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: PRESIDIO, TX **COOP ID: 417262**

Climate Division: TX 5 **NWS Call Sign:** **Elevation: 2,560 Feet** **Lat: 29˚33N** **Lon: 104˚21W**

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	69.1	34.5	51.8	88	1943	23	56.9	2000	4	1962	12	47.7	1985	410	1	.0	.0	29.9	@	12.9	.0
Feb	75.4	39.3	57.4	95	1940	29	63.2	2000	11+	1956	4	52.9	1973	226	12	.0	.7	27.9	.1	5.3	.0
Mar	83.1	45.7	64.4	105	1946	31	68.1	1974	20+	1942	8	59.3	1987	84	65	.1	5.5	31.0	.0	1.2	.0
Apr	90.0	53.6	71.8	106+	1989	23	76.8	2000	25	1928	10	65.9	1973	19	222	1.8	19.3	30.0	.0	.2	.0
May	97.0	63.2	80.1	114+	1951	29	86.8	1996	34	1976	14	75.1	1976	2	469	12.4	28.1	31.0	.0	.0	.0
Jun	102.1	71.6	86.9	117+	1960	18	93.1	1980	50	1946	2	83.0	1984	0	656	22.4	29.4	30.0	.0	.0	.0
Jul	100.8	73.7	87.3	116+	1958	14	92.8	1980	59	1946	11	82.5	1975	0	691	20.3	29.8	31.0	.0	.0	.0
Aug	99.0	72.3	85.7	114	1951	8	89.4	1994	58+	1936	3	81.3	1971	0	640	16.4	29.3	31.0	.0	.0	.0
Sep	94.8	66.8	80.8	112	1952	1	86.0	1997	42	1973	28	75.0	1974	0	475	7.1	25.2	30.0	.0	.0	.0
Oct	87.1	56.2	71.7	103+	2000	3	76.0	1998	27	1980	30	65.0	1976	20	227	.7	13.1	31.0	.0	.2	.0
Nov	76.6	43.0	59.8	95	1988	5	64.4	1998	13	1976	30	53.7	1976	188	32	.0	1.0	29.8	.0	3.2	.0
Dec	69.0	35.7	52.4	88	1993	12	56.6	1984	10	1929	22	48.8	1976	393	0	.0	.0	30.4	.0	11.6	.0
Ann	87.0	54.6	70.8	117+	Jun 1960	18	93.1	Jun 1980	4	Jan 1962	12	47.7	Jan 1985	1342	3490	81.2	181.4	363.0	.1	34.6	.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: 1927-2001

(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	.31	.13	.99	1931	29	1.57	1992	.00+	2000
Feb	.36	.08	2.28	1997	20	3.02	1992	.00+	2000
Mar	.15	.01	1.27	1974	14	1.40	1974	.00+	2000
Apr	.38	.10	3.30	1979	17	3.47	1979	.00+	2000
May	.66	.53	1.96	1941	24	3.40	1992	.00+	2000
Jun	1.51	1.17	2.02	1987	26	4.49	2000	.06	1995
Jul	2.01	1.70	2.30	1993	1	7.29	1993	.00	1989
Aug	1.82	1.63	2.07	1980	12	5.24	1980	.00	1994
Sep	1.69	1.38	3.01	1958	26	6.63	1974	.01	1999
Oct	.99	.48	1.92	1930	5	4.89	1971	.00+	1999
Nov	.37	.15	1.09	1963	27	1.29	1974	.00+	1999
Dec	.51	.20	1.59	1986	22	3.46	1986	.00+	1996
Ann	10.76	11.43	3.30	Apr 1979	17	7.29	Jul 1993	.00+	May 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	2.0	.9	.1	.0
Feb	1.6	.8	.3	.2
Mar	.9	.3	.1	.1
Apr	1.4	.8	.2	@
May	3.1	1.5	.4	.1
Jun	4.5	2.5	1.1	.3
Jul	6.6	3.9	1.1	.5
Aug	5.7	3.6	1.0	.3
Sep	4.9	3.1	1.1	.4
Oct	3.5	1.9	.6	.2
Nov	1.9	1.0	.2	.0
Dec	2.5	1.1	.3	.1
Ann	38.6	21.4	6.5	2.2

