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: HUNTSVILLE, TX **COOP ID: 414382**

Climate Division: TX 6 **NWS Call Sign:** **Elevation: 494 Feet** **Lat: 30˚43N** **Lon: 95˚33W**

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	57.9	39.0	48.5	88	1975	27	54.2	1990	7	1982	11	38.7	1978	525	5	.0	.0	23.1	.7	8.5	.0
Feb	62.8	42.6	52.7	94	1986	21	60.3	1999	7	1951	2	40.7	1978	359	13	.0	.1	23.7	.4	4.7	.0
Mar	70.6	49.7	60.2	91	1971	23	65.0	1974	18	1980	2	54.7	1996	178	27	.0	@	29.6	@	1.1	.0
Apr	77.5	56.3	66.9	97	1963	11	71.9	1981	31	1987	3	62.2	1997	51	109	.0	.7	30.0	.0	@	.0
May	84.4	64.0	74.2	98	1996	30	79.2	1996	42	1954	4	69.8	1976	4	289	.0	6.9	31.0	.0	.0	.0
Jun	90.3	70.1	80.2	106	1980	28	85.4	1998	54+	1974	26	77.3	1989	0	457	.4	19.9	30.0	.0	.0	.0
Jul	93.8	72.6	83.2	106+	1980	17	87.9	1998	58	1967	15	80.0	1976	0	563	3.4	27.1	31.0	.0	.0	.0
Aug	93.5	72.1	82.8	107+	1980	23	86.0	1999	56	1967	13	79.3	1992	0	553	2.3	26.7	31.0	.0	.0	.0
Sep	88.0	67.2	77.6	108	2000	5	82.2	1980	41	1972	30	70.8	1974	1	378	.3	15.7	30.0	.0	.0	.0
Oct	79.3	58.2	68.8	98	1953	1	71.6	1991	28	1993	31	60.6	1976	33	151	.0	2.7	30.9	.0	@	.0
Nov	68.5	48.9	58.7	90	1955	3	65.5	1973	19	1976	29	50.3	1976	233	45	.0	.0	28.6	@	1.4	.0
Dec	60.3	41.2	50.8	85	1994	9	60.2	1984	2	1989	23	41.7	1989	451	10	.0	.0	25.0	.4	6.0	.0
Ann	77.2	56.8	67.1	108	Sep 2000	5	87.9	Jul 1998	2	Dec 1989	23	38.7	Jan 1978	1835	2600	6.4	99.8	343.9	1.5	21.7	.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: 1946-2001

(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	4.28	3.17	4.08	1990	18	11.98	1991	.16	1971
Feb	3.14	2.82	4.50	1949	26	8.15	1992	.21	1999
Mar	3.47	3.34	4.84	1947	13	7.26	1973	.36	1986
Apr	3.50	3.37	4.40	1953	29	8.24	1973	.10	1984
May	5.08	5.10	5.55	1953	13	11.48	1986	.04	1998
Jun	4.66	4.54	6.55	2001	6	9.57	1993	.09	1980
Jul	2.67	2.26	4.02	1995	31	7.26	1999	.09	1986
Aug	3.69	2.60	4.94	1974	30	13.72	1974	.41	1978
Sep	4.73	4.28	7.09	1974	14	11.97	1974	.87	1989
Oct	4.32	3.17	10.21	1994	17	15.94	1994	.20	1978
Nov	4.87	3.84	9.37	1987	25	15.69	2000	.86	1994
Dec	4.10	3.91	6.55	1994	16	10.73	1994	1.11	1981
Ann	48.51	49.66	10.21	Oct 1994	17	15.94	Oct 1994	.04	May 1998

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.1	6.3	2.9	1.4
Feb	8.1	5.1	2.1	.9
Mar	9.1	5.6	2.3	1.1
Apr	6.7	4.5	2.6	1.3
May	9.2	6.5	3.1	1.7
Jun	8.3	6.4	3.3	1.5
Jul	6.9	4.6	1.5	.6
Aug	7.0	5.0	2.4	1.1
Sep	7.8	5.5	2.8	1.5
Oct	7.0	4.8	2.2	1.4
Nov	8.6	5.9	3.1	1.4
Dec	9.5	6.1	2.7	1.1
Ann	98.3	66.3	31.0	15.0

