

# Climatography of the United States No. 20

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

Station: THOMPSONS 3 WSW, TX

1971-2000

COOP ID: 418996

Climate Division: TX 8

NWS Call Sign:

Elevation: 72 Feet

Lat: 29°29N

Lon: 95°38W

## 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	62.4	43.2	52.8	85	1982	4	58.9	1989	13	1962	12	44.1	1977	401	18	.0	.0	26.4	.1	5.0	.0
Feb	66.1	45.8	56.0	88+	2001	28	63.6	2000	20+	1989	5	45.0	1978	278	25	.0	.0	25.4	.1	2.8	.0
Mar	73.0	52.7	62.9	92+	1989	31	68.0	2000	21	1943	3	57.4	1996	118	51	.0	.1	30.5	.0	.8	.0
Apr	79.3	58.5	68.9	99	1944	16	73.2	1999	35+	1987	4	65.0	1973	22	140	.0	.7	30.0	.0	.0	.0
May	85.7	66.0	75.9	99	1998	31	80.4	1998	45	1945	17	71.7	1976	2	337	.0	7.0	31.0	.0	.0	.0
Jun	91.0	71.8	81.4	101+	1990	24	86.2	1998	45	1988	1	79.0	1973	0	491	.3	21.3	30.0	.0	.0	.0
Jul	93.7	73.8	83.8	103+	2000	21	87.4	1998	59	1967	16	81.1	1976	0	582	1.5	27.5	31.0	.0	.0	.0
Aug	93.9	73.4	83.7	104+	2000	31	87.4	1999	60+	1992	29	80.9	1992	0	578	1.5	27.1	31.0	.0	.0	.0
Sep	89.7	69.3	79.5	100+	1999	9	82.2	1998	42	1967	29	75.0	1974	0	435	.3	17.8	30.0	.0	.0	.0
Oct	82.3	60.1	71.2	95+	1998	1	73.8	1998	32	1989	20	62.7	1976	17	209	.0	4.3	31.0	.0	@	.0
Nov	72.6	52.3	62.5	91	1992	1	69.0	1973	21	1976	29	53.7	1976	155	79	.0	@	29.3	.0	.6	.0
Dec	65.0	45.2	55.1	85	1995	4	63.6	1984	8	1989	23	45.4	1989	330	22	.0	.0	28.0	.2	3.1	.0
Ann	79.6	59.3	69.5	104+	Aug 2000	31	87.4+	Aug 1999	8	Dec 1989	23	44.1	Jan 1977	1323	2967	3.6	105.8	353.6	.4	12.3	.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](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: 1942-2001

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

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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	3.78	3.14	3.37	1991	15	10.49	1991	.25	1971	10.2	6.5	2.7	1.2	.74	1.08	1.63	2.14	2.66	3.21	3.84	4.60	5.60	7.21	8.74
Feb	2.61	2.10	3.04	1987	26	7.58	1992	.21	1996	7.8	4.6	1.6	.7	.34	.55	.93	1.29	1.67	2.09	2.59	3.19	4.01	5.35	6.64
Mar	2.99	2.33	3.71	1973	24	8.15	1997	.46	1978	7.9	4.7	2.0	.9	.56	.82	1.26	1.67	2.08	2.53	3.03	3.65	4.46	5.77	7.01
Apr	3.28	2.39	6.75	1966	14	9.84	1997	.03	1987	6.8	4.1	2.2	1.2	.30	.53	.98	1.43	1.93	2.50	3.17	4.00	5.16	7.08	8.96
May	4.22	3.93	4.00+	1968	11	8.29	1981	.00	1998	8.1	5.6	3.0	1.6	.75	1.33	2.05	2.62	3.18	3.77	4.41	5.17	6.16	7.72	9.16
Jun	4.98	4.32	8.48	1960	26	13.93	1973	.44	1990	9.1	6.6	2.9	1.5	.91	1.35	2.08	2.76	3.45	4.20	5.05	6.07	7.44	9.64	11.74
Jul	3.24	2.81	6.40	1943	28	9.99	1979	.31	1994	8.1	5.3	1.9	.8	.48	.76	1.23	1.67	2.14	2.65	3.24	3.96	4.92	6.49	8.00
Aug	4.21	3.96	8.80	1989	2	10.97	1989	.10	1999	8.9	6.4	2.8	1.2	.65	1.00	1.61	2.19	2.80	3.46	4.21	5.14	6.38	8.40	10.34
Sep	5.30	4.18	9.53	1983	19	14.28	1979	.45	1975	9.5	6.4	2.5	1.6	.70	1.12	1.88	2.61	3.39	4.25	5.24	6.47	8.13	10.84	13.47
Oct	3.46	2.24	6.05	1959	31	12.26	1984	.33	1987	7.1	4.8	2.4	1.0	.33	.58	1.05	1.53	2.05	2.65	3.35	4.22	5.43	7.43	9.39
Nov	4.29	4.23	7.81	1985	12	11.27	2000	.19	1994	8.7	5.2	2.7	1.5	.53	.87	1.48	2.07	2.71	3.41	4.23	5.24	6.61	8.86	11.04
Dec	3.45	3.15	3.20	1991	22	8.84	1991	.89	1980	9.3	5.6	2.2	1.0	1.05	1.38	1.87	2.29	2.70	3.12	3.59	4.14	4.85	5.96	6.98
Ann	45.81	45.94	9.53	Sep 1983	19	14.28	Sep 1979	.00	May 1998	101.5	65.8	28.9	14.2	27.82	31.09	35.40	38.75	41.78	44.74	47.85	51.33	55.61	61.91	67.46

