

# 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: STILLHOUSE HOLLOW DAM, TX

1971-2000

COOP ID: 418646

Climate Division: TX 3

NWS Call Sign:

Elevation: 706 Feet

Lat: 31°02N

Lon: 97°32W

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	58.7	34.4	46.6	88	2000	20	53.0	1999	6	1982	11	37.4+	1979	578	3	.0	.0	22.4	.7	13.4	.0
Feb	63.8	38.7	51.3	98	1996	22	58.7	2000	12	1996	4	40.8	1978	395	10	.0	.2	23.3	.5	7.3	.0
Mar	71.5	46.3	58.9	97+	1971	29	64.3	1974	15	1980	2	53.9	1996	211	21	.0	.4	29.7	.0	2.3	.0
Apr	78.5	53.7	66.1	97	1996	20	71.1	1972	31+	1996	7	61.8	1997	62	95	.0	1.4	29.9	.0	.1	.0
May	84.9	62.5	73.7	100	1984	6	79.8	1996	41	1991	6	69.1	1979	8	278	@	6.1	31.0	.0	.0	.0
Jun	91.4	69.2	80.3	106	1980	28	84.5	1998	50	1964	1	77.3	1983	0	460	.8	19.6	30.0	.0	.0	.0
Jul	96.0	72.0	84.0	108	2000	16	87.8	1998	52	1970	21	80.2	1976	0	588	4.9	28.2	31.0	.0	.0	.0
Aug	96.0	71.3	83.7	106+	1969	15	87.7	1999	57	1992	28	79.7+	1992	0	578	5.5	27.6	31.0	.0	.0	.0
Sep	90.0	65.9	78.0	110+	2000	6	82.9	1977	39	1989	25	70.6	1974	1	389	.9	17.4	30.0	.0	.0	.0
Oct	80.8	55.8	68.3	99+	1997	1	71.5	1979	22	1993	31	60.0	1976	40	143	.0	4.1	30.9	.0	.1	.0
Nov	69.1	45.5	57.3	92+	1988	8	63.2	1999	19+	1993	26	50.2	1976	259	28	.0	@	28.2	.1	2.6	.0
Dec	61.1	37.3	49.2	84	1966	7	56.8	1984	-5	1989	23	38.8	1989	495	4	.0	.0	25.4	.6	8.8	.1
Ann	78.5	54.4	66.5	110+	Sep 2000	6	87.8	Jul 1998	-5	Dec 1989	23	37.4+	Jan 1979	2049	2597	12.1	105.0	342.8	1.9	34.6	.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](http://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: 1963-2001

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

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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	1.87	1.50	3.40	1965	22	4.99	1991	.00	1971	7.6	4.1	1.2	.3	.11	.29	.58	.86	1.15	1.47	1.85	2.31	2.94	3.97	4.97
Feb	2.64	2.45	4.17	1986	4	7.39	1992	.15	1996	7.1	4.2	1.8	.7	.30	.50	.87	1.24	1.63	2.07	2.59	3.23	4.10	5.53	6.93
Mar	2.60	2.79	2.10	1995	13	5.64	1979	.17	1971	8.0	4.8	1.8	.8	.58	.82	1.20	1.54	1.89	2.25	2.67	3.16	3.81	4.84	5.81
Apr	2.93	2.13	3.30	1997	26	9.80	1976	.14	1983	6.9	4.4	2.1	.8	.41	.65	1.07	1.48	1.91	2.37	2.91	3.57	4.47	5.92	7.33
May	4.94	4.58	4.36	1979	22	11.65	1991	1.07	1988	8.3	6.4	3.5	1.7	1.46	1.93	2.63	3.24	3.83	4.45	5.13	5.93	6.96	8.58	10.08
Jun	3.87	3.41	9.56	1964	16	13.91	1981	.47	1990	6.9	5.4	2.5	1.1	.71	1.06	1.62	2.15	2.69	3.27	3.93	4.72	5.78	7.49	9.11
Jul	1.88	1.56	2.89	1968	9	5.33	1979	.00+	1993	4.5	3.2	1.2	.6	.00	.09	.35	.63	.94	1.30	1.75	2.30	3.09	4.42	5.75
Aug	2.20	1.95	6.04	2001	31	10.15	1974	.00	1993	4.9	3.7	1.5	.7	.06	.21	.51	.82	1.18	1.58	2.07	2.69	3.55	5.00	6.44
Sep	3.80	3.48	4.91	2000	25	7.55	1976	.25	1982	6.6	5.0	2.3	1.2	.60	.92	1.47	2.00	2.54	3.13	3.81	4.64	5.75	7.56	9.29
Oct	3.85	3.54	7.52	1974	31	10.26	1998	.25	1992	6.6	5.0	2.4	1.3	.45	.75	1.29	1.82	2.40	3.04	3.78	4.71	5.97	8.04	10.05
Nov	2.95	2.82	3.05	2001	16	8.32	2000	.20	1999	7.3	4.9	2.0	.9	.50	.75	1.18	1.59	2.00	2.45	2.97	3.60	4.44	5.79	7.09
Dec	2.70	2.26	5.68	1997	21	9.78	1991	.33	1977	7.3	4.0	1.5	.6	.38	.60	.99	1.36	1.76	2.19	2.68	3.29	4.11	5.46	6.75
Ann	36.23	36.04	9.56	Jun 1964	16	13.91	Jun 1981	.00+	Aug 1993	82.0	55.1	23.8	10.7	23.84	26.17	29.19	31.51	33.59	35.62	37.72	40.06	42.92	47.10	50.75

