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: ELGIN, TX **COOP ID: 412820**

Climate Division: TX 7 **NWS Call Sign:** **Elevation: 579 Feet** **Lat: 30˚21N** **Lon: 97˚22W**

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	61.5	40.0	50.8	89	1971	30	57.6	1971	7	1982	11	41.4	1979	456	8	.0	.0	25.0	.3	7.5	.0
Feb	66.3	43.7	55.0	98	1996	21	62.3	2000	10	1985	2	45.2	1978	296	16	.0	.3	24.9	.4	3.9	.0
Mar	74.1	50.7	62.4	96	1971	28	68.2	1974	17	1980	2	56.5	1996	139	58	.0	.5	30.4	.0	1.2	.0
Apr	80.2	57.2	68.7	97+	1982	13	73.5	1972	33	1973	10	63.3	1997	34	145	.0	1.7	30.0	.0	.0	.0
May	85.9	65.2	75.6	100	1998	6	81.2	1996	45+	1984	9	71.4	1976	4	330	@	8.3	31.0	.0	.0	.0
Jun	91.7	70.7	81.2	107	1998	14	85.7	1998	54	1964	1	78.9	1983	0	486	.9	22.3	30.0	.0	.0	.0
Jul	95.6	72.9	84.3	107	1964	25	88.0	1980	62	1970	23	80.3	1976	0	598	6.7	28.3	31.0	.0	.0	.0
Aug	95.9	72.6	84.3	107+	2000	31	87.5	1999	59	1986	30	80.4	1992	0	598	6.3	28.8	31.0	.0	.0	.0
Sep	90.6	68.1	79.4	110+	2000	5	84.1	1977	44	1983	22	73.7	1974	0	430	1.0	18.9	30.0	.0	.0	.0
Oct	82.1	59.2	70.7	96+	1991	13	73.4	1979	29	1993	31	62.2	1976	19	194	.0	4.9	30.9	.0	@	.0
Nov	71.0	49.5	60.3	91	1963	6	67.8	1973	21	1976	29	52.7	1976	198	56	.0	.0	28.9	.0	1.5	.0
Dec	63.3	41.9	52.6	86	1973	12	60.5	1984	0	1989	23	43.8	1989	397	12	.0	.0	26.9	.4	5.1	@
Ann	79.9	57.6	68.8	110+	Sep 2000	5	88.0	Jul 1980	0	Dec 1989	23	41.4	Jan 1979	1543	2931	14.9	114.0	350.0	1.1	19.2	@

+ 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

Issue Date: February 2004

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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	2.33	1.65	5.38	1965	22	12.31	1991	.00+	1996
Feb	2.11	1.71	2.30	1986	4	7.19	1992	.00	1999
Mar	2.41	2.18	2.90	1999	19	5.47	1999	.15	1972
Apr	2.46	2.38	4.00	1991	5	9.76	1976	.04	1984
May	4.67	5.07	4.54	1970	16	8.67	1975	.42	1998
Jun	3.89	3.57	4.96	1985	6	12.09	1981	.43	1998
Jul	1.98	1.41	3.20	1976	5	6.41	1999	.00+	1994
Aug	1.95	1.16	2.95	1974	30	8.50	1974	.00+	1999
Sep	2.96	2.77	3.77	1962	8	8.97	1996	.31	1999
Oct	3.98	2.99	6.05	1998	18	11.44	1984	.38	1987
Nov	3.25	2.45	6.10	2001	16	9.91	2000	.13	1999
Dec	2.43	1.77	5.30	1991	21	11.50	1991	.16	1989
Ann	34.42	35.53	6.10	Nov 2001	16	12.31	Jan 1991	.00+	Aug 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.3	3.9	1.6	.6
Feb	5.0	4.1	1.4	.6
Mar	5.7	4.5	1.6	.6
Apr	4.5	4.0	1.9	.7
May	6.6	5.7	3.2	1.5
Jun	5.8	5.0	2.6	1.3
Jul	3.8	2.9	1.6	.6
Aug	4.0	3.2	1.5	.4
Sep	5.2	4.5	2.0	1.0
Oct	5.5	4.7	2.4	1.3
Nov	5.0	4.3	1.9	1.0
Dec	4.9	4.0	1.8	.7
Ann	61.3	50.8	23.5	10.3

