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: 415742

Station: MEDINA 2 W, TX

Climate Division: TX 6

NWS Call Sign:

Elevation: 1,705 Feet Lat: 29°47N Lon: 99°17W

									ŗ	Tempe	eratui	re (°F)									
	Mea	n (1)						Extr	emes						Days (1) emp 65		Mean	Numb	er of I	Days (3)	
Month	Daily Max	Daily Min				Month(1)	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	61.0	33.3	47.2	88+	1975	27	53.5	1998	9+	1973	12	39.1	1979	554	1	.0	.0	25.5	.3	16.1	.0
Feb	66.1	36.4	51.3	98	1996	22	58.7	1999	7	1985	2	42.7	1978	392	6	.0	.3	25.2	.4	9.7	.0
Mar	73.1	44.1	58.6	100	1971	29	63.4	2000	15	1980	2	53.1	1996	222	24	@	.9	30.4	.0	3.7	.0
Apr	79.7	51.2	65.5	101	1984	21	70.9	1986	22	1971	7	60.1	1997	73	86	.1	2.8	29.9	.0	.6	.0
May	85.2	60.8	73.0	102	1998	8	78.0	1996	35	1996	1	68.8	1979	9	258	.2	7.6	31.0	.0	.0	.0
Jun	90.8	67.1	79.0	109	1980	28	84.1	1990	47	1970	3	75.5	1979	0	419	1.0	20.0	30.0	.0	.0	.0
Jul	93.9	68.9	81.4	107	1980	3	84.5	1998	55+	1985	1	77.6	1976	0	508	3.1	27.1	31.0	.0	.0	.0
Aug	94.3	68.3	81.3	106	1986	20	83.4	1977	52	1967	13	76.6	1971	0	504	3.1	27.5	31.0	.0	.0	.0
Sep	89.3	64.0	76.7	104	1985	3	82.0	1977	39	1983	22	69.7	1974	2	352	.9	18.0	30.0	.0	.0	.0
Oct	80.3	54.3	67.3	99+	1979	4	70.4	1991	23	1993	31	58.7	1976	52	123	.0	3.2	30.9	.0	.4	.0
Nov	70.0	43.9	57.0	93	1988	8	63.0	1985	15+	1976	30	49.9	1976	266	25	.0	.1	28.9	@	5.4	.0
Dec	62.6	35.7	49.2	87+	1995	6	57.2	1984	5	1989	23	41.2	1989	494	2	.0	.0	27.0	.2	12.9	.0
Ann	78.9	52.3	65.6	109	Jun 1980	28	84.5	Jul 1998	5	Dec 1989	23	39.1	Jan 1979	2064	2308	8.4	107.5	350.8	.9	48.8	.0

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 188-A

- (1) From the 1971-2000 Monthly Normals
- (2) Derived from station's available digital record: 1966-2000
- (3) Derived from 1971-2000 serially complete daily data

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

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Climate Division: TX 6 NWS Call Sign: Elevation: 1,705 Feet Lat: 29°47N Lon: 99°17W

