

Climatography of the United States

No. 20

1971-2000

Station: FLATONIA, TX

COOP ID: 413183

Climate Division: TX 7

NWS Call Sign:

Elevation: 520 Feet Lat: 29°40N Lon: 97°07W

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	61.8	42.3	52.1	90+	1975	26	59.8	1971	4	1930	18	42.3	1978	424	14	.0	@	25.7	.3	6.1	.0
Feb	66.0	45.6	55.8	99	1996	21	62.4	1976	12+	1951	2	45.9	1978	277	19	.0	.2	25.3	.4	3.3	.0
Mar	73.4	52.5	63.0	98+	1971	28	69.5	1974	18	1980	2	58.4	1996	123	60	.0	.5	30.6	.0	.9	.0
Apr	79.3	58.8	69.1	100	1920	16	74.2	1972	30	1920	5	63.1	1997	31	151	.0	1.1	30.0	.0	.1	.0
May	85.2	65.9	75.6	103	1925	24	80.9	1996	43	1954	4	72.0	1992	3	330	.0	6.5	31.0	.0	.0	.0
Jun	90.8	71.1	81.0	107	1934	17	85.3	1990	50+	1965	27	78.5	1995	0	478	.6	19.3	30.0	.0	.0	.0
Jul	94.6	73.0	83.8	110+	1954	26	88.0	1998	57	1967	16	80.7	1976	0	582	4.1	27.9	31.0	.0	.0	.0
Aug	94.9	72.9	83.9	111	1917	23	86.5	1985	57	1967	13	81.1	1992	0	586	2.7	28.1	31.0	.0	.0	.0
Sep	90.0	68.6	79.3	108	2000	4	83.3+	1977	41	1942	27	74.0	1974	0	429	.7	18.0	30.0	.0	.0	.0
Oct	81.9	60.5	71.2	102	1938	2	73.7	1971	27	1917	30	63.3	1976	16	208	.0	3.9	30.9	.0	@	.0
Nov	71.1	51.4	61.3	92	1969	8	69.5	1973	19+	1976	30	54.3	1976	180	67	.0	.0	29.0	.0	1.2	.0
Dec	63.4	44.1	53.8	95	1917	3	62.5	1984	3	1989	23	44.3	1989	368	20	.0	.0	27.2	.4	4.8	.0
Ann	79.4	58.9	69.2	111	Aug 1917	23	88.0	Jul 1998	3	Dec 1989	23	42.3	Jan 1978	1422	2944	8.1	105.5	351.7	1.1	16.4	.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: 1908-2001

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

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No. 20

1971-2000

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

Station: FLATONIA, TX

COOP ID: 413183

Climate Division: TX 7

NWS Call Sign:

Elevation: 520 Feet Lat: 29°40N

Lon: 97°07W

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	2.71	2.17	4.50	1916	2	7.17	1991	.04	1996	8.2	4.7	1.7	.6	.17	.33	.66	1.03	1.45	1.94	2.53	3.28	4.34	6.13	7.91
Feb	2.34	2.18	4.20	1949	25	7.62	1992	.21	1996	6.8	4.3	1.5	.6	.37	.57	.91	1.23	1.56	1.93	2.35	2.86	3.55	4.66	5.72
Mar	2.51	2.23	3.06	1937	5	6.15	1993	1.04	1982	6.9	4.3	1.6	.8	.79	1.03	1.39	1.69	1.98	2.28	2.62	3.01	3.51	4.29	5.02
Apr	2.92	1.95	6.42	1935	26	11.26	1976	.09	1983	6.2	3.9	2.0	.9	.19	.37	.73	1.13	1.58	2.10	2.73	3.54	4.65	6.55	8.43
May	5.38	5.61	5.70	1914	12	12.64	1972	.00	1996	7.5	5.9	3.4	1.9	.45	1.04	1.92	2.71	3.52	4.40	5.41	6.64	8.29	10.96	13.52
Jun	4.46	3.81	14.21	1940	30	13.04	1987	.54	1982	7.4	5.4	2.8	1.3	.80	1.19	1.84	2.45	3.07	3.75	4.51	5.44	6.67	8.66	10.56
Jul	1.84	1.33	5.70	1936	16	5.70	1976	.00+	1986	4.6	3.4	1.2	.4	.00	.13	.41	.70	1.00	1.35	1.76	2.27	2.98	4.16	5.32
Aug	2.68	1.41	11.78	1981	31	13.19	1981	.18	1993	5.6	3.9	1.6	.7	.09	.21	.50	.84	1.25	1.75	2.37	3.19	4.36	6.40	8.45
Sep	3.83	3.62	9.52	1957	25	9.45	1971	.29	1993	6.5	4.9	2.4	1.1	.61	.94	1.49	2.02	2.57	3.16	3.84	4.68	5.79	7.60	9.33
Oct	4.22	2.92	8.60	1998	18	14.10	1998	.24	1999	6.4	4.3	2.2	1.3	.23	.46	.96	1.53	2.18	2.95	3.88	5.09	6.78	9.68	12.57
Nov	3.10	2.34	5.70	1985	24	8.76	2000	.25	1999	7.0	4.6	1.8	1.0	.47	.73	1.18	1.61	2.05	2.54	3.10	3.78	4.70	6.20	7.64
Dec	2.60	2.00	3.88	1930	4	12.26	1991	.41	1983	7.4	4.8	1.7	.6	.34	.55	.92	1.28	1.66	2.08	2.57	3.17	3.98	5.31	6.60
Ann	38.59	37.52	14.21	Jun 1940	30	14.10	Oct 1998	.00+	May 1996	80.5	54.4	23.9	11.2	22.98	25.80	29.52	32.42	35.04	37.62	40.33	43.36	47.09	52.62	57.48

