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: 417481

Lon: 103°56W

Station: RED BLUFF DAM, TX

Climate Division: TX 5

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 61.8 29.4 45.6 87 1970 24 50.8 1999 -14 1962 11 40.3 1979 602 0 .0 26.4 21.2 @ Jan 67.9 33.2 50.6 90 1986 19 57.4 2000 -7 1985 2 45.1 1985 404 0 .0 @ 26.4 .5 13.4 @ Feb Mar 76.1 39.7 57.9 99 1946 31 61.2 +1997 12 1971 3 53.2 1987 231 11 .0 1.0 30.8 .0 5.8 0. 47.6 25+1973 76 Apr 84.0 65.8 103 1943 24 70.3 1986 1983 8 60.5 99 .3 8.4 29.8 .0 .8 .0 May 91.5 57.3 74.4 110+ 2000 25 80.2 2000 35 1970 3 70.1 1976 9 301 3.8 19.8 31.0 .0 0. .0 98.5 82.0 22 88.8 45 22 77.8 13.0 Jun 65.4 117 1998 1990 1946 1979 0 508 26.9 30.0 .0 .0 .0 Jul 98.4 68.9 83.7 113 1995 27 88.1 54 1952 8 79.1 1976 577 13.8 28.6 31.0 0. 1980 0 .0 .0 96.4 67.4 81.9 110 +1985 24 86.7 1977 52 1962 27 76.8 1971 0 523 10.4 26.8 31.0 .0 .0 .0 Aug 37 Sep 90.3 60.7 75.5 107 2000 6 81.1 1998 1942 27 69.0 1974 6 321 2.8 18.4 30.0 .0 .0 .0 24 59.8 Oct 82.1 49.7 65.9 103 1977 1 69.1 1979 1989 19 1976 59 86 .2 6.4 30.8 .0 .8 .0 70.7 37.6 54.2 92 1996 20 61.1 1983 4 1957 23 46.1 1976 339 14 28.7 @ 8.9 0. Nov .0 .1 Dec 62.7 30.3 46.5 86+ 1975 15 52.1 1977 2+ 1989 23 42.2 1989 574 0 .0 .0 27.2 .3 19.6 .0 Jun Jun Jan Jan 81.7 48.9 65.3 117 1998 22 88.8 1990 -14 1962 40.3 1979 2300 2440 44.3 136.4 353.1 1.2 70.5 .0 11 Ann

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

Issue Date: February 2004 244-A

(1) From the 1971-2000 Monthly Normals

Elevation: 2,800 Feet Lat: 31°54N

- (2) Derived from station's available digital record: 1939-2000
- (3) Derived from 1971-2000 serially complete daily data

⁺ Also occurred on an earlier date(s)

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

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										Pı	recipit	tation	(incl	nes)												
		ans/	P	recip	itatio	on Total					lean N of D	ays (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												
	Medi	ans(1)											-	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	.44	.27	.83	1958	5	1.38	1974	.00+	2000	3.3	1.5	.2	.0	.00	.00	.10	.17	.25	.33	.43	.55	.72	.99	1.25		
Feb	.38	.17	.80	1973	22	1.99	1973	.00+	1999	2.4	1.4	.1	.0	.00	.00	.00	.05	.11	.20	.30	.45	.65	1.02	1.38		
Mar	.19	.16	2.50	1987	29	1.14	1981	.00+	1996	1.5	.8	.1	@	.00	.00	.00	.04	.08	.13	.18	.25	.33	.47	.61		
Apr	.53	.17	3.25	1981	14	4.07	1981	.00+	1998	1.9	1.2	.2	.1	.00	.00	.00	.00	.04	.15	.31	.55	.91	1.58	2.27		
May	.95	.79	4.91	1941	24	3.31	1999	.00+	2000	3.2	2.0	.6	.3	.00	.00	.16	.33	.51	.70	.92	1.20	1.58	2.19	2.79		
Jun	1.94	1.59	7.24	1984	19	8.48	1986	.00+	1990	3.8	2.6	1.0	.7	.00	.07	.30	.58	.89	1.27	1.74	2.34	3.20	4.66	6.13		
Jul	1.86	1.38	3.88	1999	10	5.35	1990	.00+	1987	4.4	3.2	1.2	.4	.00	.13	.43	.72	1.03	1.38	1.79	2.30	3.00	4.18	5.34		
Aug	1.44	1.11	3.02	1971	16	4.71	1971	.00+	1994	4.4	3.4	1.4	.6	.00	.00	.24	.48	.73	1.01	1.36	1.79	2.39	3.39	4.39		
Sep	2.31	1.75	4.59	1980	26	8.34	1978	.00+	1998	5.2	3.6	1.2	.7	.00	.15	.49	.85	1.23	1.67	2.20	2.85	3.76	5.28	6.78		
Oct	1.05	.61	2.08	1960	17	3.46	1974	.00+	1992	3.2	2.1	.5	.2	.00	.00	.08	.28	.49	.72	.99	1.32	1.79	2.55	3.33		
Nov	.52	.30	2.75	1978	4	3.27	1978	.00+	1999	2.3	1.3	.3	.1	.00	.00	.00	.05	.17	.30	.45	.65	.91	1.37	1.81		
Dec	.55	.27	1.75	1986	23	3.90	1986	.00+	1996	2.7	1.5	.3	.1	.00	.00	.00	.05	.15	.28	.44	.66	.97	1.51	2.06		
Ann	12.16	11.21	7.24	Jun 1984	19	8.48	Jun 1986	.00+	May 2000	38.3	24.6	7.1	3.2	5.77	6.82	8.26	9.43	10.50	11.58	12.74	14.05	15.70	18.19	20.43		