										Pı	ecipi	tation	(incl	nes)										
		ans/	P	recipi	tatio	on Total					of D	Number (3))	Proba	ability th	Me	nonthly/ onthly/Ar	annual j indic	ated am	ntion wi nount vs Probal	ll be equ	els		in the
	Medi	ans(1) Med-	Highest	1	1	Highest	1	Lowest	1	>=	>=	>=	>=		Th	ese value	s were det	ermined	from the i	incomplet	te gamma			<u> </u>
Month	Mean	ian	Daily(2)	Year	Day	Monthly(1)	Year	Monthly(1)	Year	0.01	0.10	0.50	1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.72	1.33	3.20	1998	31	4.73	1998	.05	1999	6.0	3.6	1.1	.4	.11	.22	.43	.66	.93	1.24	1.61	2.08	2.74	3.86	4.97
Feb	1.91	1.82	2.30	1997	20	5.48	1992	.00	1996	5.7	3.4	1.2	.5	.04	.16	.40	.67	.98	1.33	1.76	2.32	3.09	4.41	5.72
Mar	2.27	1.79	4.18	1992	28	7.82	1992	.28	1971	6.1	4.1	1.5	.7	.32	.51	.84	1.15	1.48	1.84	2.26	2.77	3.46	4.59	5.67
Apr	2.69	2.69 2.22 3.11 1997 4 8.23 1977 .00							1998	6.2	3.7	1.6	.8	.25	.55	1.00	1.39	1.79	2.23	2.73	3.33	4.13	5.43	6.68
May	4.35	4.42	4.74	1987	29	10.53	1987	.64	1989	8.1	5.5	2.5	1.4	.90	1.30	1.94	2.52	3.11	3.73	4.44	5.29	6.41	8.21	9.91
Jun	4.29	3.82	8.20	1997	22	15.34	1987	.00+	1990	6.7	4.9	2.1	1.2	.00	.90	1.78	2.45	3.10	3.77	4.51	5.35	6.49	8.30	9.99
Jul	2.55	1.13	6.00	1973	15	12.35	1988	.02	1993	4.8	3.6	1.1	.6	.05	.13	.35	.65	1.02	1.51	2.13	2.96	4.19	6.38	8.63
Aug	3.08	1.41	9.86	1971	13	20.14	1971	.00	1985	4.9	3.4	1.6	.9	.02	.13	.43	.81	1.29	1.88	2.63	3.63	5.08	7.62	10.20
Sep	3.66	2.88	5.50	1991	15	11.61	1991	.00	1979	6.3	4.3	2.1	1.3	.19	.52	1.07	1.61	2.18	2.82	3.57	4.50	5.77	7.87	9.92
Oct	4.14	3.52	7.65	1969	5	13.14	1981	.47	1995	6.4	4.6	2.3	1.4	.45	.76	1.33	1.91	2.53	3.22	4.04	5.06	6.45	8.74	10.98
Nov	2.84	2.87	3.90	1992	19	8.24	1977	.00	1999	5.9	4.0	1.7	.9	.18	.47	.91	1.33	1.77	2.25	2.81	3.50	4.43	5.96	7.44
Dec	2.28	1.70	4.95	1991	20	17.08	1991	.00	1999	6.2	3.7	1.2	.4	.03	.15	.42	.73	1.09	1.52	2.06	2.75	3.73	5.42	7.12
Ann	35.78	35.48	9.86	Aug 1971	13	20.14	Aug 1971	.00+	Dec 1999	73.3	48.8	20.0	10.5	23.21	25.56	28.62	30.97	33.07	35.13	37.27	39.65	42.57	46.84	50.56

⁺ 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: 1966-2000

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

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Climate Division: TX 6 NWS Call Sign: Elevation: 1,705 Feet Lat: 29°47N Lon: 99°17W

										Snov	w (incl	hes)											
		Median Median Snow Fall Snow Depth Snow Depth Snow Depth .0 # 0 1.0 1987 21 1.0 1987 2 1973 10 #+ 1987 .0 # 0 3.0 1973 9 5.0 1973 # 1996 29 # 1996 .0 # 0 # 1996 1 # 1996 # 1996 1 # 1996 .0 0 0 0 0 0 0 0 0 0 0															Mea	n Nu	mber	of Day	ys (1)		
	Mean	s/Medi	ans (1))					Extre	mes (2)							ow Fa				Snow = Thr	_	
Month	Snow Fall Mean	Fall	Depth	Depth	Daily Snow	Year	Day	Monthly Snow	Year	Daily Snow	Year	Day	Monthly Mean Snow	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	.1	.0	#	0	1.0	1987	21	1.0	1987	2	1973	10	#+	1987	.1	.1	.0	.0	.0	@	.0	.0	.0
Feb	.3	.0	#	0	3.0	1973	9	5.0	1973	#	1996	29	#	1996	.1	.1	@	.0	.0	.0	.0	.0	.0
Mar	#	.0	#	0	#	1996	1	#	1996	#	1996	1	#	1996	.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	#	1999	12	#	1999	.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	#	1993	30	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	0	0	#	1980	26	#+	1980	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	#	0	#	1987	26	#	1987	#+	1997	24	#+	1997	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.4	.0	N/A	N/A	3.0	Feb 1973	9	5.0	Feb 1973	2	Jan 1973	10	#+	May 1999	.2	.2	@	.0	.0	@	.0	.0	.0

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

- (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

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^{-9/-9.9} represents missing values Annual statistics for Mean/Median snow depths are not appropriate

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Lon: 99°17W

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S Call Sign: Elevation: 1,705 Feet