+ 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

(2) Derived from station's available digital record: 1963-2001

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

Complete documentation available from:  
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**Climate Division: TX 3**

**NWS Call Sign:**

**Elevation: 706 Feet**

**Lat: 31°02N**

**Lon: 97°32W**

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	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Mar	#	.0	0	0	#	1993	14	#	1993	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Apr	.0	.0	#	0	.0	0	0	.0	0	4	1972	29	#	1972	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Nov	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Dec	#	.0	#	0	#	1990	31	#	1990	#	1990	31	#	1990	-9.9	-9.9	-9.9	-9.9	-9.9	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#+	Mar 1993	14	#+	Mar 1993	4	Apr 1972	29	#+	Dec 1990	-9.9	-9.9	-9.9	-9.9	-9.9	.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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**Lat: 31°02N**

**Lon: 97°32W**

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	4/12	4/05	3/31	3/27	3/23	3/19	3/15	3/11	3/04
32	3/31	3/24	3/19	3/14	3/11	3/07	3/02	2/25	2/18
28	3/17	3/09	3/03	2/27	2/22	2/18	2/13	2/08	1/31
24	3/10	2/27	2/20	2/13	2/07	2/01	1/25	1/16	1/03
20	2/27	2/13	2/02	1/23	1/13	1/03	12/19	0/00	0/00
16	2/06	1/27	1/19	1/11	12/31	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	10/22	10/29	11/03	11/07	11/11	11/14	11/18	11/23	11/30
32	10/31	11/08	11/13	11/17	11/22	11/26	11/30	12/06	12/13
28	11/15	11/22	11/27	12/02	12/06	12/10	12/14	12/20	12/27
24	11/14	11/25	12/03	12/09	12/16	12/22	12/30	1/07	1/21
20	11/29	12/11	12/21	12/29	1/07	1/17	2/01	0/00	0/00
16	12/26	1/06	1/15	1/25	2/07	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	259	250	243	237	232	226	220	213	204
32	285	275	267	261	255	250	244	236	226
28	317	306	298	292	286	280	273	265	255
24	>365	>365	325	313	305	297	289	280	269
20	>365	>365	>365	>365	364	345	331	318	301
16	>365	>365	>365	>365	>365	>365	>365	>365	343

\* 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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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	578	395	211	62	8	0	0	0	1	40	259	495	2049
60	435	273	108	16	1	0	0	0	0	10	156	354	1353
57	355	211	64	5	0	0	0	0	0	3	108	277	1023
55	305	175	43	2	0	0	0	0	0	2	82	231	840
50	203	101	12	0	0	0	0	0	0	0	34	138	488
32	15	3	0	0	0	0	0	0	0	0	0	3	21

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	467	542	834	1023	1293	1450	1611	1601	1378	1126	759	535	12619
55	45	70	163	335	580	760	898	888	688	415	151	50	5043
57	32	50	123	278	518	700	836	826	628	355	117	34	4497
60	19	28	73	199	425	610	743	733	538	268	75	18	3729
65	3	10	21	95	278	460	588	578	389	143	28	4	2597
70	0	0	3	32	152	310	433	423	249	56	8	0	1666

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	257	357	587	780	1040	1207	1358	1352	1137	879	524	320	257	614	1201	1981	3021	4228	5586	6938	8075	8954	9478	9798
45	160	242	440	630	885	1057	1203	1197	987	725	385	202	160	402	842	1472	2357	3414	4617	5814	6801	7526	7911	8113
50	85	147	304	480	730	907	1048	1042	837	571	263	109	85	232	536	1016	1746	2653	3701	4743	5580	6151	6414	6523
55	40	77	187	339	575	757	893	887	687	424	156	51	40	117	304	643	1218	1975	2868	3755	4442	4866	5022	5073
60	13	34	94	209	422	607	738	732	539	284	79	18	13	47	141	350	772	1379	2117	2849	3388	3672	3751	3769
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	177	230	366	499	706	831	903	893	762	572	323	204	177	407	773	1272	1978	2809	3712	4605	5367	5939	6262	6466

(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:  
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## 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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)