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: BRADY, TX **COOP ID: 411017**

Climate Division: TX 6 **NWS Call Sign:** **Elevation: 1,720 Feet** **Lat: 31˚07N** **Lon: 99˚20W**

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	59.0	32.3	45.7	91	1943	23	51.7	2000	0	1949	31	36.4	1979	602	0	.0	.0	22.7	1.5	16.8	.0
Feb	63.6	36.7	50.2	99	1996	23	57.6	2000	3	1985	3	40.4	1978	422	5	.0	.2	23.2	.9	10.0	.0
Mar	71.4	43.9	57.7	97	1967	29	65.0	1974	11+	1980	2	52.2	1987	248	20	.0	.6	29.6	.1	4.3	.0
Apr	78.9	51.1	65.0	100+	1996	26	70.5	1986	26	1938	8	59.3	1997	86	85	.1	3.2	29.8	.0	.6	.0
May	84.9	60.1	72.5	107	1984	7	78.4	1996	37+	1979	12	68.4	1976	16	248	.6	8.5	31.0	.0	.0	.0
Jun	90.5	66.8	78.7	110+	1980	29	84.1	1990	47	1970	5	73.3	1983	0	410	2.1	19.2	30.0	.0	.0	.0
Jul	94.5	69.7	82.1	110	1978	17	86.9	1980	56+	1970	23	76.6	1976	0	531	6.0	27.6	31.0	.0	.0	.0
Aug	93.7	69.0	81.4	108+	1986	21	85.6	1999	51	1992	29	75.2	1971	0	506	4.8	26.1	31.0	.0	.0	.0
Sep	87.8	63.2	75.5	109	2000	6	81.3	1977	33	1942	27	67.6	1974	5	320	1.0	15.2	30.0	.0	.0	.0
Oct	79.3	53.1	66.2	103	1951	4	70.5	1979	24	1993	31	57.8	1976	62	99	@	3.2	30.7	.0	.4	.0
Nov	68.0	42.6	55.3	92+	1980	10	61.0	1973	10	1938	27	48.4	1976	307	15	.0	.1	27.6	.1	5.5	.0
Dec	60.4	34.5	47.5	91	1954	5	54.0	1984	-2	1989	23	37.9	1983	545	0	.0	.0	24.8	.9	13.9	@
Ann	77.7	51.9	64.8	110+	Jun 1980	29	86.9	Jul 1980	-2	Dec 1989	23	36.4	Jan 1979	2293	2239	14.6	103.9	341.4	3.5	51.5	@

\+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1897-2001

(3) Derived from 1971-2000 serially complete daily data

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: BRADY, TX

COOP ID: 411017

Climate Division: TX 6 **NWS Call Sign:** **Elevation: 1,720 Feet** **Lat: 31°07N** **Lon: 99°20W**

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	1.01	.88	2.33	1968	20	3.06+	1991	.00	1971
Feb	1.68	1.28	2.15	1989	17	5.41	1997	.09	1976
Mar	1.63	1.08	2.60	1998	16	4.21	1999	.05	1971
Apr	1.92	2.03	2.30	1941	27	4.83	1977	.28	1984
May	3.60	3.06	5.94	1989	15	7.96	1975	.84	1973
Jun	3.26	2.79	5.76	1969	24	8.26	1986	.57	1990
Jul	2.68	1.74	6.51	1971	26	13.99	1971	.00	1993
Aug	2.57	1.44	5.60	1978	3	11.16	1978	.09	1973
Sep	3.26	2.53	5.03	1986	3	10.44	1980	.01	1979
Oct	2.68	2.26	4.57	1957	14	6.72	1973	.36	1995
Nov	1.73	1.30	4.25	2000	3	10.82	2000	.03	1999
Dec	1.61	.99	4.42	1984	31	8.22	1991	.05+	1985
Ann	27.63	27.10	6.51	Jul 1971	26	13.99	Jul 1971	.00+	Jul 1993

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	5.8	2.6	.5	@
Feb	5.5	3.4	1.1	.3
Mar	5.8	3.1	1.1	.3
Apr	5.4	3.6	1.4	.5
May	8.0	5.5	2.5	1.1
Jun	6.4	4.8	2.4	1.0
Jul	4.3	3.0	1.5	.8
Aug	5.4	3.3	1.6	.9
Sep	6.0	4.1	1.9	1.1
Oct	6.3	4.0	1.9	.8
Nov	5.5	3.1	1.2	.4
Dec	6.1	2.8	.8	.3
Ann	70.5	43.3	17.9	7.5

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	.02	.09	.22	.36	.52	.71	.94	1.23	1.63	2.32	3.00
Feb	.13	.24	.46	.69	.95	1.24	1.60	2.04	2.67	3.71	4.74
Mar	.15	.26	.48	.71	.95	1.23	1.57	1.98	2.56	3.52	4.46
Apr	.35	.52	.80	1.06	1.33	1.61	1.94	2.33	2.86	3.71	4.51
May	.96	1.30	1.82	2.27	2.72	3.20	3.72	4.34	5.15	6.42	7.61
Jun	.58	.87	1.35	1.79	2.25	2.74	3.30	3.98	4.88	6.34	7.72
Jul	.02	.10	.35	.68	1.09	1.60	2.26	3.14	4.43	6.69	9.00
Aug	.08	.19	.45	.77	1.16	1.64	2.25	3.04	4.19	6.19	8.22
Sep	.15	.32	.69	1.12	1.63	2.22	2.96	3.91	5.26	7.58	9.90
Oct	.34	.55	.93	1.31	1.70	2.14	2.65	3.27	4.12	5.51	6.86
Nov	.09	.19	.39	.62	.89	1.20	1.59	2.08	2.78	3.97	5.15
Dec	.03	.08	.21	.40	.63	.94	1.33	1.86	2.64	4.03	5.47
Ann	18.53	20.25	22.47	24.18	25.70	27.18	28.71	30.42	32.50	35.53	38.17