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	.29	.73	1.10	1.48	1.89	2.36	2.91	3.67	4.90	6.08
Feb	.11	.31	.63	.94	1.27	1.64	2.07	2.60	3.32	4.50	5.66
Mar	.43	.64	1.00	1.33	1.66	2.02	2.44	2.94	3.61	4.68	5.71
Apr	.23	.41	.74	1.08	1.45	1.88	2.38	3.00	3.86	5.29	6.69
May	1.05	1.48	2.17	2.78	3.40	4.05	4.78	5.66	6.81	8.65	10.38
Jun	.47	.77	1.32	1.86	2.44	3.08	3.82	4.75	6.00	8.06	10.07
Jul	.00	.00	.18	.43	.76	1.16	1.67	2.35	3.32	5.03	6.77
Aug	.00	.07	.31	.58	.90	1.28	1.75	2.36	3.21	4.68	6.15
Sep	.45	.70	1.13	1.54	1.96	2.43	2.96	3.62	4.49	5.92	7.29
Oct	.47	.78	1.34	1.90	2.49	3.14	3.91	4.86	6.15	8.27	10.34
Nov	.44	.70	1.17	1.62	2.09	2.61	3.22	3.97	4.97	6.62	8.21
Dec	.23	.40	.73	1.07	1.43	1.85	2.34	2.96	3.81	5.22	6.61
Ann	20.60	23.09	26.38	28.95	31.27	33.55	35.93	38.61	41.91	46.77	51.06

+ 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

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	.1	.0	#	0
Feb	.4	.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	0
Nov	.0	.0	0	0
Dec	.0	.0	0	0
Ann	.5	.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	2.8	1985	3	2.8+	1985	3	1985	3	#+	1997
Feb	5.0	1973	10	7.0	1973	5	1973	10	#+	1994
Mar	#	1987	30	#	1987	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	5.0	Feb 1973	10	7.0	Feb 1973	5	Feb 1973	10	#+	Jan 1997

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.1	.1	.0	.0	.0
Feb	.1	.1	.1	.1	.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	.2	.2	.1	.1	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	@	@	.0	.0
Feb	.1	@	@	.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	.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	4/09	4/01	3/26	3/21	3/17	3/12	3/07	3/02	2/22
32	3/20	3/12	3/06	3/01	2/24	2/20	2/15	2/09	2/01
28	3/13	3/03	2/23	2/16	2/10	2/04	1/29	1/21	1/10
24	2/27	2/16	2/08	1/31	1/24	1/16	1/07	12/24	0/00
20	2/12	2/02	1/25	1/17	1/08	12/23	0/00	0/00	0/00
16	1/20	1/09	12/25	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	10/26	11/02	11/07	11/12	11/16	11/20	11/24	11/29	12/06
32	11/07	11/14	11/19	11/24	11/28	12/02	12/07	12/12	12/19
28	11/20	11/28	12/03	12/08	12/12	12/17	12/22	12/27	1/04
24	12/03	12/13	12/20	12/26	1/01	1/08	1/16	2/01	0/00
20	12/18	12/30	1/09	1/19	2/01	0/00	0/00	0/00	0/00
16	12/30	1/10	1/26	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	262	255	249	243	238	232	224	215
32	305	295	288	282	276	270	264	257	247
28	339	326	317	310	303	296	289	281	270
24	>365	>365	>365	>365	352	335	322	310	296
20	>365	>365	>365	>365	>365	>365	356	344	332
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	456	296	139	34	4	0	0	0	0	19	198	397	1543
60	323	187	62	7	0	0	0	0	0	4	113	264	960
57	255	136	33	2	0	0	0	0	0	1	74	198	699
55	215	107	20	0	0	0	0	0	0	1	54	161	558
50	132	49	5	0	0	0	0	0	0	0	20	84	290
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	588	645	942	1101	1350	1476	1621	1621	1420	1198	848	639	13449
55	84	107	249	411	637	786	908	908	730	485	212	87	5604
57	62	81	199	352	575	726	846	846	670	424	172	62	5015
60	37	48	136	268	482	636	753	753	580	334	121	35	4183
65	8	16	58	145	330	486	598	598	430	194	56	12	2931
70	4	5	16	60	193	336	443	443	284	85	20	1	1890

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	371	465	703	871	1110	1246	1377	1383	1188	958	619	418	371	836	1539	2410	3520	4766	6143	7526	8714	9672	10291	10709
45	252	336	552	721	955	1096	1222	1228	1038	804	475	287	252	588	1140	1861	2816	3912	5134	6362	7400	8204	8679	8966
50	149	223	408	571	800	946	1067	1073	888	649	342	175	149	372	780	1351	2151	3097	4164	5237	6125	6774	7116	7291
55	77	132	274	425	645	796	912	918	738	498	223	97	77	209	483	908	1553	2349	3261	4179	4917	5415	5638	5735
60	36	68	159	287	490	646	757	763	589	352	127	43	36	104	263	550	1040	1686	2443	3206	3795	4147	4274	4317
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	227	290	453	577	769	854	925	918	805	642	388	256	227	517	970	1547	2316	3170	4095	5013	5818	6460	6848	7104

(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