

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: SULPHUR SPRINGS, TX

1971-2000

COOP ID: 418743

Climate Division: TX 4

NWS Call Sign:

Elevation: 495 Feet

Lat: 33°09N

Lon: 95°38W

Temperature (°F)																					
Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of 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	53.9	31.1	42.5	85	1907	22	50.7	1990	0	1949	31	32.1	1978	698	0	.0	.0	19.6	1.8	17.9	.0
Feb	59.2	35.7	47.5	91	1996	22	55.0	1976	-1	1951	3	35.5	1978	497	6	.0	@	21.3	1.0	10.8	.0
Mar	66.8	43.6	55.2	91	1908	17	60.2	1974	14	1980	2	51.4	1978	311	8	.0	.0	28.7	.2	4.0	.0
Apr	74.6	50.7	62.7	93	1948	11	68.8	1981	27	1989	11	57.4	1983	122	53	.0	.3	29.9	.0	.6	.0
May	82.0	60.1	71.1	98	1898	25	76.6	1996	36+	1954	5	65.9	1976	24	212	.0	2.6	31.0	.0	.0	.0
Jun	89.8	67.8	78.8	107	1897	21	83.7	1998	48	1970	4	75.1	1983	0	414	.5	15.6	30.0	.0	.0	.0
Jul	94.8	71.6	83.2	111	1954	25	89.9	1998	53	1971	31	78.4	1976	0	564	4.3	25.6	31.0	.0	.0	.0
Aug	95.6	70.4	83.0	115	1969	10	87.8	1999	49+	1967	14	77.3	1992	0	559	5.4	25.8	31.0	.0	.0	.0
Sep	89.0	63.4	76.2	112+	2000	5	82.3	1998	39+	1967	30	68.6	1974	7	343	1.1	14.2	30.0	.0	.0	.0
Oct	78.9	52.1	65.5	100	1953	1	69.8	1971	23	1993	31	57.9	1976	84	100	.0	1.9	30.9	.0	.3	.0
Nov	65.8	42.2	54.0	89	1966	24	60.5	1999	14+	1976	29	47.6	1976	345	14	.0	.0	26.9	.1	5.4	.0
Dec	56.8	33.9	45.4	85	1955	25	53.0	1984	-4	1989	23	33.2	1983	611	2	.0	.0	22.1	1.3	14.3	.1
Ann	75.6	51.9	63.8	115	Aug 1969	10	89.9	Jul 1998	-4	Dec 1989	23	32.1	Jan 1978	2699	2275	11.3	86.0	332.4	4.4	53.3	.1

+ Also occurred on an earlier date(s)

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

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

Issue Date: February 2004

(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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NWS Call Sign:

Elevation: 495 Feet Lat: 33°09N

Lon: 95°38W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							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	2.88	2.65	3.79	1935	19	7.00	1990	.06	1986	8.8	5.4	2.1	.6	.43	.68	1.09	1.49	1.91	2.36	2.88	3.52	4.38	5.77	7.11
Feb	3.20	3.12	4.45	2001	16	8.37	1997	.52	1996	7.8	5.1	2.1	.9	.71	1.00	1.47	1.90	2.32	2.77	3.28	3.89	4.69	5.97	7.17
Mar	4.27	4.06	7.78	1945	29	10.85	1990	1.04	1971	9.6	6.3	2.9	1.2	1.18	1.59	2.20	2.74	3.26	3.81	4.42	5.14	6.08	7.55	8.92
Apr	4.34	3.62	6.40	1974	22	13.16	1986	.38	1984	8.5	5.3	2.7	1.6	.94	1.34	1.98	2.55	3.13	3.75	4.44	5.27	6.37	8.12	9.77
May	5.00	5.14	6.75	1905	11	12.32	1990	.20	1988	9.5	6.6	3.2	1.7	.75	1.17	1.89	2.58	3.30	4.09	5.00	6.11	7.61	10.04	12.37
Jun	4.64	3.72	7.02	2000	4	19.99	2000	.49	1988	7.8	6.1	2.6	1.2	.66	1.05	1.72	2.36	3.03	3.77	4.62	5.67	7.08	9.38	11.59
Jul	3.22	2.03	8.11	1994	15	11.57	1994	.08	1993	6.1	4.1	1.9	.9	.21	.40	.80	1.24	1.74	2.31	3.01	3.90	5.14	7.24	9.33
Aug	2.35	1.86	3.82	1901	5	6.65	1996	.00+	2000	5.3	3.5	1.6	.7	.00	.25	.67	1.04	1.43	1.85	2.34	2.92	3.73	5.05	6.33
Sep	3.35	2.88	4.98	1972	28	9.26	1973	.58	1983	6.3	4.6	2.1	1.0	.57	.86	1.35	1.81	2.28	2.79	3.37	4.08	5.03	6.56	8.02
Oct	5.21	4.73	5.50	1949	7	12.69	1981	.19	1975	8.1	5.5	3.1	1.9	.69	1.11	1.86	2.58	3.34	4.19	5.16	6.37	7.99	10.65	13.22
Nov	4.77	4.64	5.69	2000	6	16.42	2000	.47	1999	8.5	5.7	2.9	1.4	.65	1.04	1.72	2.38	3.08	3.85	4.73	5.83	7.30	9.70	12.03
Dec	4.46	3.69	5.94	1984	18	9.74	1971	.25	1981	9.2	5.9	2.8	1.5	.95	1.36	2.01	2.60	3.20	3.84	4.55	5.42	6.55	8.36	10.08
Ann	47.69	46.72	8.11	Jul 1994	15	19.99	Jun 2000	.00+	Aug 2000	95.5	64.1	30.0	14.6	32.54	35.42	39.15	41.99	44.53	46.99	49.54	52.38	55.82	60.85	65.21