\+ 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: 1897-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

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: BRADY, TX **COOP ID: 411017**

Climate Division: TX 6 **NWS Call Sign:** **Elevation: 1,720 Feet** **Lat: 31°07N** **Lon: 99°20W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.7	.0	0	0
Feb	1.2	.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	-99.9	-99.9	0	0
Ann	-9.9	-9.9	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	4.0	1973	11	4.0	1973	0	0	0	0	0
Feb	5.0	1973	9	7.0	1973	#	1971	8	#	1971
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	5.0	Feb 1973	9	7.0	Feb 1973	#	Feb 1971	8	#	Feb 1971

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	-9.9	-9.9	-9.9	-9.9	-9.9
Feb	-9.9	-9.9	-9.9	-9.9	-9.9
Mar	-9.9	-9.9	-9.9	-9.9	-9.9
Apr	-9.9	-9.9	-9.9	-9.9	-9.9
May	-9.9	-9.9	-9.9	-9.9	-9.9
Jun	-9.9	-9.9	-9.9	-9.9	-9.9
Jul	-9.9	-9.9	-9.9	-9.9	-9.9
Aug	-9.9	-9.9	-9.9	-9.9	-9.9
Sep	-9.9	-9.9	-9.9	-9.9	-9.9
Oct	-9.9	-9.9	-9.9	-9.9	-9.9
Nov	-9.9	-9.9	-9.9	-9.9	-9.9
Dec	-9.9	-9.9	-9.9	-9.9	-9.9
Ann	-9.9	-9.9	-9.9	-9.9	-9.9

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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: BRADY, TX **COOP ID: 411017**

Climate Division: TX 6 **NWS Call Sign:** **Elevation: 1,720 Feet** **Lat: 31˚07N** **Lon: 99˚20W**

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	4/11	4/07	4/04	4/02	3/30	3/27	3/23	3/18
32	4/10	4/03	3/29	3/25	3/21	3/17	3/13	3/08	3/01
28	4/01	3/23	3/16	3/10	3/04	2/27	2/21	2/14	2/04
24	3/17	3/07	2/28	2/21	2/15	2/09	2/03	1/27	1/16
20	3/04	2/21	2/13	2/06	1/31	1/24	1/15	1/03	0/00
16	2/14	2/04	1/28	1/20	1/12	12/31	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	10/22	10/27	10/30	11/02	11/04	11/07	11/10	11/13	11/18
32	10/27	11/01	11/05	11/08	11/11	11/14	11/18	11/21	11/27
28	11/03	11/09	11/13	11/17	11/21	11/24	11/28	12/02	12/08
24	11/11	11/19	11/25	12/01	12/06	12/10	12/16	12/22	12/30
20	11/23	12/03	12/10	12/16	12/22	12/29	1/06	1/22	0/00
16	12/12	12/25	1/04	1/14	1/25	2/14	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	234	228	223	220	216	213	209	205	198
32	258	250	244	239	235	230	225	219	211
28	293	282	274	267	261	254	247	239	228
24	329	317	308	300	292	285	277	268	256
20	>365	>365	>365	353	331	318	307	296	282
16	>365	>365	>365	>365	>365	359	341	330	317

***** 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

Complete documentation available from:
www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

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: BRADY, TX **COOP ID: 411017**

Climate Division: TX 6 **NWS Call Sign:** **Elevation: 1,720 Feet** **Lat: 31˚07N** **Lon: 99˚20W**

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	602	422	248	86	16	0	0	0	5	62	307	545	2293
60	458	295	138	29	3	0	0	0	0	18	189	398	1528
57	374	227	89	12	0	0	0	0	0	7	133	315	1157
55	321	187	63	6	0	0	0	0	0	3	102	263	945
50	209	108	21	0	0	0	0	0	0	0	45	157	540
32	13	2	0	0	0	0	0	0	0	0	0	3	18

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	435	509	795	989	1255	1400	1554	1529	1305	1060	698	482	12011
55	30	51	145	305	542	710	841	816	615	350	110	29	4544
57	21	34	109	251	480	650	779	754	555	292	81	18	4024
60	12	18	65	178	390	560	686	661	465	210	47	9	3301
65	0	5	20	85	248	410	531	506	320	99	15	0	2239
70	0	0	4	29	133	265	376	353	191	33	3	0	1387

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	237	336	555	754	1017	1172	1321	1301	1080	821	468	275	237	573	1128	1882	2899	4071	5392	6693	7773	8594	9062	9337
45	145	222	412	605	862	1022	1166	1146	930	667	335	165	145	367	779	1384	2246	3268	4434	5580	6510	7177	7512	7677
50	74	133	279	460	707	872	1011	991	780	516	220	84	74	207	486	946	1653	2525	3536	4527	5307	5823	6043	6127
55	30	67	167	319	553	722	856	836	631	369	130	37	30	97	264	583	1136	1858	2714	3550	4181	4550	4680	4717
60	6	25	85	196	402	572	701	681	481	234	60	9	6	31	116	312	714	1286	1987	2668	3149	3383	3443	3452
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	182	231	360	485	676	788	867	853	714	534	303	196	182	413	773	1258	1934	2722	3589	4442	5156	5690	5993	6189

(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