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: PERSIMMON GAP, TX **COOP ID: 416959**

Climate Division: TX 5 **NWS Call Sign:** **Elevation: 2,865 Feet** **Lat: 29˚40N** **Lon: 103˚10W**

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	64.7	32.7	48.7	86	2000	20	53.2	1998	11	1985	13	42.0	1979	506	0	.0	.0	27.2	.4	15.6	.0
Feb	70.1	36.9	53.5	93	1996	22	59.4	1999	12	1985	2	47.8	1978	325	3	.0	.2	26.5	.2	8.4	.0
Mar	78.1	44.1	61.1	97	1995	22	66.3	1974	22+	1989	6	55.7	1987	157	36	.0	2.3	30.6	.0	2.2	.0
Apr	85.8	52.6	69.2	103+	1996	29	75.1	1986	31	1987	1	62.7	1997	41	167	.4	10.9	29.9	.0	.2	.0
May	92.9	62.2	77.6	110+	2001	29	83.9	1996	40	1988	3	72.3	1976	4	394	5.1	21.8	31.0	.0	.0	.0
Jun	97.2	69.1	83.2	112+	1994	29	88.7	1990	55	1983	2	79.5	1979	0	545	9.9	26.1	30.0	.0	.0	.0
Jul	96.7	71.9	84.3	110+	1994	1	88.6	1980	62+	1999	23	79.5	1976	0	599	7.9	27.0	31.0	.0	.0	.0
Aug	95.1	70.8	83.0	107	1994	21	86.3	1977	63	1990	7	78.4	1971	0	556	4.4	25.8	31.0	.0	.0	.0
Sep	90.2	64.9	77.6	108	1983	6	82.9	1977	44	1995	23	71.2	1974	1	378	1.6	17.4	30.0	.0	.0	.0
Oct	82.9	53.5	68.2	101+	2000	4	71.8	1979	28	1993	31	61.7	1976	40	139	.1	5.6	30.9	.0	.6	.0
Nov	72.9	41.3	57.1	94	1996	7	61.8	1973	18	2001	29	49.0	1976	262	25	.0	.4	28.7	.1	4.3	.0
Dec	65.1	34.6	49.9	86	1995	6	55.2	1984	4	1989	23	44.6	1989	471	0	.0	.0	27.6	.2	12.5	.0
Ann	82.6	52.9	67.8	112+	Jun 1994	29	88.7	Jun 1990	4	Dec 1989	23	42.0	Jan 1979	1807	2842	29.4	137.5	354.4	.9	43.8	.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: 1952-2001

(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	.35	.37	.78	1994	22	1.18	1992	.00+	1999
Feb	.29	.15	1.17	1992	4	1.57	1992	.00+	1999
Mar	.19	.06	1.25	1999	28	1.25	1999	.00+	1996
Apr	.44	.27	1.01	1991	5	2.25	1987	.00+	1998
May	.88	.75	1.07	1996	7	2.38	1992	.00+	2000
Jun	1.32	.79	1.86	1985	2	5.49	1985	.00	1990
Jul	1.31	1.15	1.60	2001	19	4.26	1999	.00	1994
Aug	1.25	1.05	1.90	1995	15	4.17	1986	.02	1994
Sep	1.62	1.22	2.80	1993	25	5.93	1993	.00	1998
Oct	.81	.35	1.40	2000	21	4.41	2000	.02	1985
Nov	.45	.34	.80	1986	13	1.67	1986	.00+	1999
Dec	.38	.25	.84	1986	22	1.98	1991	.00+	1996
Ann	9.29	8.11	2.80	Sep 1993	25	5.93	Sep 1993	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	3.2	1.0	.1	.0
Feb	2.6	.9	.2	@
Mar	1.8	.5	.1	@
Apr	3.3	1.4	.4	.1
May	5.3	2.0	.3	@
Jun	6.2	3.4	1.3	.3
Jul	7.2	4.0	1.6	.5
Aug	7.0	3.8	1.3	.5
Sep	6.3	2.6	.7	.2
Oct	5.2	2.4	.7	.2
Nov	3.2	1.0	.2	.0
Dec	3.3	1.1	.2	.0
Ann	54.6	24.1	7.1	1.8

