

Climatology of the United States

No. 20

1971-2000

Station: PLAINS, TX

COOP ID: 417074

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,675 Feet Lat: 33° 11N

Lon: 102° 50W

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	53.1	25.1	39.1	82	2000	18	46.6	1999	-12	1948	29	32.3	1982	802	0	.0	.0	20.3	2.5	27.8	.0
Feb	59.5	29.2	44.4	85+	1979	15	51.1	1976	-12	1951	1	37.7	1978	578	0	.0	.0	22.6	1.5	20.1	.0
Mar	67.2	34.6	50.9	95	1971	28	58.3	1986	4+	1948	12	41.3	1987	442	4	.0	.2	28.5	.2	12.4	.0
Apr	75.1	42.9	59.0	98+	1965	23	63.7+	1978	16	1973	9	52.4	1973	208	28	.0	1.3	29.4	.0	2.9	.0
May	83.4	52.9	68.2	107	2000	25	75.1	1996	25+	1967	3	64.8	1983	54	152	.7	7.4	30.9	.0	.0	.0
Jun	90.4	61.2	75.8	111	1994	26	82.9	1990	42	1970	2	70.5	1986	8	332	3.3	17.0	30.0	.0	.0	.0
Jul	91.7	64.6	78.2	109	1998	12	83.3	1998	50	1952	8	73.4	1976	0	407	3.0	20.9	31.0	.0	.0	.0
Aug	89.9	63.3	76.6	106+	1969	16	80.9	1999	49	1967	30	71.5	1974	2	361	1.1	18.2	31.0	.0	.0	.0
Sep	83.9	56.8	70.4	103	1948	6	76.5	1998	34+	1984	30	62.6	1974	36	197	.2	8.7	29.8	.0	.0	.0
Oct	75.7	45.0	60.4	100	1977	1	63.6	1979	18+	1993	31	54.2	1976	168	25	@	1.5	30.4	@	1.7	.0
Nov	63.2	32.9	48.1	87	1950	1	53.8	1999	-2	1957	23	41.8	1972	508	0	.0	.0	25.6	.3	14.0	.0
Dec	55.3	26.3	40.8	80+	1971	24	45.6	1994	-4	1989	23	33.9	1983	750	0	.0	.0	21.9	2.0	25.8	.1
Ann	74.0	44.6	59.3	111	Jun 1994	26	83.3	Jul 1998	-12+	Feb 1951	1	32.3	Jan 1982	3556	1506	8.3	75.2	331.4	6.5	104.7	.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: 1925-2001

