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: PECOS, TX **COOP ID: 416892**

Climate Division: TX 5 **NWS Call Sign:** **Elevation: 2,610 Feet** **Lat: 31˚25N** **Lon: 103˚30W**

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	59.9	28.1	44.0	89	1974	22	49.3	2000	-9	1962	11	38.0	1979	651	0	.0	.0	24.7	.7	21.6	.0
Feb	66.4	31.7	49.1	94+	1904	27	56.4	2000	-8	1985	2	42.8	1978	447	0	.0	.2	24.9	.6	15.2	.1
Mar	75.0	37.7	56.4	103	1946	30	62.0	1974	12+	1971	4	49.9	1987	278	10	@	2.2	30.1	@	6.1	.0
Apr	83.1	46.1	64.6	106	1972	7	69.9	1986	24	1976	1	59.1	1987	98	86	.4	10.2	29.8	.0	1.0	.0
May	91.2	56.3	73.8	112+	2000	25	80.8	2000	30	1967	2	68.4	1976	15	284	5.2	19.6	31.0	.0	.0	.0
Jun	97.8	65.3	81.6	118	1968	29	87.7	1990	48+	1970	2	77.7	1979	0	497	13.8	26.4	30.0	.0	.0	.0
Jul	98.5	68.8	83.7	116	1958	15	87.4	2000	55	1940	29	78.9	1975	0	578	15.2	28.6	31.0	.0	.0	.0
Aug	96.6	67.5	82.1	113	1972	1	86.9	1977	45	1944	31	77.3	1971	0	530	11.2	27.1	31.0	.0	.0	.0
Sep	90.2	60.4	75.3	110	1948	5	81.1	1977	37	1942	27	67.9	1974	9	318	4.4	19.2	30.0	.0	.0	.0
Oct	81.6	48.4	65.0	106	1977	1	68.3	1998	25	1993	31	58.4	1976	76	77	.4	7.1	30.7	.0	.7	.0
Nov	69.7	35.6	52.7	94	1975	1	58.9	1999	8	1976	14	45.0	1976	380	9	.0	.3	28.2	.1	9.2	.0
Dec	61.2	28.6	44.9	89+	1954	5	49.2	1994	1	1989	23	38.9	1983	623	0	.0	.0	25.2	.7	21.4	.0
Ann	80.9	47.9	64.4	118	Jun 1968	29	87.7	Jun 1990	-9	Jan 1962	11	38.0	Jan 1979	2577	2389	50.6	140.9	346.6	2.1	75.2	.1

\+ 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: 1904-2000

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

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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	.47	.37	1.00	1958	6	1.66	1991	.00+	1998
Feb	.45	.16	1.65	1989	17	2.05	1992	.00+	1999
Mar	.34	.19	1.50	1945	31	2.03	1990	.00+	1980
Apr	.47	.29	2.22	1981	15	3.62	1981	.00+	1999
May	1.25	.84	4.38	1992	23	7.43	1992	.00+	2000
Jun	1.24	.81	3.31	1980	9	4.09	1984	.05+	1998
Jul	1.35	.98	3.00	1959	26	4.04	1975	.01	1995
Aug	1.62	1.41	4.37	1987	28	5.39	1987	.09	1999
Sep	2.24	1.45	2.98	1991	17	7.76	1978	.11	2000
Oct	1.10	.59	2.85	1940	11	4.67	1974	.00+	1996
Nov	.47	.39	.97	1986	4	1.88	1978	.00+	1999
Dec	.61	.23	1.99	1986	22	3.80	1986	.00+	1996
Ann	11.61	10.47	4.38	May 1992	23	7.76	Sep 1978	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.8	1.4	.1	.0
Feb	2.8	1.1	.2	.1
Mar	2.0	.8	.2	@
Apr	2.4	1.1	.2	.1
May	4.3	2.5	.7	.2
Jun	3.9	2.3	.8	.3
Jul	4.9	2.8	.9	.2
Aug	5.1	2.8	1.0	.4
Sep	6.0	3.8	1.5	.5
Oct	4.6	2.5	.7	.2
Nov	2.7	1.2	.3	.0
Dec	3.4	1.9	.3	@
Ann	45.9	24.2	6.9	2.0

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	.03	.10	.17	.25	.34	.45	.58	.76	1.07	1.37
Feb	.00	.00	.01	.05	.12	.22	.34	.51	.77	1.22	1.70
Mar	.00	.00	.01	.04	.09	.16	.25	.37	.57	.92	1.30
Apr	.00	.00	.04	.10	.17	.27	.39	.55	.78	1.19	1.61
May	.00	.07	.26	.45	.66	.90	1.18	1.54	2.04	2.88	3.70
Jun	.04	.09	.22	.38	.57	.80	1.09	1.47	2.01	2.96	3.91
Jul	.04	.10	.24	.41	.62	.87	1.18	1.60	2.19	3.22	4.27
Aug	.15	.26	.48	.71	.95	1.23	1.56	1.98	2.55	3.51	4.44
Sep	.14	.27	.55	.86	1.20	1.60	2.09	2.71	3.58	5.05	6.51
Oct	.00	.02	.13	.28	.45	.67	.95	1.31	1.83	2.74	3.67
Nov	.00	.00	.00	.05	.14	.25	.39	.57	.82	1.25	1.68
Dec	.00	.00	.03	.11	.21	.33	.50	.71	1.03	1.58	2.15
Ann	5.16	6.19	7.62	8.79	9.88	10.98	12.15	13.50	15.20	17.78	20.11

