U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: PEARSALL, TX **COOP ID: 416879**

Climate Division: TX 9 **NWS Call Sign:** **Elevation: 635 Feet** **Lat: 28˚53N** **Lon: 99˚05W**

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	65.0	37.9	51.5	94	1971	3	59.7	1971	10	1962	12	41.7	1979	435	5	.0	.2	26.8	.1	9.2	.0
Feb	70.1	42.0	56.1	100	1986	21	62.5	1976	16+	1994	2	47.7	1978	265	14	@	.5	25.9	.2	4.1	.0
Mar	78.3	49.5	63.9	103	1991	7	68.8	1974	17	1980	2	58.4	1996	106	70	.2	3.1	30.7	.0	.9	.0
Apr	84.0	55.7	69.9	110	1984	21	75.8	1972	25	1987	3	61.3	1987	38	184	.3	7.8	29.9	.0	.1	.0
May	89.3	63.5	76.4	106	1989	26	82.8	1989	44+	1994	6	71.3	1979	6	360	1.5	15.9	31.0	.0	.0	.0
Jun	94.2	68.5	81.4	110	1902	28	87.0	1990	52	1984	1	76.3	2000	0	491	5.7	24.9	30.0	.0	.0	.0
Jul	97.5	70.4	84.0	107+	1995	28	87.1	1980	57	2000	15	80.3	1976	0	586	11.5	29.0	31.0	.0	.0	.0
Aug	97.7	70.0	83.9	109+	1993	10	87.3	1982	58	1992	18	79.5	1971	0	585	13.3	28.9	31.0	.0	.0	.0
Sep	92.9	66.4	79.7	113	2000	6	85.0	1977	40	2000	26	73.3	1974	0	439	3.5	22.9	30.0	.0	.0	.0
Oct	84.9	57.3	71.1	102+	1989	2	75.4	1979	18	1993	31	63.8	1976	25	213	.2	9.6	30.9	.0	.1	.0
Nov	74.3	47.4	60.9	96	1988	5	67.8	1973	17	1993	27	54.2+	1993	192	68	.0	.7	29.4	.0	2.1	.0
Dec	66.3	39.9	53.1	90	1977	5	58.2	1971	7+	1989	23	44.2	1983	379	10	.0	@	28.7	.2	6.9	.0
Ann	82.9	55.7	69.3	113	Sep 2000	6	87.3	Aug 1982	7+	Dec 1989	23	41.7	Jan 1979	1446	3025	36.2	143.5	355.3	.5	23.4	.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/normals/usnormals.html

(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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: PEARSALL, TX **COOP ID: 416879**

Climate Division: TX 9 **NWS Call Sign:** **Elevation: 635 Feet** **Lat: 28°53N** **Lon: 99°05W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	1.30	.97	2.57	1992	26	5.01	1992	.00+	2000
Feb	1.45	1.01	2.71	1991	4	4.84	1994	.00+	1999
Mar	1.30	.82	3.66	1922	29	5.06	1999	.00	1971
Apr	2.15	1.52	4.27	1946	22	6.97	1977	.02	1983
May	3.33	3.00	4.20	1950	11	9.31	1975	.10	1998
Jun	3.68	3.00	6.24	1961	18	11.54	1981	.00	1980
Jul	1.58	.79	5.37	1990	15	8.44	1990	.00+	2000
Aug	2.61	1.68	7.84	1946	29	10.65	1998	.00+	2000
Sep	2.29	1.95	6.56	1919	14	8.09	1973	.06	1979
Oct	3.20	2.08	6.76	1981	7	9.13	1981	.12	1979
Nov	1.60	1.07	3.71	1913	23	4.80	1980	.00	1999
Dec	1.24	.91	3.50	1918	18	6.25	1991	.04+	1985
Ann	25.73	25.13	7.84	Aug 1946	29	11.54	Jun 1981	.00+	Aug 2000

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.5	2.8	.7	.3
Feb	4.6	2.5	1.0	.3
Mar	4.8	2.4	.7	.4
Apr	5.1	3.3	1.5	.7
May	6.3	4.3	2.2	1.1
Jun	5.6	4.4	2.3	1.3
Jul	3.4	2.4	.9	.3
Aug	3.9	2.7	1.3	.8
Sep	5.1	3.5	1.6	.5
Oct	5.1	3.6	2.0	1.1
Nov	4.8	2.7	1.2	.5
Dec	5.3	2.7	.7	.2
Ann	59.5	37.3	16.1	7.5

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.00	.00	.17	.36	.58	.85	1.17	1.59	2.17	3.17	4.18
Feb	.00	.00	.23	.49	.76	1.06	1.40	1.83	2.42	3.37	4.31
Mar	.02	.10	.26	.44	.65	.89	1.19	1.57	2.11	3.03	3.95
Apr	.08	.18	.41	.69	1.02	1.42	1.91	2.56	3.48	5.08	6.69
May	.47	.74	1.22	1.69	2.17	2.70	3.32	4.07	5.09	6.75	8.35
Jun	.40	.85	1.46	1.99	2.53	3.11	3.76	4.55	5.59	7.26	8.85
Jul	.00	.00	.07	.25	.50	.83	1.25	1.83	2.69	4.19	5.74
Aug	.00	.00	.18	.66	1.16	1.73	2.41	3.26	4.45	6.40	8.42
Sep	.17	.31	.60	.92	1.27	1.67	2.16	2.78	3.63	5.08	6.51
Oct	.12	.26	.60	1.01	1.50	2.10	2.84	3.81	5.20	7.61	10.05
Nov	.02	.10	.29	.51	.76	1.06	1.44	1.93	2.62	3.80	5.00
Dec	.05	.11	.24	.40	.59	.82	1.11	1.48	2.00	2.92	3.83
Ann	14.99	16.91	19.46	21.45	23.25	25.03	26.90	28.99	31.58	35.41	38.80