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	.07	.13	.19	.26	.34	.44	.58	.81	1.04
Feb	.00	.00	.03	.07	.11	.17	.25	.34	.48	.72	.97
Mar	.00	.00	.00	.02	.05	.09	.15	.22	.33	.53	.74
Apr	.00	.02	.08	.14	.21	.30	.40	.54	.73	1.05	1.37
May	.00	.17	.35	.49	.62	.76	.92	1.10	1.35	1.73	2.10
Jun	.07	.19	.39	.58	.79	1.02	1.29	1.62	2.08	2.84	3.57
Jul	.10	.25	.46	.65	.85	1.07	1.32	1.62	2.03	2.70	3.33
Aug	.14	.23	.40	.58	.77	.98	1.22	1.53	1.95	2.64	3.31
Sep	.10	.26	.52	.76	1.01	1.29	1.61	2.00	2.53	3.41	4.26
Oct	.01	.03	.08	.17	.28	.43	.64	.92	1.34	2.10	2.90
Nov	.00	.03	.10	.17	.24	.33	.43	.56	.74	1.03	1.33
Dec	.00	.00	.04	.10	.16	.24	.33	.46	.63	.93	1.23
Ann	4.73	5.51	6.56	7.40	8.17	8.94	9.75	10.68	11.83	13.56	15.11

\+ 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: 1952-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	3.5	1986	8	5.0	1986	4	1986	8	1	1986	.3	.1	.1	.0	.0	.1	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.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	.5	1993	30	.5	1993	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	#	0	#	1982	25	#	1982	#	1982	25	#	1982	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	#	0	#	1997	26	#+	1997	#	1997	26	#	1997	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.5	.0	N/A	N/A	3.5	Jan 1986	8	5.0	Jan 1986	4	Jan 1986	8	1	Jan 1986	.4	.1	.1	.0	.0	.1	.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	4/11	4/04	3/30	3/26	3/22	3/18	3/13	3/08	3/01
32	4/04	3/26	3/20	3/15	3/10	3/05	2/28	2/22	2/14
28	3/24	3/15	3/09	3/03	2/26	2/20	2/15	2/08	1/30
24	3/04	2/23	2/16	2/10	2/04	1/30	1/23	1/16	1/04
20	2/17	2/06	1/28	1/20	1/12	1/03	12/22	0/00	0/00
16	1/25	1/14	1/03	12/18	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	10/11	10/18	10/24	10/28	11/02	11/06	11/11	11/16	11/24
32	10/19	10/27	11/01	11/06	11/11	11/15	11/20	11/26	12/04
28	11/06	11/14	11/19	11/24	11/28	12/03	12/08	12/13	12/21
24	11/23	12/01	12/07	12/12	12/17	12/21	12/27	1/02	1/12
20	11/30	12/11	12/19	12/26	1/03	1/11	1/24	0/00	0/00
16	12/15	12/24	1/03	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	254	244	236	230	224	219	212	205	195
32	280	268	259	252	245	238	230	222	209
28	312	299	290	282	275	268	260	250	238
24	355	337	328	320	313	307	300	292	281
20	>365	>365	>365	>365	>365	349	332	316	298
16	>365	>365	>365	>365	>365	>365	>365	>365	333

***** 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)

Base — Heating Degree Days (1)

Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	506	325	157	41	4	0	0	0	1	40	262	471	1807
60	358	200	68	11	0	0	0	0	0	10	155	320	1122
57	273	138	34	4	0	0	0	0	0	4	105	236	794
55	222	104	19	1	0	0	0	0	0	2	78	184	610
50	120	41	3	0	0	0	0	0	0	0	30	85	279
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	517	602	902	1116	1412	1535	1622	1579	1367	1122	753	552	13079
55	26	62	208	427	699	845	909	866	677	411	141	23	5294
57	15	40	160	369	637	785	847	804	617	351	108	13	4746
60	7	18	101	287	544	695	754	711	527	264	68	4	3980
65	0	3	36	167	394	545	599	556	378	139	25	0	2842
70	0	0	7	81	254	395	444	401	238	52	6	0	1878

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	279	387	650	864	1164	1291	1361	1316	1108	817	518	317	279	666	1316	2180	3344	4635	5996	7312	8420	9237	9755	10072
45	161	255	498	715	1009	1141	1206	1161	958	664	376	192	161	416	914	1629	2638	3779	4985	6146	7104	7768	8144	8336
50	74	147	352	568	854	991	1051	1006	808	512	244	96	74	221	573	1141	1995	2986	4037	5043	5851	6363	6607	6703
55	21	70	218	424	699	841	896	851	658	361	138	34	21	91	309	733	1432	2273	3169	4020	4678	5039	5177	5211
60	0	20	110	285	544	691	741	696	511	234	57	3	0	20	130	415	959	1650	2391	3087	3598	3832	3889	3892
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	228	288	437	551	744	834	896	876	727	528	351	244	228	516	953	1504	2248	3082	3978	4854	5581	6109	6460	6704

(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