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

COOP ID: 411007

Lon: 100°25W

Station: BRACKETTVILLE, TX

Climate Division: TX 7

NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 63.8 37.3 50.6 90 2000 20 56.9 2000 4 1962 12 43.3 1979 458 10 .0 @ 27.3 .1 9.2 Jan 68.7 41.1 54.9 99 1996 22 62.7 1999 14 1905 13 46.4 1978 300 17 .0 .4 26.5 @ 4.7 0. Feb Mar 76.3 49.1 62.7 101 1971 28 68.0 2000 16 1980 2 56.7 1987 127 55 @ 1.5 30.7 .0 1.3 0. 1972 29 8 1987 Apr 83.1 55.8 69.5 104 +1996 26 75.9 1973 64.4 28 161 .2 6.3 30.0 .0 .1 .0 May 88.1 64.4 76.3 107 1927 27 82.3 1998 37 1903 1 70.4 1976 5 353 1.0 13.3 31.0 .0 .0 .0 92.9 77.4 3.0 23.3 Jun 69.9 81.4 111 1988 10 86.9 1998 47+ 1903 14 1979 0 491 30.0 .0 .0 .0 Jul 95.5 72.1 83.8 109 31 89.2 55+ 1999 25 77.9 1976 582 27.3 31.0 0. 1960 1998 0 6.1 .0 .0 1971 95.9 71.8 83.9 109 1986 20 86.8 1985 54 1991 5 77.9 0 583 6.2 27.5 31.0 .0 .0 .0 Aug 35 0 Sep 91.1 67.2 79.2 104 +1985 4 83.9 1977 1991 20 70.3 1974 425 .8 21.0 30.0 .0 .0 .0 22 31 62.2 1976 Oct 82.9 58.0 70.5 101 1979 4 73.5 1972 1993 21 190 .1 5.9 31.0 .0 .3 .0 72.9 59.8 93 1988 8 66.3 1973 19+ 1976 30 51.9 1976 197 39 .2 29.4 .0 2.9 0. Nov 46.6 .0 Dec 64.9 39.1 52.0 89 1977 5 59.9 1984 9 1983 24 42.2 2000 417 14 .0 .0 27.7 .1 8.4 .0 Jun Jul Jan Dec 56.0 68.7 111 1988 10 89.2 1998 4 1962 12 42.2 2000 1553 2920 17.4 126.7 355.6 .2 26.9 .0 81.3 Ann

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

Issue Date: February 2004 036-A

Elevation: 1,118 Feet Lat: 29°19N

⁺ Also occurred on an earlier date(s)

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

⁽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

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Elevation: 1,118 Feet Lat: 29°19N Lon: 100°25W

										Pı	recipit	tation	(incl	nes)										
			P	recipi	itatio	on Total	S			M	lean N	Numbo Pays (3		Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Medi					Extremes	S			Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.77	.64	1.90	1968	18	2.90	1991	.00+	1996	3.1	2.2	.5	.2	.00	.00	.04	.17	.31	.48	.68	.95	1.31	1.93	2.56
Feb	1.16	.83	5.15	1949	23	3.92	1987	.00+	1999	3.1	2.3	.9	.5	.00	.00	.16	.33	.53	.76	1.05	1.42	1.93	2.81	3.69
Mar	1.10	.76	4.00	1923	26	4.10	1990	.00+	1986	3.3	2.3	.9	.2	.00	.00	.15	.35	.55	.78	1.04	1.38	1.84	2.59	3.34
Apr	1.99	1.35	5.50	1990	25	9.49	1990	.00+	1998	3.7	3.1	1.4	.6	.00	.15	.47	.78	1.11	1.48	1.92	2.46	3.21	4.46	5.68
May	2.87	2.59	6.20	1900	14	7.93	1987	.00	1998	4.6	3.9	1.9	.9	.33	.68	1.16	1.57	1.99	2.43	2.94	3.54	4.34	5.61	6.83
Jun	3.18	2.55	5.32	1948	24	9.35	1971	.00+	1990	4.1	3.8	2.1	1.4	.00	.31	.86	1.37	1.89	2.47	3.14	3.96	5.08	6.92	8.72
Jul	1.79	.74	5.92	1938	24	13.86	1976	.00+	1998	2.9	2.6	1.1	.7	.00	.00	.02	.19	.46	.83	1.32	2.01	3.05	4.91	6.87
Aug	2.29	1.24	4.85	1998	23	11.56	1998	.00+	1985	2.9	2.6	1.2	.8	.00	.00	.18	.46	.83	1.29	1.89	2.69	3.86	5.92	8.02
Sep	2.77	2.21	6.00	1955	24	12.90	1991	.00	1979	5.0	4.1	1.8	.9	.31	.65	1.11	1.51	1.92	2.35	2.83	3.42	4.19	5.43	6.61
Oct	2.49	1.65	5.80	1951	28	8.59	2000	.00+	1992	4.2	3.6	1.8	.9	.00	.00	.23	.55	.96	1.46	2.11	2.96	4.18	6.32	8.49
Nov	1.41	1.16	3.50	1913	24	4.11	2000	.00+	1999	3.0	2.3	1.1	.4	.00	.00	.33	.57	.81	1.08	1.40	1.78	2.29	3.15	3.97
Dec	.97	.54	2.75	1902	1	3.81	1991	.00+	1999	2.6	1.9	.6	.1	.00	.00	.09	.24	.41	.61	.86	1.18	1.64	2.40	3.18
Ann	22.79	21.97	6.20	May 1900	14	13.86	Jul 1976	.00+	Dec 1999	42.5	34.7	15.3	7.6	12.49	14.28	16.69	18.59	20.32	22.04	23.85	25.89	28.43	32.20	35.55