\+ 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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: PEARSALL, TX **COOP ID: 416879**

Climate Division: TX 9 **NWS Call Sign:** **Elevation: 635 Feet** **Lat: 28°53N** **Lon: 99°05W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	#	.0	0	0
Feb	.2	.0	#	0
Mar	.0	.0	0	0
Apr	.0	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	#	.0	0	0
Nov	.0	.0	0	0
Dec	.0	.0	0	0
Ann	.2	.0	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	#	1971	8	#	1971	0	0	0	0	0
Feb	3.0	1973	8	3.0	1973	3	1973	9	#	1973
Mar	.0	0	0	.0	0	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	#	1993	31	#	1993	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	3.0	Feb 1973	8	3.0	Feb 1973	3	Feb 1973	9	#	Feb 1973

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.0	.0	.0	.0	.0
Feb	.1	.1	.1	.0	.0
Mar	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.0	.0	.0	.0	.0
Dec	.0	.0	.0	.0	.0
Ann	.1	.1	.1	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	@	@	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	@	@	.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/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: PEARSALL, TX **COOP ID: 416879**

Climate Division: TX 9 **NWS Call Sign:** **Elevation: 635 Feet** **Lat: 28˚53N** **Lon: 99˚05W**

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	4/10	4/01	3/25	3/20	3/15	3/10	3/04	2/26	2/17
32	3/18	3/10	3/04	2/27	2/22	2/18	2/13	2/07	1/30
28	3/13	3/04	2/24	2/18	2/13	2/07	2/01	1/24	1/12
24	2/24	2/13	2/05	1/29	1/22	1/16	1/08	12/29	12/12
20	2/04	1/24	1/16	1/07	12/28	12/11	0/00	0/00	0/00
16	1/15	12/31	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	10/23	10/29	11/03	11/07	11/11	11/14	11/18	11/23	11/29
32	11/06	11/12	11/17	11/21	11/25	11/29	12/03	12/07	12/14
28	11/17	11/25	12/02	12/07	12/12	12/17	12/22	12/29	1/08
24	11/24	12/04	12/11	12/17	12/23	12/30	1/06	1/16	0/00
20	12/09	12/21	12/30	1/08	1/19	2/07	0/00	0/00	0/00
16	12/30	1/14	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	272	261	253	246	240	234	227	219	209
32	310	298	289	282	275	268	261	252	240
28	353	332	320	311	303	296	287	278	265
24	>365	>365	364	347	336	326	316	306	292
20	>365	>365	>365	>365	>365	>365	>365	352	334
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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: PEARSALL, TX **COOP ID: 416879**

Climate Division: TX 9 **NWS Call Sign:** **Elevation: 635 Feet** **Lat: 28˚53N** **Lon: 99˚05W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	435	265	106	38	6	0	0	0	0	25	192	379	1446
60	302	158	39	11	0	0	0	0	0	6	110	245	871
57	235	109	17	4	0	0	0	0	0	2	72	179	618
55	196	81	10	0	0	0	0	0	0	1	52	142	482
50	116	32	1	0	0	0	0	0	0	0	20	68	237
32	1	0	0	0	0	0	0	0	0	0	0	0	1

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	603	673	988	1136	1376	1481	1609	1608	1429	1211	866	654	13634
55	86	110	284	446	663	791	896	895	739	499	227	83	5719
57	62	81	230	390	601	731	834	833	679	439	188	58	5126
60	37	46	158	306	509	641	741	740	589	349	135	31	4282
65	5	14	70	184	360	491	586	585	439	213	68	10	3025
70	4	1	21	95	224	343	431	430	294	105	27	1	1976

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	378	482	743	900	1136	1248	1363	1355	1189	972	634	427	378	860	1603	2503	3639	4887	6250	7605	8794	9766	10400	10827
45	250	348	593	750	981	1098	1208	1200	1039	817	490	285	250	598	1191	1941	2922	4020	5228	6428	7467	8284	8774	9059
50	142	235	443	601	826	948	1053	1045	889	662	351	173	142	377	820	1421	2247	3195	4248	5293	6182	6844	7195	7368
55	72	136	304	454	671	798	898	890	739	512	231	87	72	208	512	966	1637	2435	3333	4223	4962	5474	5705	5792
60	26	65	181	313	516	648	743	735	590	366	136	38	26	91	272	585	1101	1749	2492	3227	3817	4183	4319	4357
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	259	319	484	590	755	819	869	865	772	636	416	280	259	578	1062	1652	2407	3226	4095	4960	5732	6368	6784	7064

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

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