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: FALCON DAM, TX **COOP ID: 413060**

Climate Division: TX 9 **NWS Call Sign:** **Elevation: 320 Feet** **Lat: 26˚33N** **Lon: 99˚08W**

Temperature (˚F)

Month	Mean (1)			Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
	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	68.0	45.9	57.0	97	1997	5	65.1	1998	21	1975	13	50.5	1977	291	44	.0	.4	28.3	.0	2.0	.0
Feb	73.3	49.6	61.5	102	1996	21	69.2	1999	24	1985	3	53.1	1978	160	62	.1	1.9	27.0	@	.9	.0
Mar	82.1	56.7	69.4	105	1984	28	75.1	2000	27	1987	31	63.6	1987	34	170	.5	7.8	31.0	.0	.2	.0
Apr	87.8	62.8	75.3	113	1963	10	80.6	1999	30	1987	1	68.3	1987	7	317	2.3	14.1	30.0	.0	@	.0
May	93.2	69.8	81.5	114	1995	14	87.0	1998	50+	1976	3	75.4	1976	0	512	5.6	23.0	31.0	.0	.0	.0
Jun	97.5	73.8	85.7	116	1998	16	92.0	1998	59	1984	1	81.7	1972	0	618	11.5	27.0	30.0	.0	.0	.0
Jul	99.7	74.4	87.1	110+	1998	7	91.7	1998	63+	1993	5	81.4	1976	0	683	18.7	29.6	31.0	.0	.0	.0
Aug	99.5	74.3	86.9	111	1975	1	90.7	1997	64	1999	23	82.9	1973	0	678	18.0	29.6	31.0	.0	.0	.0
Sep	94.1	71.2	82.7	112	2000	6	86.0	1980	51+	1981	20	77.7	1975	0	529	6.5	23.5	30.0	.0	.0	.0
Oct	86.7	63.6	75.2	101+	1994	4	78.4	1991	31	1993	31	67.5	1976	3	318	.2	12.8	31.0	.0	@	.0
Nov	77.4	55.1	66.3	99	1969	13	73.7	1994	31+	1975	27	57.5	1976	95	133	.0	2.9	29.7	.0	.1	.0
Dec	69.2	47.6	58.4	94+	1982	3	66.0	1984	15+	1989	23	49.3	1989	245	41	.0	.3	29.2	.1	1.3	.0
Ann	85.7	62.1	73.9	116	Jun 1998	16	92.0	Jun 1998	15+	Dec 1989	23	49.3	Dec 1989	835	4105	63.4	172.9	359.2	.1	4.5	.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: 1962-2001

(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	.88	.55	1.32	1994	21	3.65	1992	.00+	1999
Feb	1.06	.78	2.75	1983	26	6.03	1983	.00+	1976
Mar	.59	.47	1.75	1965	31	1.93	1981	.00+	1996
Apr	1.45	.77	2.61	1997	18	5.18	1997	.00+	1983
May	2.41	1.82	4.42	1991	25	8.26	1982	.00+	1998
Jun	2.49	2.27	3.60	1973	25	7.36	1973	.00+	1990
Jul	1.62	1.44	3.05	1991	1	7.09	1976	.00+	1993
Aug	2.17	1.75	7.10	1966	27	7.23	1996	.00+	1993
Sep	3.90	2.82	6.95	1971	13	12.17	1973	.92	1980
Oct	1.79	1.54	2.90	1988	29	3.86	1971	.00	1979
Nov	1.04	.61	3.20	1995	17	4.85	1976	.00+	1988
Dec	.88	.48	1.40	1965	3	3.41	1986	.06	1990
Ann	20.28	20.17	7.10	Aug 1966	27	12.17	Sep 1973	.00+	Jan 1999

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	7.0	2.5	.4	@
Feb	5.3	2.2	.5	.2
Mar	3.8	1.5	.2	.1
Apr	4.0	2.5	1.0	.4
May	5.4	3.3	1.4	.8
Jun	4.8	3.3	1.5	.8
Jul	4.2	2.8	1.1	.5
Aug	4.8	3.5	1.4	.6
Sep	7.2	5.1	2.5	1.0
Oct	5.1	2.9	1.3	.5
Nov	4.6	2.1	.7	.1
Dec	6.7	2.4	.4	.1
Ann	62.9	34.1	12.4	5.1

