

Climatology of the United States

No. 20

1971-2000

Station: SMITHVILLE, TX

COOP ID: 418415

Climate Division: TX 7

NWS Call Sign:

Elevation: 340 Feet Lat: 30°01N Lon: 97°09W

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	61.3	36.7	49.0	88+	1975	27	57.2	1998	-1	1930	18	40.6	1978	507	4	.0	.0	24.7	.5	12.1	.0
Feb	65.4	40.1	52.8	96	1986	21	60.3	2000	6	1951	2	42.6	1978	355	12	.0	.3	24.8	.4	6.9	.0
Mar	73.0	47.8	60.4	98	1991	7	66.5	2000	19+	1980	3	54.6	1996	183	41	.0	.4	30.2	.0	2.4	.0
Apr	79.7	55.4	67.6	102	1939	2	72.5	1991	25	1987	3	63.2	1983	47	124	.0	1.9	30.0	.0	.1	.0
May	85.2	64.2	74.7	103	1955	15	80.9	1996	38	1929	3	69.9	1976	5	307	@	7.5	31.0	.0	.0	.0
Jun	91.5	70.4	81.0	106	1980	28	87.4	1990	50+	1992	4	77.7	1973	0	479	1.4	21.4	30.0	.0	.0	.0
Jul	95.4	72.3	83.9	111	1954	27	87.1	1980	52	1989	28	80.0	1976	0	585	5.8	28.7	31.0	.0	.0	.0
Aug	96.3	71.4	83.9	110+	1962	10	86.8	1993	50+	1989	11	79.3	1971	0	584	8.0	28.5	31.0	.0	.0	.0
Sep	90.8	66.3	78.6	111	2000	5	82.9	1977	43+	1994	25	72.2	1974	0	406	1.6	19.6	30.0	.0	.0	.0
Oct	82.1	56.8	69.5	105	1938	2	73.4	1991	27	1993	31	60.4	1976	33	170	@	5.6	30.9	.0	.1	.0
Nov	71.0	47.0	59.0	94	1948	5	64.3	1994	20+	1976	30	51.2	1976	222	43	.0	.1	28.9	.0	3.1	.0
Dec	63.1	38.9	51.0	91	1952	10	59.3	1984	3	1929	22	41.7	1983	443	9	.0	.0	26.7	.3	9.4	.0
Ann	79.6	55.6	67.6	111+	Sep 2000	5	87.4	Jun 1990	-1	Jan 1930	18	40.6	Jan 1978	1795	2764	16.8	114.0	349.2	1.2	34.1	.0

+ 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: 1917-2001

(3) 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: SMITHVILLE, TX

COOP ID: 418415

Climate Division: TX 7

NWS Call Sign:

Elevation: 340 Feet Lat: 30°01N

Lon: 97°09W

Precipitation (inches)

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	2.73	2.39	4.50	1932	4	13.69	1991	.00	1971	7.7	4.9	1.8	.7	.18	.46	.89	1.30	1.72	2.18	2.72	3.37	4.26	5.71	7.12
Feb	2.32	1.80	3.51	1924	18	9.36	1992	.26	1996	6.4	4.3	1.6	.6	.33	.53	.86	1.18	1.51	1.88	2.31	2.83	3.53	4.67	5.78
Mar	2.56	2.52	3.38	1923	27	5.88	1983	.48	1972	7.4	4.6	1.8	.9	.74	.98	1.35	1.67	1.98	2.30	2.66	3.08	3.62	4.48	5.27
Apr	3.00	2.54	6.59	1926	21	9.44	1976	.04	1983	6.4	4.0	2.0	1.0	.21	.40	.78	1.19	1.65	2.18	2.82	3.63	4.76	6.66	8.54
May	5.12	5.84	6.54	1933	25	11.36	1992	.26	1998	8.1	6.2	3.4	1.9	.75	1.18	1.92	2.63	3.36	4.17	5.11	6.25	7.79	10.29	12.70
Jun	3.66	3.35	16.05	1940	30	11.31	1981	.12	1990	6.7	5.3	2.2	.9	.49	.79	1.31	1.82	2.36	2.95	3.63	4.47	5.61	7.47	9.27
Jul	2.01	1.88	6.00	1936	1	6.33	1979	.11	1986	5.6	3.1	1.1	.4	.16	.30	.56	.84	1.15	1.50	1.92	2.45	3.18	4.41	5.62
Aug	2.25	1.91	6.93	1981	31	7.10	1981	.00	1999	5.7	3.6	1.1	.5	.10	.29	.62	.95	1.31	1.71	2.18	2.76	3.57	4.90	6.21
Sep	3.56	3.43	6.67	1964	17	6.99	1978	.25	1999	6.9	5.1	2.1	1.1	.78	1.10	1.63	2.10	2.57	3.08	3.64	4.32	5.22	6.64	7.99
Oct	4.70	3.59	9.53	1998	18	16.26	1998	.00	1996	6.1	4.7	2.6	1.3	.18	.56	1.24	1.92	2.67	3.51	4.52	5.77	7.50	10.39	13.23
Nov	3.29	2.89	4.40	1940	5	8.08	2000	.32	1999	6.8	4.7	2.3	1.1	.58	.87	1.35	1.80	2.26	2.76	3.32	4.01	4.93	6.40	7.81
Dec	2.84	2.06	3.65	1986	23	10.65	1991	.40	1989	6.9	4.8	1.9	.8	.39	.62	1.03	1.43	1.84	2.29	2.82	3.47	4.34	5.77	7.15
Ann	38.04	35.78	16.05	Jun 1940	30	16.26	Oct 1998	.00+	Aug 1999	80.7	55.3	23.9	11.2	22.44	25.24	28.95	31.85	34.47	37.05	39.75	42.79	46.53	52.07	56.95

