

Climatography of the United States

No. 20

1971-2000

Station: MEMPHIS, TX

COOP ID: 415821

Climate Division: TX 2

NWS Call Sign:

Elevation: 2,090 Feet Lat: 34°44N

Lon: 100°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	52.0	25.5	38.8	88	1927	5	45.3	1986	-11	1930	18	27.5	1979	815	0	.0	.0	18.8	3.4	25.6	.1
Feb	57.6	29.6	43.6	92+	1996	23	51.9	1976	-3	1933	8	32.4	1978	598	0	.0	.1	20.2	2.1	18.7	.1
Mar	65.9	36.4	51.2	99	1971	28	56.4	1986	4	1960	3	46.0	1996	430	1	.0	.5	27.5	.3	8.4	.0
Apr	75.0	45.0	60.0	103	1959	26	66.2	1981	21+	1940	13	53.6	1997	196	46	.1	2.8	29.2	.0	1.4	.0
May	82.6	55.7	69.2	109	2000	24	76.4	1996	26	1944	23	64.2	1976	43	171	1.0	7.2	31.0	.0	.0	.0
Jun	90.7	64.6	77.7	116	1994	28	83.4	1994	39	1908	15	72.6	1982	4	385	3.7	17.6	30.0	.0	.0	.0
Jul	95.7	69.5	82.6	115	1936	18	87.9	1998	50	1912	21	78.2	1976	0	546	9.4	26.1	31.0	.0	.0	.0
Aug	94.0	68.0	81.0	117+	1944	3	85.4	2000	49	1950	20	75.6	1971	0	496	6.7	24.2	31.0	.0	.0	.0
Sep	86.3	60.5	73.4	110+	1952	1	80.5	1998	34+	1984	30	66.0	1974	16	268	1.7	13.4	30.0	.0	.0	.0
Oct	76.3	48.7	62.5	106	2000	3	66.2	1979	19	1993	31	55.9	1976	122	45	.1	2.5	30.6	.0	.9	.0
Nov	62.8	36.2	49.5	92+	1945	5	57.1	1999	10	1916	14	43.1	2000	470	5	.0	.0	25.0	.4	11.7	.0
Dec	53.6	28.0	40.8	88+	1955	25	45.3	1980	-6	1989	23	28.4	1983	750	0	.0	.0	20.1	1.9	23.0	.2
Ann	74.4	47.3	60.9	117+	Aug 1944	3	87.9	Jul 1998	-11	Jan 1930	18	27.5	Jan 1979	3444	1963	22.7	94.4	324.4	8.1	89.7	.4

+ 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: 1905-2001

(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: MEMPHIS, TX

COOP ID: 415821

Climate Division: TX 2

NWS Call Sign:

Elevation: 2,090 Feet Lat: 34°44N

Lon: 100°32W

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	.57	.55	1.70	1968	22	1.68	1999	.00+	1996	2.5	1.4	.4	.0	.00	.00	.00	.22	.36	.49	.62	.77	.96	1.28	1.55
Feb	.88	.70	1.55	1911	16	3.07	1998	.00+	1991	3.0	2.3	.6	@	.00	.00	.12	.25	.40	.58	.79	1.07	1.46	2.13	2.79
Mar	1.52	1.01	3.80	2000	23	6.06	2000	.00+	1997	3.3	2.5	.9	.4	.00	.00	.15	.40	.67	.99	1.38	1.88	2.58	3.75	4.92
Apr	2.04	1.36	3.20	1997	25	9.28	1997	.00+	1996	4.4	3.3	1.5	.6	.00	.21	.58	.90	1.24	1.61	2.03	2.54	3.25	4.40	5.52
May	3.93	3.97	5.50	1918	28	9.72	1989	.06	1984	6.5	5.6	2.5	1.5	.49	.80	1.36	1.91	2.48	3.13	3.88	4.80	6.05	8.11	10.10
Jun	3.51	2.76	8.80	1960	7	9.23	2000	.55	1994	5.9	5.0	2.4	1.0	.58	.88	1.39	1.87	2.37	2.91	3.53	4.29	5.29	6.93	8.49
Jul	1.88	1.71	3.30	1990	22	5.50	1996	.00+	1983	3.9	2.9	1.3	.6	.00	.00	.35	.71	1.06	1.44	1.87	2.40	3.12	4.26	5.39
Aug	2.25	1.65	4.73	1986	30	9.50	1986	.00	2000	4.7	3.5	1.3	.7	.15	.38	.73	1.06	1.41	1.79	2.24	2.78	3.52	4.73	5.89
Sep	2.45	2.24	3.02	1989	12	7.10	1978	.00	2000	4.1	3.4	1.8	.8	.13	.35	.73	1.09	1.47	1.90	2.40	3.02	3.86	5.25	6.61
Oct	1.77	1.10	8.15	1986	2	9.10	1986	.02	1992	3.8	2.9	1.1	.3	.08	.17	.37	.60	.88	1.20	1.60	2.12	2.86	4.13	5.40
Nov	.96	.87	2.90	1986	4	3.00	1986	.00+	1999	2.8	2.2	.7	.1	.00	.00	.13	.34	.53	.73	.97	1.24	1.62	2.21	2.81
Dec	.75	.43	2.80	1932	22	2.81	1997	.00+	1981	2.5	1.8	.6	.1	.00	.00	.00	.16	.33	.51	.72	.97	1.31	1.87	2.41
Ann	22.51	21.42	8.80	Jun 1960	7	9.72	May 1989	.00+	Sep 2000	47.4	36.8	15.1	6.1	13.98	15.55	17.60	19.19	20.63	22.03	23.50	25.13	27.14	30.10	32.70

