

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	584	631	918	1093	1358	1499	1644	1639	1428	1193	840	636	13463
55	88	104	228	404	645	809	931	926	738	480	206	88	5647
57	66	77	180	345	583	749	869	864	678	419	167	63	5060
60	41	46	119	260	490	659	776	771	588	329	117	36	4232
65	8	16	46	139	339	509	621	616	438	191	53	13	2989
70	6	5	12	56	200	359	466	461	294	85	19	1	1964

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	363	446	682	863	1113	1257	1397	1393	1198	955	615	413	363	809	1491	2354	3467	4724	6121	7514	8712	9667	10282	10695
45	245	319	532	713	958	1107	1242	1238	1048	801	473	282	245	564	1096	1809	2767	3874	5116	6354	7402	8203	8676	8958
50	150	210	385	563	803	957	1087	1083	898	646	340	176	150	360	745	1308	2111	3068	4155	5238	6136	6782	7122	7298
55	78	122	257	417	648	807	932	928	748	494	220	98	78	200	457	874	1522	2329	3261	4189	4937	5431	5651	5749
60	36	61	145	281	493	657	777	773	598	348	130	46	36	97	242	523	1016	1673	2450	3223	3821	4169	4299	4345
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	224	273	430	568	768	862	930	923	804	639	384	248	224	497	927	1495	2263	3125	4055	4978	5782	6421	6805	7053

(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

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 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