+ 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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Complete documentation available from:

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Station: SMITHVILLE, TX

COOP ID: 418415

Climate Division: TX 7

NWS Call Sign:

Elevation: 340 Feet

Lat: 30°01N

Lon: 97°09W

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	#	1979	2	#+	1979	#	1972	4	#	1972	.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	0	0	.0	0	0	.0	0	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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	#	0	#	1996	16	#	1996	#	1996	16	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#+	Dec 1996	16	#+	Dec 1996	#+	Dec 1996	16	#+	Dec 1996	.0	.0	.0	.0	.0	.0	.0	.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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Climate Division: TX 7

NWS Call Sign:

Elevation: 340 Feet

Lat: 30°01N

Lon: 97°09W

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	4/14	4/06	4/01	3/27	3/23	3/18	3/14	3/08	3/01
32	3/27	3/19	3/13	3/08	3/04	2/27	2/22	2/17	2/09
28	3/20	3/10	3/02	2/24	2/19	2/13	2/07	1/31	1/21
24	3/09	2/25	2/16	2/09	2/01	1/25	1/17	1/06	12/18
20	2/11	2/02	1/25	1/19	1/12	1/04	12/20	0/00	0/00
16	1/20	1/08	12/27	0/00	0/00	0/00	0/00	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	10/25	10/30	11/04	11/07	11/10	11/14	11/17	11/21	11/27
32	10/30	11/06	11/11	11/16	11/20	11/24	11/28	12/04	12/11
28	11/17	11/23	11/28	12/01	12/05	12/09	12/12	12/17	12/23
24	11/28	12/06	12/12	12/17	12/22	12/27	1/02	1/09	1/23
20	12/12	12/23	12/31	1/08	1/16	1/25	2/12	0/00	0/00
16	12/26	1/04	1/13	0/00	0/00	0/00	0/00	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	260	250	243	237	232	226	220	214	204
32	292	281	273	266	260	254	247	239	228
28	318	308	301	294	289	283	277	269	259
24	>365	>365	342	330	321	313	304	295	283
20	>365	>365	>365	>365	>365	357	343	332	320
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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Climate Division: TX 7 NWS Call Sign: Elevation: 340 Feet Lat: 30°01N Lon: 97°09W

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	507	355	183	47	5	0	0	0	0	33	222	443	1795
60	369	238	93	11	0	0	0	0	0	8	129	305	1153
57	294	180	55	4	0	0	0	0	0	3	87	234	857
55	250	147	37	1	0	0	0	0	0	1	64	193	693
50	161	78	11	0	0	0	0	0	0	0	25	109	384
32	9	0	0	0	0	0	0	0	0	0	0	1	10

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	536	581	881	1067	1324	1469	1608	1607	1396	1160	811	590	13030
55	64	83	204	378	611	779	895	894	706	449	185	69	5317
57	46	60	161	320	549	719	833	832	646	388	148	48	4750
60	28	34	106	238	456	629	740	739	556	300	100	27	3953
65	4	12	41	124	307	479	585	584	406	170	43	9	2764
70	0	1	11	48	174	330	430	429	264	74	14	0	1775

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	312	401	635	818	1073	1222	1351	1348	1151	908	570	366	312	713	1348	2166	3239	4461	5812	7160	8311	9219	9789	10155
45	199	280	489	668	918	1072	1196	1193	1001	753	428	243	199	479	968	1636	2554	3626	4822	6015	7016	7769	8197	8440
50	112	174	349	520	763	922	1041	1038	851	600	298	143	112	286	635	1155	1918	2840	3881	4919	5770	6370	6668	6811
55	55	95	224	375	608	772	886	883	701	449	191	73	55	150	374	749	1357	2129	3015	3898	4599	5048	5239	5312
60	24	46	120	243	453	622	731	728	551	310	108	36	24	70	190	433	886	1508	2239	2967	3518	3828	3936	3972
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	215	265	417	545	733	829	894	877	765	600	371	244	215	480	897	1442	2175	3004	3898	4775	5540	6140	6511	6755

(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/normal/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