

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: WEATHERFORD, TX

1971-2000

COOP ID: 419532

Climate Division: TX 3

NWS Call Sign:

Elevation: 955 Feet

Lat: 32°45N

Lon: 97°46W

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	54.2	29.0	41.6	90	1911	31	48.7	1990	-4+	1930	19	32.0	1978	726	0	.0	.0	20.3	2.1	20.3	.0
Feb	59.5	33.9	46.7	95	1996	22	55.3	1976	-1+	1985	2	34.1	1978	520	0	.0	.1	21.3	1.3	12.9	.1
Mar	67.8	41.3	54.6	97	1916	21	60.1	1972	7+	1948	12	50.2	1996	330	6	.0	.3	28.9	.1	6.2	.0
Apr	75.8	49.6	62.7	99	1925	18	67.3	1972	24	1989	11	57.4	1983	126	56	.0	1.1	29.8	.0	1.3	.0
May	82.7	59.5	71.1	105+	1967	12	78.0	1996	34	1903	1	65.9	1976	26	216	@	5.9	31.0	.0	.0	.0
Jun	90.1	67.4	78.8	119	1980	26	85.5	1980	47	1919	3	73.6	1983	1	414	1.6	17.5	30.0	.0	.0	.0
Jul	95.2	71.3	83.3	110+	1954	26	88.7	1980	54+	1972	6	79.1	1976	0	566	6.7	27.2	31.0	.0	.0	.0
Aug	95.2	70.1	82.7	114	1984	20	85.9	1985	52	1915	31	77.2	1992	0	547	8.7	26.0	31.0	.0	.0	.0
Sep	88.0	62.8	75.4	109+	2000	4	81.7	1977	34	1942	27	67.2	1974	7	319	1.5	15.0	30.0	.0	.0	.0
Oct	78.1	51.4	64.8	105	1951	4	67.5	1971	19	1917	30	56.6	1976	84	77	@	2.6	30.7	.0	.6	.0
Nov	65.6	40.4	53.0	92	1980	10	59.4	1999	13	1979	30	45.3	1976	373	13	.0	.1	26.9	.2	7.5	.0
Dec	56.9	31.7	44.3	86	1951	31	49.4	1994	-10+	1989	24	30.9	1983	642	1	.0	.0	22.6	1.2	17.3	.2
Ann	75.8	50.7	63.3	119	Jun 1980	26	88.7	Jul 1980	-10+	Dec 1989	24	30.9	Dec 1983	2835	2215	18.5	95.8	333.5	4.9	66.1	.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/normals/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

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Station: WEATHERFORD, TX

COOP ID: 419532

Climate Division: TX 3

NWS Call Sign:

Elevation: 955 Feet Lat: 32°45N

Lon: 97°46W

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	1.50	1.50	2.86	1949	27	3.47	1979	.00	1986	5.4	3.3	.9	.4	.06	.18	.40	.62	.85	1.12	1.44	1.84	2.38	3.29	4.19
Feb	2.36	1.64	4.85	1986	3	10.75	1997	.15	1996	5.4	4.2	1.4	.6	.24	.41	.74	1.07	1.42	1.82	2.29	2.88	3.68	5.01	6.32
Mar	2.79	2.73	5.90	1977	27	7.16	1977	.52	1971	6.6	4.5	1.9	.7	.59	.85	1.26	1.63	2.00	2.40	2.85	3.39	4.10	5.24	6.31
Apr	2.84	2.17	6.75	1922	25	9.73	1990	.32	1987	6.2	4.3	1.7	.9	.52	.77	1.19	1.58	1.97	2.39	2.88	3.46	4.24	5.49	6.69
May	4.76	4.76	5.75	1908	24	10.84	1989	1.63	1972	7.8	5.7	3.2	1.8	1.45	1.90	2.57	3.16	3.72	4.30	4.95	5.71	6.69	8.21	9.63
Jun	3.93	3.16	5.71	1988	1	11.73	2000	.00	1980	6.3	4.9	2.7	1.4	.48	.97	1.64	2.20	2.76	3.36	4.04	4.85	5.92	7.62	9.24
Jul	2.11	1.97	7.05	1962	26	6.18	1973	.00+	1999	4.3	3.1	1.3	.7	.00	.00	.55	.92	1.28	1.67	2.12	2.67	3.38	4.56	5.70
Aug	2.60	1.94	5.85	1979	3	8.51	1974	.00	2000	4.8	3.5	1.7	.7	.11	.32	.70	1.08	1.50	1.96	2.51	3.20	4.15	5.72	7.26
Sep	2.85	2.07	5.13	1968	25	8.64	1994	.00	1983	5.5	3.9	1.8	.9	.12	.36	.78	1.19	1.64	2.15	2.75	3.50	4.53	6.24	7.91
Oct	4.19	3.30	5.75	1959	4	13.82	1981	.40	1987	6.1	4.8	2.7	1.5	.38	.68	1.24	1.82	2.46	3.18	4.03	5.10	6.57	9.02	11.42
Nov	2.61	2.03	4.75	1994	5	9.50	1996	.00	1999	6.1	4.1	1.8	.8	.15	.40	.81	1.19	1.60	2.05	2.57	3.22	4.10	5.55	6.95
Dec	2.16	1.82	3.58	1909	1	11.04	1991	.03	1996	5.8	4.0	1.4	.4	.09	.20	.44	.72	1.05	1.45	1.94	2.58	3.49	5.05	6.63
Ann	34.70	35.19	7.05	Jul 1962	26	13.82	Oct 1981	.00+	Aug 2000	70.3	50.3	22.5	10.8	22.73	24.97	27.88	30.12	32.12	34.08	36.11	38.37	41.13	45.17	48.70