⁺ Also occurred on an earlier date(s)

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: 1939-2000

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

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COOP ID: 417481

Station: RED BLUFF DAM, TX

Climate Division: TX 5 NWS Call Sign: Elevation: 2,800 Feet Lat: 31°54N Lon: 103°56W

										Snov	w (incl	hes)														
						Sno	ow To	tals							Mean Number of Days (1)											
	Mean	s/Medi	ians (1))	Extremes (2)												ow Fa	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	.5	.0	#	0	3.0	1985	31	3.0	1972	2	1979	1	#+	1979	.4	.3	.1	.0	.0	.1	.0	.0	.0			
Feb	.5	.0	#	0	6.0	1979	5	6.0	1979	6	1979	5	#+	1985	.2	.2	.1	.1	.0	@	@	@	.0			
Mar	.0	.0	0	0	.5	1978	3	.5	1978	0	0	0	0	0	@	.0	.0	.0	.0	.0	.0	.0	.0			
Apr	#	.0	0	0	#	1980	12	#	1980	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	.6	.0	0	0	5.0	1976	12	12.0	1976	0	0	0	0	0	.1	.1	.1	.1	.0	.0	.0	.0	.0			
Dec	#	.0	#	0	#	1988	10	#+	1988	3	1986	10	#	1986	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Ann	1.6	.0	N/A	N/A	6.0	Feb 1979	5	12.0	Nov 1976	6	Feb 1979	5	#+	Dec 1986	.7	.6	.3	.2	.0	.1	@	@	.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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COOP ID: 417481

Lon: 103°56W

Lat: 31°54N

Station: RED BLUFF DAM, TX

Climate Division: TX 5 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .60 .70 .80 .90 36 4/24 4/20 4/17 4/15 4/13 4/11 4/09 4/06 4/03 32 4/12 4/08 4/05 4/02 3/30 3/28 3/25 3/22 3/17 28 4/04 3/29 3/25 3/21 3/17 3/14 3/10 3/06 2/27 2/03 24 3/19 3/11 3/06 3/01 2/25 2/20 2/16 2/10 20 3/18 3/07 2/26 2/20 2/13 2/07 1/31 1/23 1/12 1/28 1/22 16 2/20 2/10 2/03 1/16 1/09 1/01 12/16 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 10/11 10/17 10/20 10/24 10/27 10/30 11/02 11/05 11/11 32 10/15 10/22 10/27 10/31 11/04 11/07 11/11 11/16 11/23 28 10/28 11/03 11/07 11/11 11/14 11/18 11/22 11/26 12/02 24 11/05 11/11 11/15 11/19 11/23 11/26 11/30 12/04 12/11 20 11/16 11/24 11/29 12/04 12/08 12/13 12/17 12/23 12/31 11/24 12/14 12/19 12/24 16 12/03 12/09 12/30 1/08 0/00 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 212 207 203 199 196 192 189 179 36 185 32 240 232 227 222 218 213 208 203 195 28 269 260 253 247 241 236 230 223 213 24 300 289 282 276 270 264 258 251 241 275 264 20 331 318 309 302 296 289 283

342

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

359

Derived from 1971-2000 serially complete daily data

>365

>365

16

Complete documentation available from:

313

Elevation: 2,800 Feet

303

289

331

322

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

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Climate Division: TX 5 NWS Call Sign: Elevation: 2,800 Feet Lat: 31°54N Lon: 103°56W

				Deg	ree Days to	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	602	404	231	76	9	0	0	0	6	59	339	574	2300
60	448	273	114	24	1	0	0	0	0	17	218	420	1515
57	358	200	64	10	0	0	0	0	0	7	159	329	1127
55	301	158	41	4	0	0	0	0	0	3	125	271	903
50	172	77	8	0	0	0	0	0	0	0	60	143	460
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	421	520	803	1013	1315	1498	1600	1546	1305	1050	665	449	12185
55	9	34	130	328	602	808	887	833	615	340	100	7	4693
57	4	20	92	273	540	748	825	771	555	281	73	4	4186
60	1	9	49	197	448	658	732	678	465	198	43	1	3479
65	0	0	11	99	301	508	577	523	321	86	14	0	2440
70	0	0	1	37	175	360	422	370	193	24	3	0	1585

Growing Degree Units (2) Base Growing Degree Units (Monthly) Growing Degree Units (Accumulated Monthly)																									
Base					Growing	g Degree	Units (M	Ionthly)					Growing Degree Units (Accumulated Monthly)												
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
40	221	339	565	780	1078	1260	1356	1308	1070	809	433	238	221	560	1125	1905	2983	4243	5599	6907	7977	8786	9219	9457	
45	118	214	418	632	923	1110	1201	1153	920	655	293	129	118	332	750	1382	2305	3415	4616	5769	6689	7344	7637	7766	
50	47	116	274	487	768	960	1046	998	770	504	179	54	47	163	437	924	1692	2652	3698	4696	5466	5970	6149	6203	
55	11	45	152	341	613	810	891	843	620	353	89	16	11	56	208	549	1162	1972	2863	3706	4326	4679	4768	4784	
60	0	14	63	208	459	660	736	688	473	216	30	0	0	14	77	285	744	1404	2140	2828	3301	3517	3547	3547	
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)	•		
50/86	212	281	414	518	669	774	861	832	685	520	321	217	212	493	907	1425	2094	2868	3729	4561	5246	5766	6087	6304	

(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

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