+ Also occurred on an earlier date(s)

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

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

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Station: SULPHUR SPRINGS, TX

COOP ID: 418743

Climate Division: TX 4

NWS Call Sign:

Elevation: 495 Feet

Lat: 33°09N

Lon: 95°38W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					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	#	1991	30	#+	1991	#	1972	5	#	1972	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.3	.0	#	0	3.0	1975	23	3.0	1975	#+	1994	10	#+	1994	.2	.1	.1	.0	.0	.0	.0	.0	.0
Mar	.7	.0	#	0	8.8	1971	3	8.8	1971	8	1971	3	#	1971	.1	.1	.1	.1	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	0	0	#	1978	31	#	1978	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	1.0	.0	N/A	N/A	8.8	Mar 1971	3	8.8	Mar 1971	8	Mar 1971	3	#+	Feb 1994	.3	.2	.2	.1	.0	@	@	@	.0

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

@ 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

Complete documentation available from:

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Station: SULPHUR SPRINGS, TX

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Climate Division: TX 4

NWS Call Sign:

Elevation: 495 Feet

Lat: 33°09N

Lon: 95°38W

Freeze Data									
Spring Freeze Dates (Month/Day)									
Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	4/16	4/12	4/09	4/06	4/04	4/01	3/30	3/27	3/22
32	4/12	4/06	4/01	3/28	3/25	3/21	3/17	3/13	3/06
28	3/30	3/21	3/14	3/09	3/04	2/26	2/21	2/14	2/05
24	3/12	3/04	2/26	2/21	2/16	2/11	2/06	1/31	1/23
20	3/03	2/22	2/16	2/10	2/05	1/30	1/24	1/17	1/02
16	2/24	2/14	2/06	1/30	1/23	1/16	1/05	0/00	0/00
Fall Freeze Dates (Month/Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	10/13	10/18	10/22	10/25	10/28	10/31	11/03	11/07	11/12
32	10/25	10/31	11/05	11/09	11/12	11/16	11/20	11/24	12/01
28	11/03	11/09	11/14	11/18	11/22	11/26	11/30	12/04	12/11
24	11/11	11/18	11/24	11/28	12/02	12/07	12/11	12/17	12/24
20	11/27	12/07	12/14	12/19	12/25	12/31	1/06	1/14	1/30
16	12/11	12/20	12/26	1/01	1/07	1/14	1/24	0/00	0/00
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	226	220	215	211	207	203	199	194	187
32	259	250	243	237	232	226	221	214	204
28	295	284	276	269	263	256	249	242	231
24	319	309	301	295	289	283	277	269	259
20	>365	>365	342	328	319	311	303	294	283
16	>365	>365	>365	>365	>365	346	330	316	300

* 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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COOP ID: 418743

Climate Division: TX 4 NWS Call Sign: Elevation: 495 Feet Lat: 33°09N Lon: 95°38W

Degree Days to Selected Base Temperatures (°F)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	698	497	311	122	24	0	0	0	7	84	345	611	2699
60	553	368	182	48	5	0	0	0	0	31	224	467	1878
57	467	297	122	22	1	0	0	0	0	14	165	383	1471
55	411	254	90	12	0	0	0	0	0	7	131	331	1236
50	287	164	34	1	0	0	0	0	0	1	66	219	772
32	33	10	0	0	0	0	0	0	0	0	0	17	60

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	358	442	719	921	1211	1404	1587	1582	1326	1039	659	430	11678
55	24	42	96	242	498	714	874	869	636	334	100	32	4461
57	17	29	66	192	437	654	812	807	576	278	74	22	3964
60	10	17	33	128	348	564	719	714	486	202	43	12	3276
65	0	6	8	53	212	414	564	559	343	100	14	2	2275
70	0	0	0	14	106	267	409	405	214	38	2	0	1455

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	175	278	488	685	968	1162	1333	1324	1077	783	424	225	175	453	941	1626	2594	3756	5089	6413	7490	8273	8697	8922
45	97	180	347	536	813	1012	1178	1169	927	628	296	127	97	277	624	1160	1973	2985	4163	5332	6259	6887	7183	7310
50	45	101	227	389	658	862	1023	1014	777	476	188	63	45	146	373	762	1420	2282	3305	4319	5096	5572	5760	5823
55	18	49	130	258	504	712	868	859	628	336	103	30	18	67	197	455	959	1671	2539	3398	4026	4362	4465	4495
60	2	16	60	145	353	562	713	704	479	207	50	7	2	18	78	223	576	1138	1851	2555	3034	3241	3291	3298
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	123	178	300	437	648	802	896	877	717	505	259	150	123	301	601	1038	1686	2488	3384	4261	4978	5483	5742	5892

(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

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

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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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