⁺ Also occurred on an earlier date(s)

NWS Call Sign:

Complete documentation available from:

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

[#] 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

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Station: BRACKETTVILLE, TX

Climate Division: TX 7 NWS Call Sign: Elevation: 1,118 Feet Lat: 29°19N Lon: 100°25W

										Snov	w (inc	hes)													
						Sno	ow To	tals									Mea	ın Nu	mber	of Da	ys (1)				
	Mean	s/Medi	ians (1))	Extremes (2)											Snow Fall >= Thresholds						Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10		
Jan	#	.0	0	0	#	1976	26	#	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Feb	.1	.0	0	0	3.0	1973	9	3.0	1973	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0		
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Nov	#	.0	0	0	#	1976	29	#	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Ann	.1	.0	N/A	N/A	3.0	Feb 1973	9	3.0	Feb 1973	0	0	0	0	0	@	@	@	.0	.0	.0	.0	.0	.0		

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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>365

16

>365

				Freez	e Data										
			Spri	ng Freeze D	ates (Month/	Day)									
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated	(*)							
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	4/14	4/05	3/30	3/24	3/19	3/14	3/08	3/02	2/21						
32	4/01	3/22	3/16	3/10	3/05	2/28	2/22	2/15	2/06						
28	3/11	3/03	2/25	2/19	2/14	2/09	2/04	1/28	1/18						
24	2/26	2/15	2/06	1/30	1/22	1/14	1/03	0/00	0/00						
20	2/05	1/26	1/18	1/10	1/02	12/24	12/07	0/00	0/00						
16	1/22	1/07	12/23	0/00	0/00	0/00	0/00	0/00	0/00						
•		•	Fal	l Freeze Da	tes (Month/D	ay)	•		•						
Tomn (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	10/14	10/22	10/28	11/02	11/07	11/12	11/17	11/23	12/01						
32	10/23	10/31	11/06	11/11	11/15	11/20	11/24	11/30	12/08						
28	11/03	11/16	11/26	12/04	12/12	12/20	12/28	1/08	1/24						
24	11/27	12/06	12/13	12/20	12/26	1/03	1/14	0/00	0/00						
20	12/09	12/21	12/30	1/08	1/17	1/29	0/00	0/00	0/00						
16	12/23	1/07	1/22	0/00	0/00	0/00	0/00	0/00	0/00						
•		•		Freeze F	ree Period	•	•		•						
Tomp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days))							
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	268	255	247	239	232	225	217	209	196						
32	291	279	270	262	255	247	239	230	218						
28	>365	324	311	302	295	287	279	270	258						
24	>365	>365	>365	>365	341	326	314	303	288						
20	>365	>365	>365	>365	>365	>365	360	342	327						
			2.5	2.5		2.5	2.5	+	2						

^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

>365

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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Elevation: 1,118 Feet

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	458	300	127	28	5	0	0	0	0	21	197	417	1553		
60	320	190	53	5	0	0	0	0	0	3	107	285	963		
57	248	139	27	1	0	0	0	0	0	1	68	219	703		
55	207	110	15	0	0	0	0	0	0	0	48	181	561		
50	122	51	3	0	0	0	0	0	0	0	17	101	294		
32	0	0	0	0	0	0	0	0	0	0	0	0	0		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	575	641	951	1123	1371	1481	1605	1606	1414	1192	832	619	13410
55	69	107	254	433	658	791	892	893	724	479	190	87	5577
57	48	80	203	374	596	731	830	831	664	418	150	63	4988
60	28	48	136	288	503	641	737	738	574	328	99	36	4156
65	10	17	55	161	353	491	582	583	425	190	39	14	2920
70	0	5	14	72	217	343	427	428	283	85	11	2	1887

	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	357	451	714	888	1131	1250	1358	1361	1177	954	595	383	357	808	1522	2410	3541	4791	6149	7510	8687	9641	10236	10619
45	230	319	560	738	976	1100	1203	1206	1027	799	454	256	230	549	1109	1847	2823	3923	5126	6332	7359	8158	8612	8868
50	126	203	412	588	821	950	1048	1051	878	645	314	143	126	329	741	1329	2150	3100	4148	5199	6077	6722	7036	7179
55	56	108	275	440	666	800	893	896	728	491	195	67	56	164	439	879	1545	2345	3238	4134	4862	5353	5548	5615
60	17	47	156	300	511	650	738	741	578	345	101	27	17	64	220	520	1031	1681	2419	3160	3738	4083	4184	4211
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	hly)						Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	241	294	459	583	766	843	902	901	788	635	386	258	241	535	994	1577	2343	3186	4088	4989	5777	6412	6798	7056

(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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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