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	.09	.23	.38	.57	.79	1.08	1.49	2.17	2.86
Feb	.00	.05	.19	.34	.52	.73	.98	1.29	1.74	2.50	3.26
Mar	.00	.00	.04	.13	.23	.35	.51	.71	1.00	1.50	2.01
Apr	.00	.02	.14	.31	.53	.82	1.19	1.69	2.43	3.73	5.07
May	.00	.19	.59	.96	1.36	1.81	2.34	2.99	3.88	5.37	6.82
Jun	.00	.14	.50	.88	1.30	1.77	2.35	3.06	4.07	5.76	7.43
Jul	.00	.00	.22	.46	.74	1.07	1.47	1.98	2.70	3.92	5.15
Aug	.00	.32	.74	1.08	1.43	1.80	2.22	2.71	3.38	4.46	5.49
Sep	.74	1.09	1.66	2.19	2.72	3.30	3.96	4.75	5.80	7.50	9.10
Oct	.09	.25	.52	.78	1.06	1.37	1.74	2.20	2.83	3.86	4.87
Nov	.00	.00	.09	.22	.39	.61	.88	1.24	1.75	2.66	3.59
Dec	.06	.11	.22	.34	.47	.63	.82	1.06	1.40	1.96	2.53
Ann	11.83	13.34	15.34	16.91	18.33	19.74	21.21	22.86	24.90	27.91	30.58

\+ 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: 1962-2001
(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	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	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	#	1973	12	#	1973	0	0	0	0	0
Feb	.0	0	0	.0	0	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	.0	0	0	.0	0	0	0	0	0	0
Ann	#	Jan 1973	12	#	Jan 1973	0	0	0	0	0

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

(1) Derived from Snow Climatology and 1971-2000 daily data

@ Denotes mean number of days greater than 0 but less than .05

(2) Derived from 1971-2000 daily data

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

Complete documentation available from:
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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	3/14	3/05	2/26	2/20	2/15	2/09	2/03	1/27	1/15
32	3/05	2/19	2/09	1/31	1/22	1/12	1/01	12/10	0/00
28	2/06	1/21	1/08	12/25	12/02	0/00	0/00	0/00	0/00
24	1/09	12/25	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	12/21	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	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	11/13	11/22	11/29	12/04	12/10	12/15	12/21	12/29	1/09
32	11/28	12/11	12/20	12/28	1/05	1/14	1/25	2/14	0/00
28	12/13	12/28	1/10	1/24	2/16	0/00	0/00	0/00	0/00
24	12/25	1/12	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	12/24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	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	353	330	317	307	299	290	281	271	256
32	>365	>365	>365	>365	348	335	325	314	300
28	>365	>365	>365	>365	>365	>365	>365	363	337
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
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	291	160	34	7	0	0	0	0	0	3	95	245	835
60	188	87	8	0	0	0	0	0	0	0	42	148	473
57	138	54	3	0	0	0	0	0	0	0	23	101	319
55	109	37	1	0	0	0	0	0	0	0	15	74	236
50	50	13	0	0	0	0	0	0	0	0	4	29	96
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	773	826	1159	1300	1535	1608	1706	1701	1519	1337	1027	819	15310
55	169	219	447	610	822	918	993	988	829	624	352	180	7151
57	137	179	387	550	760	858	931	926	769	562	300	145	6504
60	93	128	299	460	667	768	838	833	679	470	229	98	5562
65	44	62	170	317	512	618	683	678	529	318	133	41	4105
70	16	22	76	188	362	468	528	523	379	179	63	15	2819

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	534	633	916	1066	1293	1377	1469	1463	1289	1101	797	587	534	1167	2083	3149	4442	5819	7288	8751	10040	11141	11938	12525
45	388	492	761	916	1138	1227	1314	1308	1139	946	647	436	388	880	1641	2557	3695	4922	6236	7544	8683	9629	10276	10712
50	261	360	611	766	983	1077	1159	1153	989	792	503	301	261	621	1232	1998	2981	4058	5217	6370	7359	8151	8654	8955
55	157	242	461	616	828	927	1004	998	839	637	362	186	157	399	860	1476	2304	3231	4235	5233	6072	6709	7071	7257
60	79	142	323	470	673	777	849	843	689	486	242	100	79	221	544	1014	1687	2464	3313	4156	4845	5331	5573	5673
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	318	387	592	702	862	898	944	942	859	741	514	349	318	705	1297	1999	2861	3759	4703	5645	6504	7245	7759	8108

(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