+ 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: 1942-2001

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

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**Lon: 95°38W**

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	#	1987	21	#+	1987	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.1	.0	#	0	1.5	1973	9	1.5	1973	2	1973	9	#	1973	.1	.1	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.1	.0	N/A	N/A	1.5	Feb 1973	9	1.5	Feb 1973	2	Feb 1973	9	#	Feb 1973	.1	.1	.0	.0	.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	3/28	3/19	3/14	3/09	3/04	2/27	2/22	2/17	2/09
32	3/17	3/06	2/26	2/20	2/13	2/07	1/31	1/22	1/09
28	3/04	2/21	2/12	2/05	1/29	1/21	1/12	12/30	0/00
24	2/11	1/29	1/18	1/07	12/23	0/00	0/00	0/00	0/00
20	1/18	1/06	12/22	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	10/31	11/07	11/12	11/16	11/20	11/23	11/27	12/02	12/09
32	11/12	11/21	11/27	12/03	12/08	12/13	12/18	12/25	1/04
28	11/27	12/07	12/15	12/22	12/28	1/05	1/14	1/30	0/00
24	12/14	12/26	1/05	1/16	2/02	0/00	0/00	0/00	0/00
20	12/29	1/10	1/27	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	292	281	273	266	260	253	247	239	227
32	353	329	316	306	296	288	278	267	253
28	>365	>365	>365	351	333	320	309	298	283
24	>365	>365	>365	>365	>365	>365	362	335	315
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

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	401	278	118	22	2	0	0	0	0	17	155	330	1323
60	277	177	46	2	0	0	0	0	0	3	81	212	798
57	216	130	22	0	0	0	0	0	0	1	49	156	574
55	181	102	13	0	0	0	0	0	0	0	34	124	454
50	104	48	3	0	0	0	0	0	0	0	11	58	224
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	645	670	957	1108	1358	1481	1605	1601	1425	1216	914	715	13695
55	113	128	256	418	645	791	892	888	735	503	257	125	5751
57	85	100	204	358	583	731	830	826	675	442	213	96	5143
60	53	64	135	270	490	641	737	733	585	351	155	58	4272
65	18	25	51	140	337	491	582	578	435	209	79	22	2967
70	9	9	11	51	194	341	427	423	286	96	30	8	1885

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	408	482	717	874	1117	1246	1362	1358	1191	969	671	478	408	890	1607	2481	3598	4844	6206	7564	8755	9724	10395	10873
45	278	352	565	724	962	1096	1207	1203	1041	814	527	338	278	630	1195	1919	2881	3977	5184	6387	7428	8242	8769	9107
50	168	234	417	575	807	946	1052	1048	891	659	386	221	168	402	819	1394	2201	3147	4199	5247	6138	6797	7183	7404
55	89	137	280	426	652	796	897	893	741	507	258	128	89	226	506	932	1584	2380	3277	4170	4911	5418	5676	5804
60	43	69	158	286	497	646	742	738	591	358	156	67	43	112	270	556	1053	1699	2441	3179	3770	4128	4284	4351
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	235	286	449	584	781	868	930	927	821	652	426	281	235	521	970	1554	2335	3203	4133	5060	5881	6533	6959	7240

(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.  
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)