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: 415013

Lon: 101°57W

Station: LAMESA 1 SSE, TX

Climate Division: TX 1 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 54.2 26.0 40.1 84 1974 22 45.0 1998 -6 1930 17 32.4 1979 772 0 .0 .0 20.5 2.4 26.0 .1 Jan 59.9 30.0 45.0 90 +1986 27 52.1 1976 -12 1933 8 37.3 1978 561 0 .0 .1 22.7 1.2 18.3 .1 Feb Mar 68.1 36.2 52.2 95+ 1967 30 58.9 1974 7 1943 3 46.6 1996 399 .0 .3 28.6 .2 9.2 0. 23 7 1997 Apr 76.1 44.3 60.2 100 +1972 12 65.6 1986 1938 54.6 179 36 .1 3.4 29.2 .0 2.1 0. May 84.2 54.8 69.5 109 2000 25 76.6 1996 35+ 1996 1 65.7 1976 41 181 1.8 11.3 31.0 .0 .0 .0 82.8 42 73.7 4.5 Jun 90.6 63.0 76.8 114 1994 28 1990 1964 1997 1 355 19.5 30.0 .0 .0 .0 Jul 92.9 66.4 79.7 1989 3 83.9 54+ 1985 74.1 1976 454 5.6 24.9 31.0 0. 111+1998 0 .0 .0 1971 91.3 65.0 78.2 111 1978 19 81.8 1985 50 1928 24 74.7 0 409 3.1 22.6 31.0 .0 .0 .0 Aug 15 Sep 84.8 59.0 71.9 106 1930 19 78.7 1977 36+ 1999 30 66.8 1974 221 1.0 11.9 29.9 .0 .0 .0 76.5 22 54.7 44 Oct 48.0 62.3 101 +2000 3 65.6 1983 1991 31 1976 130 .2 2.7 30.3 .0 .9 .0 35.7 50.2 92 1980 8 55.2 1973 6 1976 14 44.0 2000 450 4 .0 26.5 10.7 .0 Nov 64.6 .1 .2 Dec 56.1 28.0 42.1 86 1958 5 46.7 1984 -3 1989 23 32.7 1983 712 0 .0 .0 22.4 1.5 23.2 .1 Jun Jul Feb Jan 74.9 46.4 60.7 114 1994 28 83.9 1998 -12 1933 8 32.4 1979 3260 1705 16.3 96.8 333.1 5.5 90.4 .3 Ann

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

Issue Date: February 2004 159-A

Elevation: 2,965 Feet Lat: 32°43N

⁺ 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: 1910-2001

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

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										Pı	recipi	tation	(incl	nes)										
		Precipitation Totals Means/ Medians(1) Extremes									ean N of D	ays (3	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										
	Medi	ans(1)								Zung Treespieution				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	.57	.34	2.15	1939	8	2.55	1973	.00+	1987	3.3	1.7	.2	@	.00	.00	.07	.16	.26	.37	.52	.70	.95	1.39	1.83
Feb	.77	.41	1.70	1911	16	2.57	1992	.00+	1999	3.6	1.9	.5	.1	.00	.00	.03	.14	.27	.44	.65	.93	1.32	2.00	2.70
Mar	.73	.72	1.68	1968	20	2.24	1999	.00+	1997	2.7	1.4	.4	.2	.00	.00	.06	.15	.26	.41	.60	.85	1.22	1.87	2.54
Apr	.88	.70	2.30	1915	24	4.24	1976	.00+	1991	3.7	2.3	.5	.1	.00	.07	.21	.34	.49	.66	.85	1.09	1.43	1.98	2.53
May	2.35	1.75	2.49	1969	6	8.62	1987	.16	1996	5.3	3.8	1.7	.7	.29	.47	.80	1.13	1.47	1.86	2.31	2.87	3.62	4.86	6.06
Jun	2.81	2.47	5.72	1913	29	7.29	1986	.11	1974	5.5	4.4	1.9	.8	.40	.63	1.03	1.42	1.83	2.28	2.80	3.44	4.29	5.69	7.04
Jul	2.19	1.36	3.63	1955	20	7.92	1976	.08	2000	5.1	3.5	1.5	.7	.10	.21	.45	.74	1.08	1.48	1.98	2.62	3.54	5.11	6.69
Aug	2.00	1.96	4.52	1920	16	6.06	1972	.06	1994	5.5	3.5	1.3	.5	.12	.24	.48	.75	1.06	1.42	1.86	2.42	3.20	4.53	5.86
Sep	3.42	3.27	3.42	1980	28	9.78	1980	.00+	1979	5.7	3.9	2.4	1.1	.00	.07	.41	.85	1.39	2.07	2.92	4.05	5.69	8.55	11.46
Oct	1.76	.86	6.24	1985	10	7.89	1985	.00+	1992	4.2	2.9	1.1	.4	.00	.00	.14	.36	.64	1.00	1.46	2.07	2.96	4.52	6.13
Nov	.82	.61	2.27	1923	19	2.92	1984	.00+	1999	2.9	1.7	.6	.2	.00	.00	.06	.17	.31	.48	.70	.98	1.39	2.09	2.80
Dec	.77	.41	2.35	1942	20	4.97	1991	.00+	1973	3.1	1.9	.5	.1	.00	.01	.05	.13	.25	.40	.60	.87	1.28	2.03	2.81
Ann	19.07	18.58	6.24	Oct 1985	10	9.78	Sep 1980	.00+	Nov 1999	50.6	32.9	12.6	4.9	10.95	12.39	14.31	15.81	17.18	18.53	19.94	21.53	23.50	26.42	29.00