+ 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

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Station: WEATHERFORD, TX

COOP ID: 419532

Climate Division: TX 3

NWS Call Sign:

Elevation: 955 Feet

Lat: 32°45N

Lon: 97°46W

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	1.0	1983	1	1.3	1983	2	1996	1	#+	1997	.2	.1	.0	.0	.0	.1	.0	.0	.0
Feb	1.0	.0	#	0	2.0	1975	23	4.3	1985	4	1985	4	#+	1996	.7	.6	.0	.0	.0	.3	.1	.0	.0
Mar	.1	.0	0	0	1.0	1998	8	1.0	1998	0	0	0	0	0	.1	.1	.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	.1	.0	#	0	.8	1972	21	.8	1972	2	1995	28	#	1995	.1	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.6	.0	#	0	3.6	1983	16	3.7	1983	4	1983	16	#+	1997	.3	.2	.1	.0	.0	.1	@	.0	.0
Ann	2.0	.0	N/A	N/A	3.6	Dec 1983	16	4.3	Feb 1985	4+	Feb 1985	4	#+	Dec 1997	1.4	1.0	.1	.0	.0	.5	.1	.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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

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No. 20 1971-2000

Station: WEATHERFORD, TX

COOP ID: 419532

Climate Division: TX 3

NWS Call Sign:

Elevation: 955 Feet

Lat: 32° 45N

Lon: 97° 46W

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	4/22	4/17	4/14	4/11	4/09	4/06	4/03	3/31	3/27
32	4/16	4/10	4/06	4/02	3/29	3/26	3/22	3/18	3/12
28	4/06	3/30	3/25	3/21	3/17	3/13	3/08	3/03	2/24
24	3/25	3/15	3/09	3/03	2/26	2/21	2/15	2/08	1/30
20	3/05	2/25	2/19	2/15	2/10	2/05	1/31	1/25	1/15
16	2/25	2/16	2/09	2/03	1/28	1/22	1/14	1/03	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	10/08	10/14	10/18	10/21	10/25	10/28	11/01	11/05	11/11
32	10/22	10/28	11/01	11/04	11/08	11/11	11/14	11/18	11/24
28	10/29	11/04	11/08	11/12	11/15	11/19	11/22	11/27	12/03
24	11/06	11/13	11/19	11/23	11/27	12/01	12/06	12/11	12/18
20	11/09	11/21	11/29	12/07	12/14	12/21	12/29	1/07	1/22
16	12/02	12/11	12/17	12/23	12/28	1/03	1/11	1/25	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	222	214	208	203	198	194	189	183	175
32	244	237	231	227	223	218	214	209	201
28	268	259	253	248	243	238	233	226	218
24	313	299	289	281	273	266	257	248	234
20	>365	335	320	310	302	295	287	278	266
16	>365	>365	>365	>365	338	325	315	305	293

* 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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Station: WEATHERFORD, TX

COOP ID: 419532

Climate Division: TX 3 NWS Call Sign: Elevation: 955 Feet Lat: 32°45N Lon: 97°46W

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	726	520	330	126	26	1	0	0	7	84	373	642	2835
60	579	391	196	51	6	0	0	0	0	29	248	496	1996
57	492	320	133	24	2	0	0	0	0	13	187	410	1581
55	436	276	99	13	0	0	0	0	0	7	151	356	1338
50	308	185	39	2	0	0	0	0	0	1	81	236	852
32	38	16	0	0	0	0	0	0	0	0	1	18	73

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	336	427	700	920	1213	1403	1589	1570	1302	1016	631	399	11506
55	20	43	85	243	500	713	876	857	612	309	91	24	4373
57	14	31	57	194	439	653	814	795	552	253	67	16	3885
60	9	18	27	131	351	563	721	702	462	177	38	9	3208
65	0	0	6	56	216	414	566	547	319	77	13	1	2215
70	0	0	0	16	113	274	411	393	193	23	2	0	1425

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	168	271	470	686	972	1170	1349	1331	1070	775	410	212	168	439	909	1595	2567	3737	5086	6417	7487	8262	8672	8884
45	86	172	330	540	817	1020	1194	1176	920	620	284	117	86	258	588	1128	1945	2965	4159	5335	6255	6875	7159	7276
50	40	98	212	395	662	870	1039	1021	770	473	179	54	40	138	350	745	1407	2277	3316	4337	5107	5580	5759	5813
55	17	46	114	261	509	720	884	866	621	328	95	21	17	63	177	438	947	1667	2551	3417	4038	4366	4461	4482
60	1	18	53	154	359	570	729	711	477	202	47	3	1	19	72	226	585	1155	1884	2595	3072	3274	3321	3324
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	135	187	308	443	649	793	892	870	709	505	269	155	135	322	630	1073	1722	2515	3407	4277	4986	5491	5760	5915

(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