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: 413992

Lon: 99°45W

Station: HASKELL, TX

Climate Division: TX 2

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 54.1 28.8 41.5 89 1898 7 47.4 1990 -3 1930 18 32.3 1979 729 0 .0 .0 20.2 2.6 20.4 Jan 59.5 33.6 94 1904 28 54.7 1976 -6 1985 2 35.9 1978 520 4 .0 .1 21.3 1.6 13.1 .1 Feb 46.6 Mar 68.6 41.1 54.9 101 1946 31 61.2 1974 5 1943 3 49.1 1996 327 11 .0 .9 28.6 .2 5.2 0. 24+58.0 1997 79 Apr 77.6 50.0 63.8 106 +1902 29 70.2 1978 1940 12 116 .1 4.0 29.7 .0 .7 .0 May 85.3 60.0 72.7 112 2000 25 78.9 1998 34 1907 4 68.1 1976 20 257 1.5 10.5 31.0 .0 0. .0 1994 27 85.6 3 75.2 Jun 91.7 68.3 80.0 115 1980 46 1919 1983 0 451 3.3 20.1 30.0 .0 .0 .0 Jul 96.1 72.7 84.4 115+ 1933 14 91.1 1980 54+ 1952 9 80.1 1976 8.9 27.7 31.0 0. 0 601 .0 .0 95.0 71.5 83.3 115 +1936 12 87.6 +2000 49 1915 31 77.3 1971 0 566 8.0 26.0 31.0 .0 .0 .0 Aug 5 9 Sep 87.6 64.0 75.8 109 2000 82.7 1977 37+ 1989 24 68.6 1974 333 1.9 15.7 30.0 .0 .0 .0 22 57.3 Oct 78.0 52.7 65.4 105 1977 1 70.2 1979 1917 30 1976 79 90 .2 3.3 30.7 .0 .3 .0 64.9 40.7 52.8 1992 58.6 1999 2 1997 16 46.0 2000 374 9 .0 25.9 6.4 .0 Nov 90+ 1 .1 .1 Dec 56.1 31.6 43.9 89 1954 5 47.6 +1980 -6 1989 23 31.4 1983 656 0 .0 .0 22.1 1.6 17.1 .1 Jun Jul Dec Dec 51.3 63.8 115 +1994 27 91.1 1980 1989 23 31.4 1983 2830 2401 23.9 108.4 331.5 63.2 .2 76.2 -6+ 6.1 Ann

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

Issue Date: February 2004 137-A

(1) From the 1971-2000 Monthly Normals

Elevation: 1,600 Feet Lat: 33°09N

- (2) Derived from station's available digital record: 1897-2001
- (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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COOP ID: 413992

Station: HASKELL, TX

Climate Division: TX 2 NWS Call Sign: Elevation: 1,600 Feet Lat: 33°09N Lon: 99°45W

										Pı	recipi	tation	(incl	nes)										
			P	recipi	itatio	on Total	S			М		Numbo Pays (3		Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
		ans/				Extremes	S			Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels 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	.96	.63	1.85	1999	29	3.32	1991	.00	1986	5.1	2.2	.5	.1	.02	.07	.18	.32	.47	.65	.87	1.16	1.57	2.26	2.96
Feb	1.47	1.14	2.50	1938	15	5.29	1992	.00+	1999	5.4	2.8	.6	.4	.00	.08	.30	.52	.76	1.04	1.38	1.80	2.40	3.39	4.38
Mar	1.46	1.28	2.41	2000	23	3.44	2000	.03	1971	4.8	2.7	.9	.3	.12	.22	.41	.61	.83	1.09	1.39	1.77	2.30	3.18	4.05
Apr	1.99	1.58	3.78	1922	26	6.19	1990	.21	1980	5.3	3.7	1.3	.6	.28	.44	.72	1.00	1.29	1.61	1.97	2.42	3.03	4.03	4.98
May	3.32	3.17	5.03	1969	7	10.38	1982	.15	1984	7.6	4.9	2.2	.9	.45	.73	1.20	1.66	2.15	2.68	3.30	4.05	5.08	6.75	8.37
Jun	3.26	2.50	8.30	1930	14	8.61	1982	.22	1994	6.9	4.9	2.0	1.0	.49	.77	1.24	1.69	2.16	2.67	3.26	3.98	4.95	6.52	8.03
Jul	1.61	1.65	6.50	1960	7	5.12	1975	.00+	1994	5.3	2.9	.9	.4	.00	.12	.39	.64	.90	1.20	1.56	1.99	2.59	3.59	4.57
Aug	2.74	1.99	14.29	1978	4	15.74	1978	.00	2000	6.5	3.7	1.3	.6	.11	.33	.72	1.12	1.55	2.05	2.63	3.36	4.36	6.04	7.68
Sep	2.96	2.64	6.16	1900	23	9.40	1980	.00+	2000	6.2	4.5	1.9	1.0	.00	.24	.72	1.19	1.68	2.23	2.88	3.67	4.76	6.58	8.36
Oct	2.53	1.64	7.10	1941	15	10.48	1986	.08	1992	6.5	4.3	1.7	.8	.18	.33	.65	1.00	1.39	1.84	2.38	3.07	4.03	5.64	7.24
Nov	1.26	1.01	2.20+	1954	15	3.74	2000	.00+	1999	4.5	2.3	.9	.3	.00	.07	.25	.44	.65	.89	1.19	1.55	2.07	2.93	3.79
Dec	1.37	1.31	3.75	1932	23	4.31	1991	.00+	1996	5.2	2.8	.8	.2	.00	.05	.22	.41	.64	.91	1.24	1.66	2.27	3.30	4.33
Ann	24.93	24.29	14.29	Aug 1978	4	15.74	Aug 1978	.00+	Sep 2000	69.3	41.7	15.0	6.6	16.16	17.79	19.92	21.55	23.02	24.45	25.94	27.60	29.63	32.60	35.20