\+ 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: 1904-2000
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	2.1	1.0	#	#
Feb	.8	.0	#	0
Mar	.1	.0	#	0
Apr	.1	.0	#	0
May	.0	.0	0	0
Jun	.0	.0	#	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.1	.0	#	0
Nov	.6	.0	#	0
Dec	1.1	.0	#	#
Ann	4.9	1.0	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	8.0	1983	1	8.5	1985	8	1983	1	1	1983
Feb	5.0	1979	6	6.0	1985	4	1985	2	#+	1994
Mar	2.0	1988	4	2.0+	1989	2	1989	5	#+	1996
Apr	2.0	1983	8	2.0	1983	#+	1996	5	#+	1996
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	#	1982	21	#	1982
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	2.5	1993	30	2.5	1993	2	1993	30	#	1993
Nov	5.0	1980	17	9.5	1980	4	1976	14	#+	1997
Dec	4.5	1998	11	8.5	1998	4+	1998	11	#+	1998
Ann	8.0	Jan 1983	1	9.5	Nov 1980	8	Jan 1983	1	1	Jan 1983

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.9	.8	.2	.2	.0
Feb	.4	.4	.1	@	.0
Mar	.1	.1	.0	.0	.0
Apr	@	@	.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
Nov	.3	.2	.1	@	.0
Dec	.4	.4	.2	.0	.0
Ann	2.1	1.9	.6	.2	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.7	.2	.1	.0
Feb	.3	.1	.0	.0
Mar	@	.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	.2	.1	.0	.0
Dec	.3	.2	.0	.0
Ann	1.5	.6	.1	.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	4/23	4/17	4/14	4/10	4/07	4/04	4/01	3/28	3/23
32	4/12	4/07	4/02	3/30	3/26	3/23	3/19	3/15	3/09
28	4/03	3/27	3/23	3/19	3/15	3/11	3/07	3/03	2/24
24	3/19	3/11	3/06	3/01	2/25	2/20	2/15	2/10	2/02
20	3/11	2/28	2/20	2/13	2/06	1/31	1/24	1/16	1/04
16	2/14	2/04	1/28	1/21	1/15	1/08	12/31	12/15	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	10/15	10/20	10/23	10/26	10/29	11/01	11/04	11/08	11/13
32	10/21	10/27	10/31	11/03	11/07	11/10	11/13	11/18	11/23
28	11/03	11/08	11/11	11/14	11/17	11/20	11/23	11/27	12/02
24	11/11	11/17	11/21	11/25	11/28	12/01	12/05	12/09	12/15
20	11/17	11/26	12/02	12/08	12/13	12/18	12/24	12/30	1/08
16	12/03	12/13	12/21	12/28	1/04	1/12	1/22	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	223	216	212	208	204	201	197	192	186
32	249	241	235	229	225	220	215	209	200
28	272	263	257	251	247	242	236	230	221
24	307	297	289	282	276	270	263	255	244
20	344	330	321	314	308	301	294	286	275
16	>365	>365	>365	>365	>365	339	325	313	300

***** 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

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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	651	447	278	98	15	0	0	0	9	76	380	623	2577
60	497	313	154	37	3	0	0	0	0	24	252	468	1748
57	407	238	98	17	0	0	0	0	0	10	188	377	1335
55	350	193	68	9	0	0	0	0	0	5	150	318	1093
50	216	103	21	1	0	0	0	0	0	1	77	184	603
32	6	0	0	0	0	0	0	0	0	0	0	0	6

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	378	477	755	978	1293	1487	1601	1553	1300	1024	619	400	11865
55	8	26	111	297	580	797	888	840	610	316	79	5	4557
57	4	15	78	245	518	737	826	778	550	259	57	2	4069
60	0	7	41	175	428	647	733	685	460	180	31	1	3388
65	0	0	10	86	284	497	578	530	318	77	9	0	2389
70	0	0	1	31	165	348	423	376	194	23	1	0	1562

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	208	312	545	759	1066	1260	1370	1320	1081	803	416	225	208	520	1065	1824	2890	4150	5520	6840	7921	8724	9140	9365
45	112	199	396	610	911	1110	1215	1165	931	648	281	120	112	311	707	1317	2228	3338	4553	5718	6649	7297	7578	7698
50	47	106	264	462	756	960	1060	1010	781	497	168	55	47	153	417	879	1635	2595	3655	4665	5446	5943	6111	6166
55	11	47	148	328	601	810	905	855	634	351	86	16	11	58	206	534	1135	1945	2850	3705	4339	4690	4776	4792
60	0	12	62	202	449	660	750	700	485	216	34	0	0	12	74	276	725	1385	2135	2835	3320	3536	3570	3570
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	202	269	403	493	654	778	860	834	685	516	316	216	202	471	874	1367	2021	2799	3659	4493	5178	5694	6010	6226

(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.
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