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: 413047

Lon: 96°12W

Station: FAIRFIELD 3 W, TX

Climate Division: TX 4 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 3 58.5 36.4 47.5 84 1997 4 54.0 1990 8+ 1973 12 37.2 1978 552 .0 .0 23.3 .7 12.0 @ Jan 22 63.3 40.5 51.9 94+ 1996 59.0 2000 0 1985 2 41.1 1978 378 10 .0 .1 24.2 6.9 @ Feb .6 Mar 70.9 47.9 59.4 93 1991 5 64.9 1974 13 1980 2 53.4 1993 203 29 .0 .1 30.2 @ 2.5 0. 54.7 97 27 3 1997 97 Apr 77.6 66.2 1987 18 70.2 1981 1987 61.3 62 .0 1.0 30.0 .0 .4 .0 May 83.8 63.1 73.5 99+ 1998 31 79.0 1996 42 1984 9 69.9 1976 6 268 .0 5.3 31.0 .0 0. .0 90.3 69.5 79.9 85.0 49 Jun 105 +1998 14 1998 1988 11 76.4 1983 0 447 .9 18.7 30.0 .0 .0 .0 Jul 95.0 72.2 83.6 107 1974 22 88.7 56+ 1994 28 79.9 1976 577 5.9 28.0 31.0 .0 .0 1998 0 .0 1992 95.1 71.0 83.1 109 +1984 19 86.5 2000 51+1992 31 78.7 0 559 7.0 27.6 31.0 .0 .0 .0 Aug 38 2 Sep 89.0 65.0 77.0 110 +2000 4 81.4 1998 1989 25 70.7 1974 362 1.5 16.5 30.0 .0 0. .0 79.7 55.5 30+ 20 58.9 Oct 67.6 99 1989 3 71.4 1992 1989 1976 49 129 .0 2.6 31.0 .0 .2 .0 68.2 45.8 57.0 90 1987 1 64.6 1973 1976 29 48.9 1976 268 28 @ 28.4 .0 3.4 .0 Nov 16 .0 Dec 60.0 38.0 49.0 88 1977 4 57.6 1984 -2 1989 23 39.2 1983 502 6 .0 .0 25.3 .4 9.3 **(**a) Sep Jul Dec Jan 55.0 66.3 110 +2000 4 88.7 1998 -2 1989 23 37.2 1978 2022 2515 15.3 99.9 345.4 1.7 34.7 @ 77.6 Ann

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

Issue Date: February 2004 101-A

(1) From the 1971-2000 Monthly Normals

Elevation: 432 Feet Lat: 31°44N

- (2) Derived from station's available digital record: 1941-2001
- (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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Climate Division: TX 4 NWS Call Sign: Elevation: 432 Feet Lat: 31°44N Lon: 96°12W

										Pı	recipi	tation	(incl	nes)										
	Me	Precipitation Totals Means/ Medians(1) Extremes										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)				Extremes	3			Daily Precipitation				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	2.84	2.95	7.90	1999	29	10.25	1999	.08	1971	8.5	5.3	1.7	.7	.37	.60	1.00	1.40	1.81	2.28	2.81	3.47	4.37	5.83	7.25
Feb	3.29	2.79	5.20	1985	23	9.57	1997	.13	1999	7.4	4.7	1.9	.9	.42	.68	1.14	1.60	2.08	2.62	3.24	4.01	5.06	6.77	8.42
Mar	3.29	3.17	3.57	1965	29	6.23	1979	.37	1971	8.2	5.3	2.3	1.1	.81	1.12	1.60	2.02	2.44	2.89	3.39	3.98	4.76	5.98	7.14
Apr	3.38	3.01	5.00	1956	30	9.85	1997	.18	1983	7.3	4.8	2.6	1.2	.46	.74	1.22	1.69	2.19	2.73	3.36	4.13	5.17	6.88	8.52
May	5.04	4.70	4.85	1959	10	10.52	1989	.22	1998	8.9	6.0	3.1	1.8	.87	1.31	2.04	2.73	3.44	4.21	5.09	6.15	7.57	9.87	12.06
Jun	3.79	3.95	3.30	1977	16	6.54	1973	.93	1980	7.7	5.5	2.4	1.2	.86	1.21	1.77	2.27	2.76	3.29	3.88	4.59	5.52	7.00	8.40
Jul	2.14	1.73	2.61	1989	3	6.30	1995	.00	1986	5.0	3.1	1.3	.7	.03	.13	.38	.67	1.01	1.41	1.92	2.57	3.50	5.11	6.72
Aug	2.56	2.06	6.93	1966	12	7.11	1996	.00	1992	5.4	3.7	1.7	.9	.20	.48	.89	1.27	1.66	2.08	2.57	3.17	3.97	5.27	6.52
Sep	3.48	2.69	5.45	1974	13	11.39	1974	.79	1982	6.3	4.5	2.4	1.1	.90	1.23	1.74	2.18	2.62	3.08	3.60	4.20	5.00	6.25	7.42
Oct	4.64	3.75	5.55	1998	6	11.92	1984	.13	1995	7.8	5.2	2.7	1.5	.54	.89	1.54	2.19	2.88	3.65	4.55	5.66	7.18	9.68	12.12
Nov	4.16	4.03	4.32	1994	5	12.26	2000	.68	1999	8.2	5.8	2.6	1.3	.97	1.36	1.97	2.51	3.05	3.63	4.27	5.04	6.05	7.65	9.15
Dec	3.70	3.62	5.50	1991	20	9.15	1991	.56+	1989	8.3	5.1	2.4	1.1	.95	1.30	1.83	2.31	2.78	3.27	3.82	4.48	5.33	6.67	7.93
Ann	42.31	40.77	7.90	Jan 1999	29	12.26	Nov 2000	.00+	Aug 1992	89.0	59.0	27.1	13.5	30.79	33.04	35.91	38.08	40.01	41.87	43.78	45.89	48.45	52.14	55.33