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	.00	.00	.07	.15	.25	.37	.55	.85	1.15
Feb	.00	.00	.00	.00	.00	.05	.15	.32	.59	1.12	1.70
Mar	.00	.00	.00	.00	.00	.00	.02	.09	.21	.46	.76
Apr	.00	.00	.00	.00	.01	.07	.18	.36	.65	1.19	1.76
May	.00	.01	.08	.16	.27	.40	.56	.78	1.09	1.64	2.20
Jun	.07	.15	.32	.52	.76	1.03	1.38	1.82	2.44	3.51	4.59
Jul	.13	.33	.65	.94	1.25	1.60	1.99	2.48	3.13	4.21	5.25
Aug	.32	.57	.88	1.13	1.37	1.63	1.90	2.23	2.66	3.33	3.96
Sep	.07	.15	.34	.56	.82	1.14	1.52	2.02	2.74	3.97	5.21
Oct	.00	.00	.06	.17	.32	.52	.78	1.14	1.67	2.62	3.60
Nov	.00	.00	.00	.00	.05	.15	.27	.43	.66	1.05	1.44
Dec	.00	.00	.00	.03	.11	.21	.35	.56	.87	1.44	2.03
Ann	4.19	5.19	6.61	7.78	8.90	10.03	11.26	12.68	14.48	17.25	19.77

\+ 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: 1927-2001
(3) Derived from 1971-2000 serially complete daily data

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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	#	.0	0	0
Feb	#	.0	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
Ann	#	.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	#	1990	6	#	1990	0	0	0	0	0
Feb	#	1973	8	#	1973	0	0	0	0	0
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	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	#	1997	26	#	1997	#	1997	26	#	1997
Ann	#+	Dec 1997	26	#+	Dec 1997	#	Dec 1997	26	#	Dec 1997

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	.0	.0	.0	.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	.0	.0	.0	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.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	.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	4/16	4/07	3/31	3/25	3/20	3/14	3/08	3/02	2/20
32	4/02	3/23	3/16	3/10	3/05	2/27	2/21	2/14	2/04
28	3/18	3/06	2/26	2/19	2/13	2/06	1/30	1/22	1/11
24	2/21	2/09	2/01	1/26	1/19	1/12	1/05	12/26	12/08
20	2/02	1/23	1/15	1/08	12/30	12/15	0/00	0/00	0/00
16	12/30	12/19	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	11/30
32	11/02	11/09	11/13	11/17	11/20	11/24	11/28	12/02	12/08
28	11/15	11/20	11/24	11/27	12/01	12/04	12/07	12/11	12/17
24	11/26	12/02	12/07	12/11	12/15	12/19	12/24	12/29	1/09
20	12/09	12/18	12/26	1/02	1/12	0/00	0/00	0/00	0/00
16	12/18	1/01	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	273	260	251	243	235	228	220	211	198
32	296	284	275	267	260	253	246	237	224
28	329	315	306	298	290	283	275	265	252
24	>365	>365	352	339	329	320	311	301	288
20	>365	>365	>365	>365	>365	>365	348	334	319
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

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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	410	226	84	19	2	0	0	0	0	20	188	393	1342
60	263	120	25	3	0	0	0	0	0	3	93	242	749
57	183	74	9	0	0	0	0	0	0	1	54	162	483
55	137	50	4	0	0	0	0	0	0	0	35	116	342
50	54	14	0	0	0	0	0	0	0	0	8	36	112
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	614	710	1004	1193	1490	1646	1714	1663	1465	1230	834	631	14194
55	38	116	294	503	777	956	1001	950	775	517	179	34	6140
57	21	84	237	443	715	896	939	888	715	456	138	18	5550
60	8	47	160	356	622	806	846	795	625	366	87	5	4723
65	1	12	65	222	469	656	691	640	475	227	32	0	3490
70	0	1	16	118	324	506	536	485	332	116	8	0	2442

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	373	512	761	970	1258	1416	1467	1415	1237	995	605	389	373	885	1646	2616	3874	5290	6757	8172	9409	10404	11009	11398
45	232	371	606	820	1103	1266	1312	1260	1087	840	459	245	232	603	1209	2029	3132	4398	5710	6970	8057	8897	9356	9601
50	115	240	455	670	948	1116	1157	1105	937	686	320	121	115	355	810	1480	2428	3544	4701	5806	6743	7429	7749	7870
55	42	127	306	521	793	966	1002	950	787	534	188	45	42	169	475	996	1789	2755	3757	4707	5494	6028	6216	6261
60	2	48	173	375	638	816	847	795	638	383	92	10	2	50	223	598	1236	2052	2899	3694	4332	4715	4807	4817
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	303	380	518	608	769	871	932	905	793	645	426	304	303	683	1201	1809	2578	3449	4381	5286	6079	6724	7150	7454

(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