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

Station: DANEVANG 1 W, TX 1971-2000 COOP ID: 412266

Climate Division: TX 8 NWS Call Sign: Elevation: 70 Feet Lat: 29°03N Lon: 96°14W

									r	Гетре	eratur	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	•		Mean	Numb	er of I	Days (3)	
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	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	62.4	41.9	52.2	84+	1971	25	58.0	2000	7	1940	23	44.2	1978	416	8	.0	.0	26.6	.1	4.4	.0
Feb	66.0	44.4	55.2	91+	1986	19	62.1	2000	12	1951	2	46.0	1978	290	15	.0	@	26.1	.2	2.2	.0
Mar	72.5	51.4	62.0	95+	1928	26	67.2	2000	22	1923	20	56.6	1996	141	47	.0	.1	30.6	.0	.9	.0
Apr	78.8	58.3	68.6	97	1933	27	73.1	1972	30	1987	3	63.9	1983	31	139	.0	.7	30.0	.0	@	.0
May	84.5	65.7	75.1	100	1928	27	78.7	1996	39	1908	6	71.9	1976	1	313	.0	4.0	31.0	.0	.0	.0
Jun	89.7	71.3	80.5	104+	1936	21	84.2	1998	51	1919	4	78.0	1988	0	465	.0	18.0	30.0	.0	.0	.0
Jul	92.6	72.3	82.5	108	1954	26	85.9	1998	62+	1911	26	80.5	1985	0	541	.5	27.4	31.0	.0	.0	.0
Aug	93.2	72.4	82.8	106	1928	10	84.6	1987	58+	1992	29	80.5	1992	0	551	1.3	27.3	31.0	.0	.0	.0
Sep	89.4	68.9	79.2	109+	2000	6	82.0	1977	41	1918	29	75.2	1974	0	424	.3	17.9	30.0	.0	.0	.0
Oct	82.4	60.2	71.3	98+	1956	7	73.5	1971	25	1993	31	63.1	1976	14	208	.0	5.0	31.0	.0	@	.0
Nov	72.1	50.8	61.5	92+	1963	6	67.1	1973	14	1911	30	53.5	1976	174	66	.0	@	29.4	.0	.8	.0
Dec	64.6	43.9	54.3	90	1916	7	63.0	1984	8+	1989	24	43.0	1989	355	23	.0	.0	28.2	.2	3.1	.0
Ann	79.0	58.5	68.8	109+	Sep 2000	6	85.9	Jul 1998	7	Jan 1940	23	43.0	Dec 1989	1422	2800	2.1	100.4	354.9	.5	11.4	.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 087-A

[@] 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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Climate Division: TX 8 NWS Call Sign: Elevation: 70 Feet Lat: 29°03N Lon: 96°14W

										Pı	recipi	tation	(incl	hes)										
	Me	ans/	P	recipi	itatio	on Total					ean N of D	ays (3	3)	Proba	ability th		nonthly/	annual j	precipita ated an	babilit ation will nount vs Probal	ll be equ		less tha	an the
	Medi	ans(1)				Extremes	•			L	any Fie	стриацо	11		Th	ese value	s were det	termined	from the	incomplet	e gamma	distribut	ion	
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	3.23	3.18	5.20	1920	23	9.24	1991	.45	1971	9.4	5.5	2.1	.8	.78	1.08	1.55	1.97	2.39	2.83	3.33	3.91	4.68	5.90	7.05
Feb	2.67	2.04	5.55	1907	24	8.45	1992	.08	1996	7.3	4.5	1.6	.7	.27	.46	.83	1.20	1.60	2.05	2.59	3.26	4.17	5.69	7.18
Mar	2.83	2.26	6.00	1923	27	11.12	1997	.27	1971	6.5	4.0	1.7	.7	.41	.64	1.05	1.44	1.85	2.30	2.82	3.46	4.32	5.72	7.06
Apr	2.63	1.85	5.30	1915	23	7.72	1992	.04	1984	5.8	3.5	1.7	.8	.13	.27	.58	.93	1.34	1.82	2.41	3.17	4.24	6.07	7.91
May	5.08	5.01	7.20	1982	6	11.34	1982	.05	1998	6.9	4.7	2.9	1.8	.41	.74	1.41	2.11	2.89	3.77	4.84	6.17	8.03	11.13	14.20
Jun	4.83	4.42	12.96	1960	26	12.41	1996	.14	1984	8.0	5.6	2.8	1.6	.56	.93	1.61	2.28	3.00	3.80	4.74	5.90	7.48	10.09	12.63
Jul	3.33	2.57	5.53	1939	12	11.60	1983	.00	1986	7.1	4.8	2.3	1.1	.13	.40	.88	1.36	1.89	2.49	3.20	4.09	5.32	7.37	9.38
Aug	3.83	3.27	4.41	1998	22	11.06	1998	.43	1987	9.2	6.5	2.7	1.0	.71	1.06	1.62	2.14	2.66	3.23	3.88	4.66	5.70	7.37	8.96
Sep	5.62	4.48	9.30	1979	19	15.32	1973	.68	2000	8.9	6.4	2.9	1.7	.84	1.31	2.12	2.90	3.71	4.59	5.61	6.86	8.54	11.27	13.89
Oct	4.56	3.52	7.47	1983	17	12.73	1994	.36	1978	6.8	4.9	2.5	1.4	.53	.88	1.52	2.16	2.83	3.59	4.48	5.57	7.07	9.53	11.92
Nov	3.68	3.50	4.65	1907	18	9.92	2000	.22	1988	6.9	4.9	2.4	1.3	.51	.81	1.34	1.85	2.38	2.98	3.66	4.50	5.63	7.47	9.26
Dec	3.08	2.70	4.94	1937	16	8.02	1991	.40	1980	7.7	4.8	1.8	.8	.59	.86	1.31	1.73	2.15	2.61	3.13	3.75	4.58	5.91	7.17
Ann	45.37	43.35	12.96	Jun 1960	26	15.32	Sep 1973	.00	Jul 1986	90.5	60.1	27.4	13.7	29.37	32.35	36.24	39.23	41.92	44.54	47.26	50.30	54.02	59.46	64.21