+ 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: 1905-2001

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

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

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151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: MEMPHIS, TX

COOP ID: 415821

Climate Division: TX 2

NWS Call Sign:

Elevation: 2,090 Feet

Lat: 34° 44N

Lon: 100° 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	1.5	.0	#	0	5.0	1994	31	7.0	1997	5	1994	31	1	1997	.7	.6	.2	.1	.0	.8	.4	.1	.0
Feb	.8	.0	#	0	8.0	1971	21	10.0	1971	10	1971	22	1	1971	.4	.3	.1	.1	.0	.3	.2	.1	.1
Mar	.0	.0	#	0	.5	1988	17	.5	1988	2	1995	2	#+	2000	.1	.0	.0	.0	.0	@	.0	.0	.0
Apr	#	.0	#	0	#	1999	14	#+	1999	#	1999	14	#	1999	.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	#	1996	22	#+	1996	#	1996	22	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.6	.0	#	0	6.5	1972	18	10.5	1972	4	1992	23	#+	2000	.2	.2	.1	.1	.0	.2	@	.0	.0
Dec	1.6	.0	#	0	8.0	2000	26	8.5	2000	8	2000	27	1	2000	.6	.4	.1	.1	.0	.8	.3	.2	.0
Ann	4.5	.0	N/A	N/A	8.0+	Dec 2000	26	10.5	Nov 1972	10	Feb 1971	22	1+	Dec 2000	2.0	1.5	.5	.4	.0	2.1	.9	.4	.1

+ 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: MEMPHIS, TX

COOP ID: 415821

Climate Division: TX 2

NWS Call Sign:

Elevation: 2,090 Feet

Lat: 34° 44N

Lon: 100° 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	4/24	4/19	4/15	4/12	4/10	4/07	4/04	3/31	3/26
32	4/13	4/09	4/06	4/03	4/01	3/29	3/26	3/23	3/19
28	4/06	3/30	3/26	3/22	3/18	3/15	3/11	3/06	2/28
24	3/28	3/19	3/12	3/07	3/02	2/25	2/20	2/13	2/04
20	3/17	3/09	3/03	2/26	2/22	2/17	2/12	2/07	1/30
16	3/03	2/22	2/15	2/09	2/04	1/29	1/22	1/14	12/30
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	10/03	10/09	10/14	10/18	10/22	10/26	10/30	11/04	11/10
32	10/23	10/27	10/30	11/02	11/04	11/07	11/09	11/12	11/17
28	10/30	11/04	11/07	11/10	11/13	11/16	11/19	11/22	11/27
24	11/06	11/12	11/16	11/19	11/22	11/26	11/29	12/03	12/09
20	11/10	11/22	11/30	12/07	12/14	12/21	12/28	1/06	1/18
16	11/21	11/30	12/06	12/12	12/17	12/22	12/28	1/05	1/19
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	221	212	205	200	195	190	184	178	169
32	233	227	224	220	217	214	211	207	202
28	262	254	248	243	239	234	229	224	216
24	298	287	278	271	265	258	251	243	231
20	333	315	305	297	290	284	277	269	257
16	>365	358	337	325	316	308	299	289	276

* 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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Station: MEMPHIS, TX

COOP ID: 415821

Climate Division: TX 2 NWS Call Sign: Elevation: 2,090 Feet Lat: 34°44N Lon: 100°32W

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	815	598	430	196	43	4	0	0	16	122	470	750	3444
60	660	467	287	106	12	0	0	0	3	47	334	596	2512
57	570	390	210	66	4	0	0	0	0	22	261	507	2030
55	513	341	165	46	2	0	0	0	0	13	218	450	1748
50	371	233	80	14	0	0	0	0	0	2	130	313	1143
32	49	24	0	0	0	0	0	0	0	0	5	29	107

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	258	350	595	839	1152	1370	1569	1519	1242	946	530	302	10672
55	8	23	46	195	441	680	856	806	552	246	53	10	3916
57	3	16	29	156	381	620	794	744	492	193	36	5	3469
60	1	9	13	106	295	530	701	651	405	124	19	1	2855
65	0	0	1	46	171	385	546	496	268	45	5	0	1963
70	0	0	0	15	81	250	391	343	155	10	0	0	1245

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	110	200	383	617	920	1141	1325	1268	1000	692	310	136	110	310	693	1310	2230	3371	4696	5964	6964	7656	7966	8102
45	48	113	253	469	765	991	1170	1113	850	540	197	66	48	161	414	883	1648	2639	3809	4922	5772	6312	6509	6575
50	19	56	148	334	611	841	1015	958	701	391	109	27	19	75	223	557	1168	2009	3024	3982	4683	5074	5183	5210
55	0	22	71	211	458	691	860	803	554	256	46	3	0	22	93	304	762	1453	2313	3116	3670	3926	3972	3975
60	0	4	29	112	311	541	705	648	412	141	13	0	0	4	33	145	456	997	1702	2350	2762	2903	2916	2916
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	110	166	270	397	582	747	862	829	646	440	223	123	110	276	546	943	1525	2272	3134	3963	4609	5049	5272	5395

(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