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	.62	.98	1.60	2.19	2.81	3.49	4.27	5.23	6.52	8.62	10.64
Feb	.58	.86	1.32	1.75	2.18	2.65	3.19	3.83	4.69	6.06	7.38
Mar	.84	1.16	1.67	2.12	2.57	3.04	3.57	4.20	5.03	6.34	7.57
Apr	.39	.66	1.15	1.63	2.16	2.74	3.42	4.27	5.43	7.33	9.19
May	.56	.95	1.66	2.36	3.12	3.97	4.97	6.20	7.89	10.67	13.38
Jun	.78	1.18	1.86	2.50	3.16	3.87	4.69	5.68	7.01	9.15	11.21
Jul	.26	.45	.82	1.19	1.59	2.05	2.58	3.26	4.18	5.71	7.20
Aug	.51	.81	1.34	1.85	2.39	2.98	3.67	4.51	5.65	7.51	9.30
Sep	1.23	1.68	2.37	2.97	3.56	4.19	4.88	5.71	6.78	8.47	10.05
Oct	.35	.64	1.21	1.81	2.47	3.22	4.12	5.25	6.82	9.44	12.03
Nov	.90	1.34	2.05	2.71	3.39	4.11	4.94	5.93	7.26	9.39	11.42
Dec	1.38	1.77	2.34	2.82	3.28	3.76	4.28	4.89	5.67	6.87	7.99
Ann	31.84	34.97	39.03	42.15	44.94	47.66	50.49	53.64	57.49	63.12	68.03

\+ 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: 1946-2001
(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	.3	.0	0	0
Feb	#	.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
Dec	#	.0	#	0
Ann	.3	.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	3.0	1973	11	5.0	1973	0	0	0	0	0
Feb	#	1981	11	#+	1981	1	1985	1	#	1985
Mar	#	1989	6	#	1989	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	#	1993	26	#+	1993	2	1976	28	#	1976
Dec	#	1996	16	#+	1996	#+	1996	16	#+	1996
Ann	3.0	Jan 1973	11	5.0	Jan 1973	2	Nov 1976	28	#+	Dec 1996

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.2	.1	.1	.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	.2	.1	.1	.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	4/01	3/26	3/21	3/17	3/13	3/09	3/05	3/01	2/22
32	3/21	3/12	3/06	2/28	2/23	2/18	2/13	2/06	1/28
28	3/09	2/26	2/18	2/12	2/05	1/30	1/23	1/15	1/02
24	2/27	2/17	2/10	2/03	1/27	1/20	1/10	0/00	0/00
20	2/10	1/31	1/22	1/14	1/03	0/00	0/00	0/00	0/00
16	1/26	1/15	1/02	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	10/31	11/06	11/11	11/14	11/18	11/21	11/25	11/30	12/06
32	11/10	11/17	11/22	11/26	11/30	12/04	12/08	12/13	12/19
28	11/20	11/29	12/06	12/12	12/18	12/23	12/29	1/06	1/17
24	12/07	12/15	12/22	12/27	1/02	1/09	1/18	0/00	0/00
20	12/19	12/31	1/11	1/22	2/05	0/00	0/00	0/00	0/00
16	12/30	1/12	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	273	264	259	254	249	244	239	233	225
32	310	299	292	285	279	273	266	258	247
28	>365	342	330	321	313	306	298	289	277
24	>365	>365	>365	>365	355	335	322	311	297
20	>365	>365	>365	>365	>365	>365	356	342	329
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	525	359	178	51	4	0	0	0	1	33	233	451	1835
60	387	242	84	12	0	0	0	0	0	8	140	314	1187
57	312	185	46	4	0	0	0	0	0	3	97	243	890
55	268	152	29	1	0	0	0	0	0	1	73	202	726
50	176	84	7	0	0	0	0	0	0	0	31	118	416
32	12	2	0	0	0	0	0	0	0	0	0	2	16

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	522	580	872	1048	1308	1447	1586	1576	1367	1140	802	584	12832
55	65	86	189	359	595	757	873	863	677	429	185	71	5149
57	47	63	144	301	533	697	811	801	617	368	149	50	4581
60	29	37	88	220	440	607	718	708	527	280	102	28	3784
65	5	13	27	109	289	457	563	553	378	151	45	10	2600
70	1	3	6	39	155	307	408	398	238	58	16	1	1630

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	322	415	649	824	1075	1225	1361	1352	1147	911	576	375	322	737	1386	2210	3285	4510	5871	7223	8370	9281	9857	10232
45	215	293	498	674	920	1075	1206	1197	997	756	436	252	215	508	1006	1680	2600	3675	4881	6078	7075	7831	8267	8519
50	126	190	355	525	765	925	1051	1042	847	602	306	150	126	316	671	1196	1961	2886	3937	4979	5826	6428	6734	6884
55	64	107	231	380	610	775	896	887	697	449	198	82	64	171	402	782	1392	2167	3063	3950	4647	5096	5294	5376
60	26	47	127	248	456	625	741	732	547	307	110	37	26	73	200	448	904	1529	2270	3002	3549	3856	3966	4003
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	188	247	398	536	742	849	923	910	787	603	352	216	188	435	833	1369	2111	2960	3883	4793	5580	6183	6535	6751

(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:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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