## 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: 411911

Station: COLUMBUS, TX

**Climate Division: TX 7** 

**NWS Call Sign:** 

Elevation: 199 Feet Lat: 29°43N Lon: 96°32W

									ŗ	Tempe	eratu	re (°F)									
	Mea	<b>n</b> (1)						Extr	emes						Days (1) emp 65		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	64.2	36.8	50.5	88	2000	20	56.6	1999	10+	1982	12	42.5	1978	463	5	.0	.0	26.0	.4	11.5	.0
Feb	68.4	40.2	54.3	97	1996	21	62.8	1999	13+	1996	5	44.2	1978	313	13	.0	.3	25.3	.3	6.8	.0
Mar	75.9	47.9	61.9	97	1963	26	67.5	1974	18	1980	2	55.5	1996	146	49	.0	.6	30.3	.0	2.3	.0
Apr	81.3	54.7	68.0	96	1963	9	73.6	1981	28	1987	3	61.5	1997	51	140	.0	1.7	30.0	.0	.2	.0
May	87.2	63.3	75.3	102	1996	29	81.2	1996	40	1992	8	71.1	1976	5	322	.2	9.3	31.0	.0	.0	.0
Jun	92.7	68.6	80.7	106	1990	24	85.9	1998	49	1984	1	77.5	1973	0	470	1.3	23.2	30.0	.0	.0	.0
Jul	96.3	70.2	83.3	108	2000	23	87.0	1980	56	1967	16	81.0	1976	0	566	6.3	29.3	31.0	.0	.0	.0
Aug	97.4	69.2	83.3	109	1999	20	86.8	1985	46+	1992	30	76.4	1992	0	567	9.8	29.0	31.0	.0	.0	.0
Sep	93.2	64.4	78.8	116	2000	4	82.6	1998	40+	1992	30	73.6	1974	0	414	4.0	22.0	30.0	.0	.0	.0
Oct	85.3	54.2	69.8	102	2000	6	73.4	1984	25	1993	31	61.8	1976	33	180	.1	8.7	31.0	.0	.2	.0
Nov	74.5	45.7	60.1	93	1992	1	65.4	1973	18+	1991	25	51.3	1991	217	70	.0	.5	29.4	.0	3.9	.0
Dec	66.5	38.2	52.4	88+	1996	29	62.9	1984	4+	1989	24	43.0	1989	408	16	.0	.0	27.6	.3	9.8	.0
Ann	81.9	54.5	68.2	116	Sep 2000	4	87.0	Jul 1980	4+	Dec 1989	24	42.5	Jan 1978	1636	2812	21.7	124.6	352.6	1.0	34.7	.0

<sup>+</sup> Also occurred on an earlier date(s)

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

Issue Date: February 2004 073-A

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1915-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

## 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: 411911** 

Station: COLUMBUS, TX

Climate Division: TX 7 NWS Call Sign: Elevation: 199 Feet Lat: 29°43N Lon: 96°32W

										Pı	ecipi	tation	(incl	nes)										
	Mea	ans/	P	recipi	itatio	on Total					ean N of D	ays (3	)	Proba	ability th		nonthly/	annual j indic	precipita ated am	ount	ies (1)		less tha	ın the
	Medi	ans(1)				Extremes	•			"	any Fie	стриацо	11		Th	ese value	s were det	ermined	from the i	incomplet	te gamma	distributi	on	ļ
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	3.61	2.63	4.55	1965	22	10.49	1989	.17	1971	11.1	5.9	2.4	1.1	.48	.77	1.28	1.79	2.31	2.90	3.57	4.41	5.53	7.38	9.16
Feb	2.84	2.33	4.66	1949	26	10.09	1992	.28	1974	9.3	4.9	1.7	.9	.51	.77	1.18	1.57	1.96	2.39	2.87	3.46	4.24	5.49	6.69
Mar	2.93	2.29	6.10	1972	21	7.40	1983	.19	1971	9.9	4.8	1.6	.8	.56	.83	1.26	1.65	2.05	2.48	2.97	3.56	4.35	5.60	6.80
Apr	3.57	3.05	3.20	1960	25	8.65	1973	.29	1983	8.5	4.6	2.3	1.3	.37	.64	1.13	1.63	2.17	2.77	3.48	4.36	5.57	7.56	9.51
May	5.75	6.33	6.15	1952	28	13.48	1979	.05	1998	9.5	6.5	3.4	2.1	.72	1.17	1.98	2.79	3.63	4.57	5.67	7.02	8.86	11.87	14.79
Jun	5.03	4.07	10.00	1973	13	16.89	1973	.11	1990	8.5	6.0	2.8	1.6	.53	.90	1.59	2.29	3.05	3.89	4.89	6.14	7.83	10.65	13.39
Jul	2.64	2.00	4.50	1961	10	7.90	1979	.10	1986	7.0	4.3	1.7	.7	.19	.35	.69	1.05	1.46	1.93	2.49	3.21	4.20	5.88	7.54
Aug	3.07	2.36	3.31	1981	31	7.56	1971	.16	1993	7.4	4.8	2.1	.9	.33	.56	.99	1.42	1.88	2.39	3.00	3.75	4.77	6.47	8.12
Sep	3.92	3.14	7.83	1961	12	10.33	1978	.28	1982	8.6	5.1	2.1	1.3	.42	.71	1.25	1.80	2.38	3.04	3.82	4.78	6.10	8.28	10.41
Oct	4.16	3.20	8.50	1998	17	13.02	1998	.27	1987	8.0	4.9	2.4	1.4	.43	.73	1.30	1.88	2.51	3.21	4.04	5.08	6.49	8.84	11.14
Nov	3.99	3.18	4.80	1998	12	10.12	1998	.70	1999	9.6	5.7	2.5	1.3	.95	1.32	1.90	2.42	2.94	3.49	4.10	4.83	5.79	7.31	8.74
Dec	3.21	2.95	3.15	1991	22	9.78	1991	.70	1989	11.1	5.9	2.1	.9	.74	1.04	1.51	1.93	2.35	2.80	3.30	3.89	4.68	5.92	7.09
Ann	44.72	43.94	10.00	Jun 1973	13	16.89	Jun 1973	.05	May 1998	108.5	63.4	27.1	14.3	28.25	31.29	35.27	38.34	41.10	43.80	46.62	49.77	53.62	59.28	64.24