⁺ 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: 1897-2001

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COOP ID: 412266

Station: DANEVANG 1 W, TX

Climate Division: TX 8 NWS Call Sign: Elevation: 70 Feet Lat: 29°03N Lon: 96°14W

										Snov	w (incl	hes)												
						Sno	ow To	tals									Mea	ın Nu	mber	of Day	ys (1)			
	Mean	s/Medi	ians (1))					Extre	mes (2)							ow Fa					now 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	.1	.0	#	0	1.0	1973	11	1.0	1973	#	1972	5	#	1972	.1	@	.0	.0	.0	.0	.0	.0	.0	
Feb	.1	.0	0	0	1.5	1973	9	1.5	1973	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0	
Mar	#	.0	0	0	#	1989	5	#	1989	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	28	#	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
Dec	#	.0	0	0	#	1985	13	#	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0	
Ann	.2	.0	N/A	N/A	1.5	Feb 1973	9	1.5	Feb 1973	#	Jan 1972	5	#	Jan 1972	.1	@	.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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Elevation: 70 Feet Lat: 29°03N Lon: 96°14W

				Freez	e Data				
			Spri	ng Freeze D	ates (Month/	/Day)			
Temp (F)		P	robability of	f later date i	n spring (thr	ru Jul 31) tha	n indicated((*)	
temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	3/30	3/22	3/16	3/10	3/05	3/01	2/23	2/17	2/09
32	3/21	3/11	3/04	2/26	2/20	2/15	2/09	2/01	1/23
28	3/09	2/25	2/17	2/09	2/02	1/25	1/16	1/02	0/00
24	2/08	1/29	1/21	1/14	1/05	12/24	0/00	0/00	0/00
20	1/15	12/22	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
			Fa	ll Freeze Da	tes (Month/D	Day)		•	•
Temp (F)		Pro	bability of e	arlier date i	n fall (beginn	ning Aug 1) t	han indicate	ed(*)	
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	10/31	11/07	11/12	11/17	11/21	11/25	11/30	12/05	12/13
32	11/08	11/20	11/28	12/05	12/11	12/18	12/25	1/02	1/14
28	11/18	12/04	12/15	12/25	1/04	1/15	1/28	2/22	0/00
24	12/20	12/31	1/08	1/16	1/25	2/07	0/00	0/00	0/00
20	1/02	1/28	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
				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	294	282	274	267	260	253	246	238	226
32	330	316	307	299	292	285	277	269	257
28	>365	>365	>365	344	329	319	310	300	288
24	>365	>365	>365	>365	>365	>365	360	345	332
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

^{*} 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	416	290	141	31	1	0	0	0	0	14	174	355	1422
60	287	181	61	6	0	0	0	0	0	2	95	235	867
57	223	130	31	1	0	0	0	0	0	1	61	177	624
55	187	101	18	0	0	0	0	0	0	0	43	144	493
50	108	44	4	0	0	0	0	0	0	0	16	73	245
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	625	649	929	1098	1335	1455	1564	1574	1414	1217	883	691	13434
55	98	106	234	408	622	765	851	861	724	504	235	121	5529
57	73	79	185	349	560	705	789	799	664	443	193	93	4932
60	44	45	121	263	467	615	696	706	574	352	138	57	4078
65	8	15	47	139	313	465	541	551	424	208	66	23	2800
70	7	5	11	54	170	315	386	396	276	92	24	8	1744

										Gro	wing	Degre	e Uni	ts (2)										
Base					Growin	g Degree	Units (N	(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	438	499	738	891	1116	1229	1335	1347	1198	996	689	495	438	937	1675	2566	3682	4911	6246	7593	8791	9787	10476	10971
45	307	364	584	741	961	1079	1180	1192	1048	841	543	354	307	671	1255	1996	2957	4036	5216	6408	7456	8297	8840	9194
50	194 244 439 591 806 929 1025 1037 898 687 401												194	438	877	1468	2274	3203	4228	5265	6163	6850	7251	7483
55	105	141	294	442	651	779	870	882	748	533	273	137	105	246	540	982	1633	2412	3282	4164	4912	5445	5718	5855
60	49	70	175	298	496	629	715	727	598	384	165	69	49	119	294	592	1088	1717	2432	3159	3757	4141	4306	4375
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)		
50/86	86 257 300 474 600 792 866 918 917 824 677 437 3											298	257	557	1031	1631	2423	3289	4207	5124	5948	6625	7062	7360

(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