

Climatology of the United States

No. 20

1971-2000

Station: MC LEAN, TX

COOP ID: 415770

Climate Division: TX 1

NWS Call Sign:

Elevation: 2,860 Feet Lat: 35° 14N

Lon: 100° 36W

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	49.9	25.3	37.6	82	1986	20	46.6	1986	-7	1963	12	25.6	1979	850	0	.0	.0	17.5	4.1	24.4	.3
Feb	56.1	29.3	42.7	87	1996	22	50.9	1976	-5+	1989	4	29.7	1978	625	0	.0	.0	18.9	2.4	17.7	.3
Mar	65.2	36.4	50.8	96	1971	28	56.4	1972	4	1980	2	45.5	1998	442	2	.0	.1	26.9	.4	10.8	.0
Apr	74.1	44.7	59.4	98	1972	7	65.5	1972	20	1994	6	53.3	1997	208	40	.0	1.1	29.3	.0	2.4	.0
May	80.8	54.2	67.5	105	2000	23	73.9	1974	30	1976	1	62.8	1995	60	137	.4	4.5	30.9	.0	@	.0
Jun	87.7	62.8	75.3	110	1980	24	80.4	1980	42	1964	1	70.1	1989	10	318	1.6	13.0	30.0	.0	.0	.0
Jul	92.0	67.0	79.5	111+	1980	2	85.2	1980	52	1990	13	76.3	1990	0	450	3.8	21.6	31.0	.0	.0	.0
Aug	90.4	66.0	78.2	106+	1980	2	84.3	1983	51	1966	23	73.7	1992	1	411	1.8	20.0	31.0	.0	.0	.0
Sep	84.2	58.7	71.5	105	1983	6	78.3	1998	30	1985	30	64.8	1974	25	219	.7	9.7	29.9	.0	@	.0
Oct	74.4	47.8	61.1	101	2000	3	66.6	1979	14	1993	31	53.1	1976	160	40	@	.7	30.4	@	1.1	.0
Nov	60.6	35.7	48.2	88+	1980	9	56.7	1999	7	1976	28	40.1	1972	507	2	.0	.0	23.9	.4	11.1	.0
Dec	51.4	27.6	39.5	80	1996	9	45.0	1975	-8	1989	23	26.0	1983	789	0	.0	.0	18.7	2.7	22.5	.5
Ann	72.2	46.3	59.3	111+	Jul 1980	2	85.2	Jul 1980	-8	Dec 1989	23	25.6	Jan 1979	3677	1619	8.3	70.7	318.4	10.0	90.0	1.1

+ 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: 1948-2001

(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: MC LEAN, TX

COOP ID: 415770

Climate Division: TX 1

NWS Call Sign:

Elevation: 2,860 Feet Lat: 35°14N

Lon: 100°36W

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	.69	.66	2.00	1999	29	2.10	1999	.00+	1996	2.6	1.7	.4	.1	.00	.00	.09	.24	.37	.52	.69	.89	1.17	1.60	2.05
Feb	.97	.65	2.28	1985	22	4.21	1985	.00+	1999	3.3	2.4	.5	.2	.00	.00	.15	.32	.50	.70	.93	1.22	1.62	2.26	2.89
Mar	1.91	1.60	3.50	1974	10	6.51	2000	.00+	1997	4.1	3.3	1.2	.5	.00	.00	.40	.77	1.13	1.50	1.92	2.44	3.15	4.24	5.32
Apr	2.47	1.74	7.60	1997	3	14.95	1997	.00	1996	4.9	4.1	1.5	.6	.07	.25	.59	.94	1.33	1.79	2.33	3.02	3.97	5.58	7.17
May	4.24	3.60	4.00	1977	21	14.62	1977	.28	1984	7.5	5.9	3.1	1.2	.55	.89	1.50	2.09	2.71	3.40	4.20	5.19	6.52	8.71	10.82
Jun	3.85	3.19	4.90	1995	3	8.92	1989	.15	1998	6.9	5.8	2.6	1.2	.39	.67	1.20	1.73	2.31	2.97	3.74	4.70	6.01	8.19	10.32
Jul	2.76	2.28	3.60	1993	14	7.65	1996	.16	1974	5.0	4.3	1.9	.9	.44	.67	1.07	1.45	1.85	2.28	2.77	3.37	4.18	5.49	6.74
Aug	2.31	2.58	2.65	1966	23	5.35	1991	.25	2000	5.1	4.2	1.5	.8	.47	.68	1.02	1.33	1.64	1.98	2.35	2.80	3.40	4.36	5.26
Sep	2.88	2.13	5.10	1981	4	7.84	1996	.00+	2000	5.1	4.4	1.9	.9	.00	.00	1.01	1.52	1.99	2.48	3.02	3.67	4.48	5.81	7.07
Oct	2.10	1.42	3.20	1998	31	8.55	1986	.00+	1999	3.9	3.1	1.4	.7	.00	.11	.40	.72	1.07	1.47	1.96	2.57	3.43	4.89	6.34
Nov	1.12	1.06	3.20	1986	4	3.46	1986	.00+	1999	3.0	2.5	.7	.2	.00	.13	.33	.51	.69	.89	1.12	1.39	1.77	2.38	2.97
Dec	.83	.50	1.20	1995	18	3.22	1991	.00+	2000	2.9	2.1	.4	.1	.00	.00	.10	.22	.36	.53	.74	1.01	1.39	2.05	2.70
Ann	26.13	25.57	7.60	Apr 1997	3	14.95	Apr 1997	.00+	Dec 2000	54.3	43.8	17.1	7.4	16.70	18.45	20.73	22.49	24.07	25.62	27.23	29.02	31.22	34.44	37.26