+ 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: 1908-2001

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

Complete documentation available from:
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Station: FLATONIA, TX

COOP ID: 413183

Climate Division: TX 7

NWS Call Sign:

Elevation: 520 Feet

Lat: 29°40N

Lon: 97°07W

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	.5	.0	#	0	4.0	1985	13	7.0	1985	1	1973	11	#+	1997	.2	.2	.1	.0	.0	@	.0	.0	.0
Feb	.2	.0	0	0	3.0	1973	9	3.0	1973	0	0	0	0	0	.1	.1	.1	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1989	5	#	1989	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	#	1996	16	#+	1996	#+	2000	13	#+	2000	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.7	.0	N/A	N/A	4.0	Jan 1985	13	7.0	Jan 1985	1	Jan 1973	11	#+	Dec 2000	.3	.3	.2	.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

Complete documentation available from:

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Climate Division: TX 7

NWS Call Sign:

Elevation: 520 Feet

Lat: 29° 40N

Lon: 97° 07W

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	4/04	3/26	3/20	3/15	3/10	3/05	2/28	2/21	2/13
32	3/24	3/14	3/07	2/28	2/23	2/17	2/10	2/03	1/24
28	3/13	2/28	2/19	2/11	2/04	1/28	1/20	1/10	12/25
24	2/26	2/15	2/07	1/30	1/23	1/14	1/01	0/00	0/00
20	2/09	1/30	1/21	1/12	12/31	0/00	0/00	0/00	0/00
16	1/14	1/04	12/23	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	11/24	11/28	12/03	12/09
32	11/08	11/17	11/23	11/29	12/04	12/09	12/14	12/20	12/29
28	11/20	12/01	12/08	12/15	12/22	12/28	1/04	1/13	1/26
24	12/01	12/13	12/23	12/31	1/09	1/20	2/08	0/00	0/00
20	12/17	12/30	1/09	1/20	2/05	0/00	0/00	0/00	0/00
16	12/29	1/07	1/19	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	284	274	266	260	254	248	242	234	224
32	323	309	300	291	284	276	267	258	244
28	>365	>365	343	328	316	306	296	285	270
24	>365	>365	>365	>365	360	339	327	315	301
20	>365	>365	>365	>365	>365	>365	363	342	326
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: 520 Feet Lat: 29° 40N Lon: 97° 07W

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	424	277	123	31	3	0	0	0	0	16	180	368	1422
60	298	172	50	6	0	0	0	0	0	3	100	244	873
57	235	124	25	1	0	0	0	0	0	1	65	185	636
55	199	96	14	0	0	0	0	0	0	0	46	151	506
50	120	42	3	0	0	0	0	0	0	0	17	78	260
32	5	0	0	0	0	0	0	0	0	0	0	0	5

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	625	667	960	1110	1350	1468	1605	1609	1419	1215	878	674	13580
55	106	118	262	420	637	778	892	896	729	503	234	112	5687
57	80	90	210	361	575	718	830	834	669	441	192	84	5084
60	50	55	143	276	482	628	737	741	579	350	138	51	4230
65	14	19	60	151	330	478	582	586	429	208	67	20	2944
70	9	6	16	64	191	328	427	431	283	94	25	7	1881

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	396	478	718	873	1107	1233	1362	1364	1184	970	638	444	396	874	1592	2465	3572	4805	6167	7531	8715	9685	10323	10767
45	274	352	564	723	952	1083	1207	1209	1034	815	494	311	274	626	1190	1913	2865	3948	5155	6364	7398	8213	8707	9018
50	168	234	418	574	797	933	1052	1054	884	660	357	198	168	402	820	1394	2191	3124	4176	5230	6114	6774	7131	7329
55	94	140	281	427	642	783	897	899	734	508	238	107	94	234	515	942	1584	2367	3264	4163	4897	5405	5643	5750
60	41	70	167	286	487	633	742	744	584	358	139	57	41	111	278	564	1051	1684	2426	3170	3754	4112	4251	4308
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	237	290	451	580	769	854	921	916	803	650	395	267	237	527	978	1558	2327	3181	4102	5018	5821	6471	6866	7133

(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