⁺ 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

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

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COOP ID: 413992

Station: HASKELL, TX

Climate Division: TX 2 NWS Call Sign:

Elevation: 1,600 Feet Lat: 33°09N Lon: 99°45W

										Snov	w (incl	hes)												
						Sno	ow To	tals							Mean Number of Days (1)									
	Mean	s/Medi	ans (1))	Extremes (2)												Snow Fall >= Thresholds						ı İs	
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	1.9	.9	#	0	4.9	1983	2	11.5	1983	6	1983	2	1	1983	1.0	.8	.1	.0	.0	1.0	.4	@	.0	
Feb	1.5	.1	#	#	5.5	1985	1	8.7	1973	6	1985	2	1	1985	.9	.6	.1	@	.0	.6	.2	.1	.0	
Mar	.1	.0	#	0	1.0	1989	5	2.0	1989	1	1989	21	#+	1989	.2	.1	.0	.0	.0	.1	.0	.0	.0	
Apr	#	.0	0	0	#	1973	16	#	1973	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	1.0	1993	30	1.0	1993	#	1991	31	#	1991	@	@	.0	.0	.0	.0	.0	.0	.0	
Nov	.9	.0	#	0	10.0	1980	17	11.0	1980	8	1980	17	1	1980	.3	.3	.1	@	@	.1	@	.0	.0	
Dec	.7	.0	#	0	3.0	1971	3	3.0+	1983	3	1983	16	#+	1997	.4	.3	.1	.0	.0	.1	@	.0	.0	
Ann	5.1	1.0	N/A	N/A	10.0	Nov 1980	17	11.5	Jan 1983	8	Nov 1980	17	1+	Feb 1985	2.8	2.1	.4	@	@	1.9	.6	.1	.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

[@] 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

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Elevation: 1,600 Feet

Lat: 33°09N Lon: 99°45W

				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	n indicated((*)								
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	4/16	4/12	4/09	4/07	4/05	4/03	3/31	3/29	3/25							
32	4/10	4/05	4/02	3/30	3/27	3/24	3/21	3/18	3/13							
28	4/05	3/27	3/21	3/15	3/10	3/05	2/28	2/22	2/13							
24	3/21	3/12	3/05	2/27	2/21	2/16	2/10	2/03	1/24							
20	3/08	2/26	2/19	2/14	2/08	2/02	1/28	1/21	1/11							
16	2/28	2/16	2/06	1/29	1/21	1/13	1/03	12/19	0/00							
_			Fal	l Freeze Da	tes (Month/D	ay)										
Tomp (F)		Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	10/19	10/24	10/29	11/01	11/05	11/08	11/12	11/16	11/22							
32	10/27	11/02	11/05	11/09	11/12	11/15	11/18	11/21	11/27							
28	11/06	11/11	11/15	11/18	11/21	11/24	11/27	12/01	12/06							
24	11/10	11/17	11/23	11/27	12/01	12/05	12/10	12/15	12/22							
20	11/16	11/27	12/05	12/12	12/19	12/25	1/01	1/09	1/20							
16	11/28	12/07	12/14	12/20	12/26	1/01	1/10	1/24	0/00							
		-	•	Freeze F	ree Period											
Tomp (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)									
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90							
36	232	226	221	217	213	209	205	201	194							
32	248	241	237	233	229	225	221	217	210							
28	279	271	265	260	255	250	245	239	230							
24	318	306	297	289	282	275	267	258	246							
20	>365	340	327	318	310	302	294	285	272							
16	>365	>365	>365	357	340	328	318	307	292							

^{*} 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	729	520	327	116	20	0	0	0	9	79	374	656	2830		
60	576	391	200	49	4	0	0	0	1	27	247	505	2000		
57	489	318	140	25	1	0	0	0	0	11	184	419	1587		
55	431	273	107	15	0	0	0	0	0	6	147	362	1341		
50	297	178	46	3	0	0	0	0	0	1	76	236	837		
32	26	12	0	0	0	0	0	0	0	0	1	14	53		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	320	420	708	953	1260	1441	1624	1589	1314	1035	625	381	11670
55	12	37	102	278	547	751	911	876	624	327	82	16	4563
57	8	26	73	228	486	691	849	814	564	271	59	11	4080
60	2	15	40	162	396	601	756	721	475	193	32	4	3397
65	0	4	11	79	257	451	601	566	333	90	9	0	2401
70	0	0	1	29	143	307	446	412	208	31	1	0	1578

										Gro	wing]	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	161	265	488	730	1023	1207	1381	1340	1079	795	408	200	161	426	914	1644	2667	3874	5255	6595	7674	8469	8877	9077		
45	87	166	352	582	868	1057	1226	1185	929	642	282	108	87	253	605	1187	2055	3112	4338	5523	6452	7094	7376	7484		
50	35	93	229	438	714	907	1071	1030	779	490	180	49	35	128	357	795	1509	2416	3487	4517	5296	5786	5966	6015		
55	7	43	131	303	560	757	916	875	631	347	95	18	7	50	181	484	1044	1801	2717	3592	4223	4570	4665	4683		
60	0	13	64	184	410	607	761	720	483	217	42	0	0	13	77	261	671	1278	2039	2759	3242	3459	3501	3501		
Base				Gro	wing Deg	gree Unit	s for Co	rn (Mont	hly)						Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)				
50/86	136	190	322	467	668	805	905	882	712	506	258	150	136	326	648	1115	1783	2588	3493	4375	5087	5593	5851	6001		

(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