

Climatology of the United States No. 20

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

Station: HAMILTON 1 NW, TX

1971-2000

COOP ID: 413884

Climate Division: TX 5

NWS Call Sign:

Elevation: 1,260 Feet Lat: 31°43N

Lon: 98°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	56.7	33.4	45.1	91	1969	9	51.9	1990	2	1979	2	35.0	1979	620	0	.0	.0	21.1	1.8	16.4	.0
Feb	61.7	37.8	49.8	94	1986	21	58.7	1976	6+	1985	3	38.9	1978	434	8	.0	.1	22.1	.9	8.7	.0
Mar	69.3	44.6	57.0	94+	1974	31	63.7	1974	10	1980	2	51.9	1996	269	20	.0	.2	29.4	.1	3.6	.0
Apr	76.1	51.8	64.0	100+	1963	10	69.8	1972	28+	1987	4	58.2	1973	106	75	.0	1.0	29.8	.0	.3	.0
May	82.8	60.7	71.8	103	1984	6	77.5	1996	39	1979	12	67.5	1976	20	228	.1	4.5	31.0	.0	.0	.0
Jun	89.5	68.0	78.8	106	1969	22	83.0	1980	48	1964	1	75.0	1988	0	413	.9	15.5	30.0	.0	.0	.0
Jul	94.3	71.3	82.8	107	1964	26	87.5	1980	57+	1990	14	79.0	1976	0	552	4.1	27.4	31.0	.0	.0	.0
Aug	93.6	70.2	81.9	109	1964	7	86.2	1985	53+	1967	14	77.1	1992	0	524	4.5	26.2	31.0	.0	.0	.0
Sep	86.8	64.0	75.4	108	1985	3	81.7	1977	39	1984	30	68.7	1974	6	318	.8	14.3	30.0	.0	.0	.0
Oct	78.1	54.4	66.3	98	1979	2	71.0	1979	28+	1980	31	58.3	1976	65	103	.0	2.4	30.9	.0	.2	.0
Nov	66.7	43.3	55.0	94	1980	9	62.4	1973	15	1976	29	47.5	1976	318	18	.0	.1	27.3	.1	4.9	.0
Dec	58.6	35.7	47.2	84	1977	5	54.1	1984	-3	1989	22	37.2	1983	554	1	.0	.0	23.4	1.0	13.2	.1
Ann	76.2	52.9	64.6	109	Aug 1964	7	87.5	Jul 1980	-3	Dec 1989	22	35.0	Jan 1979	2392	2260	10.4	91.7	337.0	3.9	47.3	.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: 1915-2001

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

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Station: HAMILTON 1 NW, TX

COOP ID: 413884

Climate Division: TX 5

NWS Call Sign:

Elevation: 1,260 Feet Lat: 31°43N

Lon: 98°09W

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	1.64	1.57	1.87	1968	20	3.68	1982	.02	1986	5.5	3.1	1.1	.4	.15	.27	.49	.72	.97	1.25	1.58	2.00	2.57	3.52	4.45
Feb	1.76	1.80	2.57	1965	9	4.56	1997	.12	1999	5.7	3.6	1.2	.7	.27	.42	.67	.92	1.17	1.44	1.76	2.15	2.67	3.52	4.33
Mar	2.61	2.37	3.32	1989	28	8.42	1979	.00	1972	6.6	4.4	1.7	.7	.36	.70	1.14	1.51	1.88	2.27	2.70	3.22	3.90	4.97	5.99
Apr	2.72	2.30	5.53	1977	16	10.07	1977	.54	1983	6.4	4.0	1.5	.6	.53	.78	1.18	1.55	1.92	2.32	2.77	3.31	4.03	5.19	6.28
May	3.70	3.64	4.28	1980	7	8.67	1987	.65	1990	9.3	6.6	2.8	1.0	.98	1.33	1.87	2.34	2.80	3.29	3.83	4.47	5.30	6.62	7.84
Jun	3.71	3.33	4.55	1981	16	7.95	1981	.00	1990	7.7	5.6	2.3	1.1	.85	1.38	1.99	2.48	2.94	3.41	3.92	4.52	5.29	6.48	7.58
Jul	1.53	1.17	4.24	1971	25	9.18	1971	.14	1989	5.1	3.1	1.2	.5	.12	.22	.41	.62	.86	1.13	1.45	1.86	2.42	3.37	4.30
Aug	1.57	1.42	3.00	1964	22	5.31	1978	.02	2000	5.5	2.4	.9	.1	.17	.29	.50	.72	.96	1.22	1.53	1.91	2.44	3.31	4.15
Sep	2.85	2.55	5.88	1974	17	8.55	1986	.02+	1982	6.8	4.7	1.5	.7	.16	.33	.67	1.06	1.50	2.01	2.64	3.44	4.57	6.48	8.39
Oct	2.90	2.75	8.20	1959	4	6.54	1971	.11	1987	6.8	4.6	1.9	.8	.27	.48	.87	1.28	1.72	2.22	2.80	3.54	4.55	6.24	7.89
Nov	2.00	1.66	3.04	1952	24	5.78	1978	.18	1979	7.3	4.2	1.2	.4	.37	.54	.84	1.11	1.39	1.69	2.03	2.44	2.99	3.87	4.71
Dec	1.60	1.32	2.05	1946	11	4.94	1971	.02	1978	7.3	3.6	1.1	.4	.12	.22	.42	.65	.89	1.17	1.51	1.94	2.54	3.55	4.54
Ann	28.59	27.86	8.20	Oct 1959	4	10.07	Apr 1977	.00+	Jun 1990	80.0	49.9	18.4	7.4	20.21	21.83	23.91	25.48	26.89	28.25	29.65	31.20	33.08	35.82	38.18