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1915-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

# 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: COLUMBUS, TX** 

**Climate Division: TX 7** 

NWS Call Sign: COOP ID: 411911

Lat: 29°43N Lon: 96°32W

										Snov	w (incl	hes)											
						Sno	ow To	tals									Mea	n Nu	mber	of Day	ys (1)		
	Means/Medians (1) Extremes (2)																ow Fa		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	#	.0	0	0	#	1975	13	#	1975	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	#	0	#	1989	5	#	1989	#	1989	5	#	1989	.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	29	#	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#+	Mar 1989	5	#+	Mar 1989	#	Mar 1989	5	#	Mar 1989	.0	.0	.0	.0	.0	.0	.0	.0	.0

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

### 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: 411911** 

**Station: COLUMBUS, TX** 

**Climate Division: TX 7** 

**NWS Call Sign:** 

**Elevation: 199 Feet** 

Lat: 29°43N Lon: 96°32W

				Freez	e Data				
			Spri	ng Freeze D	ates (Month	/Day)			
Temp (F)		P	robability of	later date i	n spring (thr	ru Jul 31) tha	an indicated	(*)	
Temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	4/15	4/07	4/01	3/27	3/22	3/18	3/13	3/07	2/27
32	4/03	3/26	3/20	3/15	3/11	3/06	3/01	2/24	2/16
28	3/22	3/11	3/03	2/25	2/19	2/12	2/06	1/29	1/18
24	3/03	2/20	2/11	2/03	1/27	1/20	1/12	1/01	12/13
20	2/15	2/05	1/29	1/22	1/15	1/07	12/23	0/00	0/00
16	1/24	1/14	1/04	12/24	0/00	0/00	0/00	0/00	0/00
			Fal	l Freeze Da	tes (Month/L	Day)	1	1	1
Tomp (E)		Pro	bability of ea	arlier date i	n fall (beginr	ning Aug 1) t	han indicate	ed(*)	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	10/17	10/25	10/30	11/04	11/08	11/13	11/17	11/23	11/30
32	10/25	11/02	11/07	11/12	11/16	11/21	11/25	12/01	12/08
28	11/07	11/16	11/22	11/28	12/03	12/08	12/14	12/20	12/29
24	11/22	12/01	12/08	12/13	12/19	12/24	12/30	1/07	1/22
20	12/02	12/16	12/27	1/06	1/16	1/30	0/00	0/00	0/00
16	12/21	12/31	1/09	1/20	0/00	0/00	0/00	0/00	0/00
<u> </u>				Freeze F	ree Period	II.	П	II.	11
Tomas (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	)	
Temp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	262	251	243	237	230	224	217	209	199
32	278	269	262	256	250	244	238	231	222
28	326	312	303	294	287	279	271	261	248
24	>365	>365	343	332	324	316	309	301	290
20	>365	>365	>365	>365	364	347	337	327	316
16	>365	>365	>365	>365	>365	>365	>365	>365	347

<sup>\*</sup> 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.

Complete documentation available from:

## 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: COLUMBUS, TX** 

COOP ID: 411911

Climate Division: TX 7 NWS Call Sign: Elevation: 199 Feet Lat: 29°43N Lon: 96°32W

				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	463	313	146	51	5	0	0	0	0	33	217	408	1636
60	329	199	65	14	0	0	0	0	0	9	133	279	1028
57	259	146	33	5	0	0	0	0	0	4	92	214	753
55	219	115	20	2	0	0	0	0	0	2	70	177	605
50	135	54	4	0	0	0	0	0	0	0	31	99	323
32	6	0	0	0	0	0	0	0	0	0	0	0	6

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	581	624	926	1080	1340	1460	1589	1590	1404	1170	843	631	13238
55	81	95	233	392	627	770	876	877	714	459	223	95	5442
57	59	70	185	335	565	710	814	815	654	399	185	70	4861
60	35	39	123	254	473	620	721	722	564	311	136	42	4040
65	5	13	49	140	322	470	566	567	414	180	70	16	2812
70	3	1	13	62	187	320	411	412	269	81	29	4	1792

										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	352	428	677	833	1085	1214	1336	1337	1153	919	600	397	352	780	1457	2290	3375	4589	5925	7262	8415	9334	9934	10331
45	232	304	528	684	930	1064	1181	1182	1003	764	457	270	232	536	1064	1748	2678	3742	4923	6105	7108	7872	8329	8599
50	140         194         380         535         775         914         1026         1027         853         609         324											163	140	334	714	1249	2024	2938	3964	4991	5844	6453	6777	6940
55	70	112	250	393	620	764	871	872	703	456	210	93	70	182	432	825	1445	2209	3080	3952	4655	5111	5321	5414
60	31	56	141	255	466	614	716	717	553	314	123	46	31	87	228	483	949	1563	2279	2996	3549	3863	3986	4032
Base	Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)		
50/86	<b>86</b> 246 288 446 558 741 825 871 862 748 605 402											276	246	534	980	1538	2279	3104	3975	4837	5585	6190	6592	6868

(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