+ 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: 1948-2001

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

Complete documentation available from:
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Station: MC LEAN, TX

COOP ID: 415770

Climate Division: TX 1

NWS Call Sign:

Elevation: 2,860 Feet

Lat: 35° 14N

Lon: 100° 36W

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	2.0	.0	#	0	12.0	1987	18	12.0	1987	3+	1977	9	3	1977	.9	.7	.3	.1	@	.0	.0	.0	.0
Feb	2.0	.0	#	0	12.0	1971	22	12.0	1986	1+	1977	3	#+	1977	.7	.7	.3	.1	@	.2	.0	.0	.0
Mar	.8	.0	#	0	4.5	1976	9	12.0	1988	1	1998	8	#	1998	.2	.2	.2	.0	.0	.1	.0	.0	.0
Apr	.2	.0	0	0	5.0	1973	8	5.0	1973	0	0	0	0	0	.1	.1	@	@	.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	1.2	.0	#	0	5.0	1992	25	10.5	1992	4	1972	18	#	1972	.4	.4	.2	@	.0	.2	.1	.0	.0
Dec	3.7	1.0	#	0	13.5	1987	14	21.5	1987	14	1987	14	2	1987	.9	.8	.4	.2	.1	-9.9	-9.9	-9.9	-9.9
Ann	9.9	1.0	N/A	N/A	13.5	Dec 1987	14	21.5	Dec 1987	14	Dec 1987	14	3	Jan 1977	3.2	2.9	1.4	.4	.1	-9.9	-9.9	-9.9	-9.9

+ 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: MC LEAN, TX

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Climate Division: TX 1

NWS Call Sign:

Elevation: 2,860 Feet

Lat: 35° 14N

Lon: 100° 36W

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	5/05	4/29	4/25	4/21	4/18	4/15	4/11	4/07	4/02
32	4/21	4/17	4/14	4/11	4/09	4/06	4/04	4/01	3/27
28	4/10	4/06	4/02	3/30	3/28	3/25	3/22	3/19	3/14
24	4/05	3/30	3/25	3/21	3/17	3/14	3/10	3/05	2/27
20	3/31	3/23	3/17	3/12	3/08	3/03	2/26	2/20	2/12
16	3/21	3/12	3/06	2/28	2/23	2/18	2/12	2/06	1/28
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	9/30	10/06	10/10	10/14	10/17	10/20	10/24	10/28	11/02
32	10/13	10/18	10/22	10/25	10/28	10/31	11/04	11/07	11/13
28	10/27	10/31	11/04	11/07	11/10	11/12	11/15	11/19	11/24
24	11/04	11/09	11/14	11/17	11/20	11/24	11/27	12/01	12/07
20	11/09	11/16	11/21	11/26	11/30	12/04	12/09	12/14	12/22
16	11/15	11/23	11/29	12/05	12/09	12/14	12/19	12/26	1/03
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	204	196	190	185	181	176	172	166	158
32	221	214	210	205	202	198	194	189	183
28	247	240	235	230	226	222	217	212	205
24	273	264	258	252	247	242	237	230	222
20	296	286	278	272	266	261	255	247	237
16	326	313	304	296	289	281	273	264	251

* 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

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Climate Division: TX 1 NWS Call Sign: Elevation: 2,860 Feet Lat: 35°14N Lon: 100°36W

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	850	625	442	208	60	10	0	1	25	160	507	789	3677
60	696	496	299	115	19	1	0	0	5	72	368	635	2706
57	607	419	223	73	7	0	0	0	1	39	291	547	2207
55	550	370	178	50	4	0	0	0	0	24	244	490	1910
50	409	261	91	17	0	0	0	0	0	6	147	351	1282
32	73	35	1	0	0	0	0	0	0	0	6	46	161

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	246	334	584	822	1100	1298	1473	1432	1184	903	491	279	10146
55	10	25	48	183	390	608	760	719	494	214	38	10	3499
57	5	18	30	145	332	548	698	657	435	167	25	5	3065
60	1	11	14	97	250	460	605	564	349	107	13	1	2472
65	0	0	2	40	137	318	450	411	219	40	2	0	1619
70	0	0	0	12	59	194	297	264	118	9	0	0	953

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	104	181	347	580	850	1069	1240	1199	951	656	285	119	104	285	632	1212	2062	3131	4371	5570	6521	7177	7462	7581
45	46	102	225	437	696	919	1085	1044	801	508	177	59	46	148	373	810	1506	2425	3510	4554	5355	5863	6040	6099
50	16	47	130	303	541	769	930	889	652	360	96	21	16	63	193	496	1037	1806	2736	3625	4277	4637	4733	4754
55	2	13	62	184	391	619	775	734	509	227	41	2	2	15	77	261	652	1271	2046	2780	3289	3516	3557	3559
60	0	2	23	92	247	469	620	579	369	118	11	0	0	2	25	117	364	833	1453	2032	2401	2519	2530	2530
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	92	145	241	375	540	711	824	801	619	412	191	97	92	237	478	853	1393	2104	2928	3729	4348	4760	4951	5048

(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