+ 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: 1915-2001

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

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Station: HAMILTON 1 NW, TX

COOP ID: 413884

Climate Division: TX 5

NWS Call Sign:

Elevation: 1,260 Feet

Lat: 31°43N

Lon: 98°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	.4	.0	#	0	3.0	1985	2	3.0	1985	1	1973	13	#+	1973	.3	.2	.1	.0	.0	.2	.0	.0	.0
Feb	.2	.0	#	0	1.5	1978	17	1.5	1978	1	1979	17	#+	1989	.1	.1	.0	.0	.0	.2	.0	.0	.0
Mar	.0	.0	#	0	.3	1978	4	.3	1978	#+	1978	4	#+	1978	.1	.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	.3	.0	#	0	4.0	1976	13	4.0	1976	4	1976	13	#	1976	.1	.1	.1	.0	.0	.1	.1	.0	.0
Dec	.1	.0	#	0	1.0	1972	11	1.0	1972	1	1972	12	#+	1985	.1	.1	.0	.0	.0	.1	.0	.0	.0
Ann	1.0	.0	N/A	N/A	4.0	Nov 1976	13	4.0	Nov 1976	4	Nov 1976	13	#+	Feb 1989	.7	.5	.2	.0	.0	.6	.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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No. 20 1971-2000

Station: HAMILTON 1 NW, TX

COOP ID: 413884

Climate Division: TX 5

NWS Call Sign:

Elevation: 1,260 Feet

Lat: 31° 43N

Lon: 98° 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	4/15	4/09	4/05	4/02	3/29	3/26	3/23	3/19	3/13
32	4/06	3/30	3/25	3/20	3/16	3/12	3/08	3/03	2/24
28	3/29	3/20	3/13	3/07	3/02	2/25	2/19	2/12	2/03
24	3/16	3/05	2/26	2/20	2/14	2/08	2/02	1/25	1/15
20	3/04	2/21	2/12	2/05	1/30	1/23	1/15	1/05	12/18
16	2/15	2/04	1/27	1/20	1/13	1/05	12/23	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	10/24	10/29	11/01	11/04	11/07	11/10	11/13	11/16	11/21
32	10/25	11/01	11/06	11/11	11/15	11/19	11/23	11/28	12/05
28	11/07	11/14	11/19	11/23	11/27	12/01	12/05	12/10	12/17
24	11/19	11/26	12/01	12/05	12/09	12/13	12/17	12/22	12/29
20	11/27	12/06	12/12	12/18	12/23	12/28	1/03	1/11	1/25
16	12/16	12/24	12/31	1/06	1/12	1/19	2/02	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	239	233	229	225	222	219	215	211	205
32	271	261	254	248	243	237	231	224	214
28	297	288	281	275	269	264	258	251	241
24	328	316	308	302	296	290	284	277	267
20	>365	>365	349	335	325	317	309	300	288
16	>365	>365	>365	>365	>365	353	340	329	317

* 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: 413884

Climate Division: TX 5 NWS Call Sign: Elevation: 1,260 Feet Lat: 31°43N Lon: 98°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	620	434	269	106	20	0	0	0	6	65	318	554	2392
60	476	309	156	41	4	0	0	0	0	20	202	409	1617
57	392	242	105	19	1	0	0	0	0	8	146	326	1239
55	339	203	77	11	0	0	0	0	0	4	115	275	1024
50	225	123	29	1	0	0	0	0	0	1	55	169	603
32	17	4	0	0	0	0	0	0	0	0	0	5	26

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	422	502	774	959	1231	1403	1575	1547	1302	1061	690	476	11942
55	31	56	137	280	518	713	862	834	612	352	115	32	4542
57	21	40	104	228	457	653	800	772	552	294	86	21	4028
60	12	22	62	160	367	563	707	679	462	213	52	11	3310
65	0	8	20	75	228	413	552	524	318	103	18	1	2260
70	0	0	4	24	118	268	397	370	191	36	4	0	1412

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	207	309	528	721	976	1161	1328	1313	1083	818	447	246	207	516	1044	1765	2741	3902	5230	6543	7626	8444	8891	9137
45	118	204	381	573	821	1011	1173	1158	933	663	318	142	118	322	703	1276	2097	3108	4281	5439	6372	7035	7353	7495
50	56	119	251	426	666	861	1018	1003	783	510	201	70	56	175	426	852	1518	2379	3397	4400	5183	5693	5894	5964
55	22	61	145	287	511	711	863	848	634	363	111	31	22	83	228	515	1026	1737	2600	3448	4082	4445	4556	4587
60	1	20	69	166	358	561	708	693	485	231	50	7	1	21	90	256	614	1175	1883	2576	3061	3292	3342	3349
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	148	205	334	454	654	799	881	865	720	530	280	165	148	353	687	1141	1795	2594	3475	4340	5060	5590	5870	6035

(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