⁺ 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: 1910-2001

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Station: LAMESA 1 SSE, TX

Climate Division: TX 1 NWS Call Sign: Elevation: 2,965 Feet Lat: 32°43N Lon: 101°57W

										Snov	w (incl	hes)													
						Sno	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ians (1))	Extremes (2)												Snow Fall >= Thresholds						n ds		
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	1.3	.0	0	0	8.0	1983	1	11.5	1983	0	0	0	0	0	.4	.3	.2	.1	.0	.0	.0	.0	.0		
Feb	.7	.0	#	0	6.0	1988	6	8.0	1988	1	1986	10	#+	1993	.3	.3	.1	.1	.0	.0	.0	.0	.0		
Mar	.2	.0	0	0	2.0	1989	5	2.0	1989	0	0	0	0	0	.2	.1	.0	.0	.0	.0	.0	.0	.0		
Apr	#	.0	0	0	#	1983	8	#	1983	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	6.0	1976	13	7.0+	1980	#	1995	28	#	1995	.2	.2	.1	.1	.0	.0	.0	.0	.0		
Dec	1.0	.0	#	0	5.0	1982	31	9.5	1982	4	1979	14	#+	1997	.3	.3	.1	.1	.0	.1	.1	.0	.0		
Ann	3.8	.0	N/A	N/A	8.0	Jan 1983	1	11.5	Jan 1983	4	Dec 1979	14	#+	Dec 1997	1.4	1.2	.5	.4	.0	.1	.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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S Call Sign: Elevation: 2,965 Feet

				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	an indicated(*)								
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	4/27	4/22	4/19	4/16	4/14	4/11	4/08	4/05	3/31							
32	4/18	4/13	4/10	4/07	4/04	4/01	3/29	3/25	3/21							
28	4/10	4/04	3/31	3/27	3/24	3/20	3/16	3/12	3/06							
24	3/29	3/21	3/15	3/10	3/05	2/28	2/23	2/18	2/09							
20	3/17	3/09	3/03	2/26	2/21	2/16	2/11	2/05	1/27							
16	2/27	2/18	2/11	2/05	1/31	1/25	1/18	1/10	12/26							
<u>'</u>			Fa	ll Freeze Da	tes (Month/D	ay)	1		•							
Tomm (F)		Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	10/06	10/12	10/17	10/21	10/25	10/29	11/02	11/07	11/13							
32	10/19	10/25	10/29	11/01	11/05	11/08	11/11	11/15	11/21							
28	10/28	11/03	11/07	11/11	11/14	11/17	11/21	11/25	12/01							
24	11/06	11/12	11/17	11/20	11/24	11/27	12/01	12/05	12/11							
20	11/12	11/22	11/29	12/05	12/10	12/16	12/22	12/29	1/08							
16	11/23	12/04	12/12	12/19	12/26	1/02	1/10	1/21	0/00							
			•	Freeze F	ree Period	•	1	•	•							
Tomn (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	j.								
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	215	208	203	198	194	189	185	179	172							
32	237	229	223	219	214	210	205	199	192							
28	258	250	244	239	235	230	225	219	211							
24	291	282	275	269	263	257	251	244	234							
20	320	311	304	298	292	286	280	273	263							
16	>365	>365	353	338	327	318	310	300	287							

^{*} 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	772	561	399	179	41	1	0	0	15	130	450	712	3260		
60	617	422	255	87	11	0	0	0	2	52	313	557	2316		
57	524	344	180	49	4	0	0	0	0	26	240	466	1833		
55	464	292	137	31	2	0	0	0	0	15	196	407	1544		
50	322	178	57	7	0	0	0	0	0	3	109	269	945		
32	24	5	0	0	0	0	0	0	0	0	2	13	44		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	275	368	625	847	1163	1343	1477	1432	1197	937	546	324	10534
55	3	11	49	188	452	653	764	719	507	239	50	5	3640
57	0	6	29	146	392	593	702	657	447	187	33	2	3194
60	0	1	12	94	306	503	609	564	359	120	17	0	2585
65	0	0	1	36	181	355	454	409	221	44	4	0	1705
70	0	0	0	9	88	215	300	258	113	9	0	0	992

										Gro	wing l	Degre	e Uni	ts (2)										
Base					Growing	g Degree	Units (N	Ionthly)					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	132	219	416	641	948	1135	1257	1210	977	702	342	162	132	351	767	1408	2356	3491	4748	5958	6935	7637	7979	8141
45	56	124	283	497	793	985	1102	1055	827	553	222	76	56	180	463	960	1753	2738	3840	4895	5722	6275	6497	6573
50	17	59	165	354	639	835	947	900	679	405	122	31	17	76	241	595	1234	2069	3016	3916	4595	5000	5122	5153
55	0	22	78	231	485	686	792	745	530	262	55	2	0	22	100	331	816	1502	2294	3039	3569	3831	3886	3888
60	0	1	30	131	336	537	637	590	388	147	15	0	0	1	31	162	498	1035	1672	2262	2650	2797	2812	2812
Base				Gro	wing Deg	gree Unit	s for Co	rn (Mont	hly)				Growing Degree Units for Corn (Accumulated Monthly)											
50/86	138	198	314	425	596	728	812	791	635	452	250	152	138	336	650	1075	1671	2399	3211	4002	4637	5089	5339	5491

(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