				Freez	e Data									
			Spri	ng Freeze D	ates (Month/	Day)								
Probability of later date in spring (thru Jul 31) than indicated(*) 10 20 30 40 50 60 70 80 90 36 4/20 4/14 4/10 4/07 4/03 3/31 3/28 3/24 3/18 32 4/14 4/06 3/31 3/26 3/22 3/17 3/12 3/06 2/26 28 4/01 3/23 3/17 3/11 3/06 3/01 2/24 2/17 2/08 24 3/18 3/07 2/27 2/20 2/14 2/07 1/31 1/23 1/12 20 3/02 2/18 2/09 2/01 1/24 1/16 1/07 12/26 0/00 16 2/09 1/27 1/17 1/07 12/25 0/00 0/00 0/00 0/00 Temp (F)														
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	4/20	4/14	4/10	4/07	4/03	3/31	3/28	3/24	3/18					
32	4/14	4/06	3/31	3/26	3/22	3/17	3/12	3/06	2/26					
28	4/01	3/23	3/17	3/11	3/06	3/01	2/24	2/17	2/08					
24	3/18	3/07	2/27	2/20	2/14	2/07	1/31	1/23	1/12					
20	3/02	2/18	2/09	2/01	1/24	1/16	1/07	12/26	0/00					
16	2/09	1/27	1/17	1/07	12/25	0/00	0/00	0/00	0/00					
		-	Fal	l Freeze Da	tes (Month/D	ay)								
Tomn (F)		Pro	bability of ea	arlier date i	n fall (beginn	ing Aug 1) t	han indicate	d(*)						
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	10/11	10/18	10/22	10/26	10/30	11/02	11/06	11/11	11/17					
32	10/26	10/31	11/04	11/07	11/10	11/13	11/16	11/20	11/25					
28	11/02	11/09	11/14	11/19	11/23	11/27	12/02	12/07	12/14					
24	11/17	11/24	11/30	12/04	12/09	12/13	12/18	12/23	12/30					
20	11/26	12/06	12/13	12/20	12/26	1/02	1/09	1/21	0/00					
16	12/12	12/25	1/05	1/16	1/31	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)	j.						
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90					
36	234	225	219	214	209	204	198	192	183					
32	262	252	244	238	233	227	221	214	204					
28	295	283	275	268	261	254	247	239	227					
24	336	323	313	305	297	289	281	272	258					
20	>365	>365	>365	347	335	325	316	307	294					
16	>365	>365	>365	>365	>365	>365	362	341	325					

^{*} 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:

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				Deg	ree Days t	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	554	392	222	73	9	0	0	0	2	52	266	494	2064
60	411	266	118	21	1	0	0	0	0	14	160	351	1342
57	328	200	73	8	0	0	0	0	0	5	110	272	996
55	278	162	50	4	0	0	0	0	0	3	83	224	804
50	173	87	15	0	0	0	0	0	0	0	34	129	438
32	8	0	0	0	0	0	0	0	0	0	0	1	9

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	477	538	825	1003	1272	1409	1531	1527	1340	1094	749	532	12297
55	34	56	162	317	559	719	818	814	650	383	142	42	4696
57	23	38	123	261	497	659	756	752	590	324	109	28	4160
60	12	20	76	185	404	569	663	659	500	240	68	14	3410
65	1	6	24	86	258	419	508	504	352	123	25	2	2308
70	0	0	5	27	136	272	353	349	214	45	7	0	1408

										Gro	wing 1	Degre	e Uni	ts (2)										
Base					Growing	g Degree	Units (M	Ionthly)					Growing Degree Units (Accumulated Monthly)											
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 40 280 367 615 789 1044 1186 1295 1290 1105 854 522 33												Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	10 10 10 10 10 10 10 10												280	647	1262	2051	3095	4281	5576	6866	7971	8825	9347	9675
45												199	170	413	880	1520	2409	3445	4585	5720	6675	7375	7758	7957
50												109	80	224	549	1042	1776	2662	3647	4627	5432	5978	6237	6346
55	33	72	202	346	579	736	830	825	655	397	153	47	33	105	307	653	1232	1968	2798	3623	4278	4675	4828	4875
60	8	26	102	216	427	586	675	670	505	260	78	17	8	34	136	352	779	1365	2040	2710	3215	3475	3553	3570
Base	Base Growing Degree Units for Corn (Monthly)													Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)			
50/86	50/86 219 269 413 522 703 805 862 845 740 571 349 235												219	488	901	1423	2126	2931	3793	4638	5378	5949	6298	6533

(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