⁺ 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: 1941-2001

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

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Station: FAIRFIELD 3 W, TX

Climate Division: TX 4 NWS Call Sign: Elevation: 432 Feet Lat: 31°44N Lon: 96°12W

										Snov	w (incl	hes)													
						Sno	ow To	tals									Mea	ın Nu	mber	of Day	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	.6	.0	#	0	3.5	1973	11	4.3	1977	4	1977	31	#+	2000	.6	.2	@	.0	.0	.2	.1	.0	.0		
Feb	.3	.0	#	0	2.0	1978	17	3.4	1978	1+	1994	11	#+	1994	.5	.1	.0	.0	.0	.2	.0	.0	.0		
Mar	.0	.0	#	0	.2	1978	3	.2	1978	#+	1998	9	#+	1998	@	.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	0	.3	1976	13	.7	1976	0	0	0	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0		
Dec	.1	.0	#	0	2.0	1983	16	2.0	1983	1	1983	16	#+	2000	.1	@	.0	.0	.0	@	.0	.0	.0		
Ann	1.0	.0	N/A	N/A	3.5	Jan 1973	11	4.3	Jan 1977	4	Jan 1977	31	#+	Dec 2000	1.3	.3	@	.0	.0	.4	.1	.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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				Freez	ze 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 (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	4/16	4/11	4/07	4/04	4/01	3/29	3/26	3/22	3/17							
32	4/10	4/02	3/28	3/23	3/19	3/14	3/10	3/04	2/25							
28	3/24	3/15	3/09	3/04	2/28	2/23	2/18	2/12	2/04							
24	3/07	2/28	2/22	2/17	2/13	2/09	2/04	1/29	1/22							
20	2/26	2/15	2/08	2/01	1/26	1/19	1/11	12/29	0/00							
16	2/10	1/29	1/19	1/09	12/26	0/00	0/00	0/00	0/00							
<u>.</u>			Fal	l Freeze Da	tes (Month/D	ay)										
Temp (F)		Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	10/24	10/29	11/02	11/06	11/09	11/12	11/15	11/19	11/24							
32	10/27	11/03	11/08	11/13	11/17	11/21	11/25	12/01	12/08							
28	11/06	11/13	11/18	11/23	11/27	12/01	12/05	12/11	12/18							
24	11/19	11/27	12/02	12/07	12/11	12/16	12/20	12/26	1/02							
20	12/04	12/14	12/20	12/26	1/01	1/08	1/16	1/31	0/00							
16	12/18	1/01	1/12	1/25	2/15	0/00	0/00	0/00	0/00							
<u>.</u>				Freeze F	ree Period											
Temp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)									
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	243	235	230	225	221	216	212	206	199							
32	272	262	254	248	242	236	230	223	213							
28	302	292	284	278	271	265	259	251	240							
24	330	320	312	306	300	295	288	281	271							
20	>365	>365	>365	>365	347	334	324	313	299							
16	>365	>365	>365	>365	>365	>365	>365	360	336							

^{*} 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.

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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	552	378	203	62	6	0	0	0	2	49	268	502	2022		
60	411	257	106	17	0	0	0	0	0	13	164	360	1328		
57	333	196	64	6	0	0	0	0	0	5	115	282	1001		
55	286	161	43	2	0	0	0	0	0	3	87	236	818		
50	189	90	12	0	0	0	0	0	0	0	38	143	472		
32	13	1	0	0	0	0	0	0	0	0	0	4	18		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	493	558	849	1024	1285	1437	1600	1582	1350	1103	749	530	12560
55	53	73	179	337	572	747	887	869	660	393	147	50	4967
57	38	52	138	280	510	687	825	807	600	333	114	34	4418
60	23	29	87	201	417	597	732	714	510	249	73	18	3650
65	3	10	29	97	268	447	577	559	362	129	28	6	2515
70	0	0	7	32	140	298	422	404	224	49	8	0	1584

	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	292	389	619	794	1048	1207	1362	1350	1128	880	538	328	292	681	1300	2094	3142	4349	5711	7061	8189	9069	9607	9935
45	184	269	471	644	893	1057	1207	1195	978	725	396	211	184	453	924	1568	2461	3518	4725	5920	6898	7623	8019	8230
50	103	172	329	497	738	907	1052	1040	828	570	272	120	103	275	604	1101	1839	2746	3798	4838	5666	6236	6508	6628
55	53	95	208	355	583	757	897	885	678	420	166	60	53	148	356	711	1294	2051	2948	3833	4511	4931	5097	5157
60	23	43	111	224	428	607	742	730	528	277	89	28	23	66	177	401	829	1436	2178	2908	3436	3713	3802	3830
Base		•		Gro	wing De	gree Unit	s for Co	rn (Mont	hly)						Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)		
50/86	183	248	396	522	719	837	902	893	758	579	332	208	183	431	827	1349	2068	2905	3807	4700	5458	6037	6369	6577

(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