(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: PLAINS, TX

COOP ID: 417074

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,675 Feet Lat: 33°11N

Lon: 102°50W

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	.49	.30	1.30	1980	23	1.70	1991	.00+	1989	2.5	1.3	.3	@	.00	.00	.00	.09	.19	.30	.44	.61	.84	1.25	1.64
Feb	.72	.46	1.77	1961	21	2.88	1973	.00+	1999	2.5	1.8	.4	@	.00	.00	.00	.11	.25	.41	.61	.87	1.24	1.87	2.50
Mar	.60	.36	2.77	1999	18	3.87	1999	.00+	1988	2.1	1.3	.4	.1	.00	.00	.00	.10	.22	.35	.52	.74	1.04	1.56	2.07
Apr	1.15	.60	4.00	1999	30	4.93	1973	.00+	1991	2.5	2.0	.6	.1	.00	.00	.00	.13	.36	.63	.97	1.40	2.01	3.07	4.11
May	2.38	2.60	2.47	1954	18	5.80	1992	.00	1998	5.1	3.9	1.8	.8	.11	.31	.66	1.01	1.39	1.81	2.31	2.93	3.78	5.20	6.59
Jun	2.55	2.46	2.80	1932	26	6.50	2000	.00	1994	4.9	4.2	2.0	.8	.09	.28	.64	1.00	1.41	1.87	2.42	3.12	4.08	5.69	7.27
Jul	2.34	2.00	6.11	1960	5	6.89	1982	.00	1980	4.9	3.8	1.8	.6	.20	.46	.84	1.18	1.53	1.92	2.35	2.89	3.60	4.76	5.88
Aug	2.75	2.42	5.40	1966	22	10.12	1974	.00	1982	6.1	4.5	1.9	.8	.17	.44	.87	1.27	1.70	2.17	2.71	3.39	4.30	5.80	7.25
Sep	2.67	2.42	5.55	1958	26	8.62	1995	.00+	2000	5.2	3.9	1.7	.7	.00	.00	.54	1.06	1.56	2.09	2.68	3.42	4.41	5.97	7.50
Oct	1.24	.70	6.00	1955	2	4.99	1985	.00+	1995	3.4	2.5	.9	.2	.00	.00	.13	.30	.51	.76	1.08	1.49	2.07	3.09	4.12
Nov	.75	.46	1.70	1978	4	2.55	1986	.00+	1999	2.4	2.0	.4	.2	.00	.00	.00	.10	.30	.50	.72	.98	1.33	1.92	2.47
Dec	.77	.37	2.00	1982	10	3.23	1987	.00+	2000	2.5	1.6	.6	.2	.00	.00	.00	.03	.16	.33	.57	.88	1.34	2.16	2.98
Ann	18.41	17.62	6.11	Jul 1960	5	10.12	Aug 1974	.00+	Dec 2000	44.1	32.8	12.8	4.5	10.18	11.62	13.54	15.06	16.44	17.81	19.25	20.88	22.89	25.89	28.55

+ 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: 1925-2001

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

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

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: PLAINS, TX

COOP ID: 417074

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,675 Feet

Lat: 33° 11N

Lon: 102° 50W

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	1.8	.0	#	0	10.0	1983	1	10.0	1983	1	1972	5	#+	1973	.8	.5	.1	.1	.1	.1	.0	.0	.0
Feb	1.4	.0	#	0	6.0	1987	10	9.0	1973	4	1973	22	1	1973	.6	.5	.2	@	.0	.0	.0	.0	.0
Mar	.4	.0	#	0	4.0	1972	31	4.0	1972	3	1989	21	#+	1998	.2	.1	.1	.0	.0	.1	.1	.0	.0
Apr	#	.0	0	0	#	1980	12	#	1980	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	#	1993	30	#+	1993	#	1991	31	#	1991	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	1.5	.0	#	0	10.0	1980	25	22.0	1980	8	1976	13	#+	1995	.2	.2	.2	.1	@	.1	.1	.1	.0
Dec	1.1	.0	#	0	8.5	1986	22	9.4	1971	5	1971	5	1	1971	.4	.3	.2	.1	.0	.2	.2	.1	.0
Ann	6.2	.0	N/A	N/A	10.0+	Jan 1983	1	22.0	Nov 1980	8	Nov 1976	13	1+	Feb 1973	2.2	1.6	.8	.3	.1	.5	.4	.2	.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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: PLAINS, TX

COOP ID: 417074

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,675 Feet

Lat: 33° 11N

Lon: 102° 50W

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	5/06	4/30	4/26	4/23	4/20	4/16	4/13	4/09	4/03
32	4/26	4/19	4/14	4/09	4/05	4/01	3/28	3/22	3/15
28	4/17	4/10	4/05	4/01	3/28	3/24	3/20	3/15	3/08
24	4/07	3/31	3/25	3/21	3/17	3/12	3/08	3/02	2/23
20	3/31	3/21	3/14	3/08	3/03	2/25	2/19	2/12	2/03
16	3/20	3/08	2/28	2/21	2/15	2/08	2/01	1/23	1/10
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	10/01	10/06	10/09	10/13	10/16	10/19	10/22	10/25	10/31
32	10/14	10/19	10/23	10/26	10/29	11/01	11/04	11/08	11/14
28	10/23	10/29	11/02	11/05	11/09	11/12	11/15	11/19	11/25
24	11/01	11/06	11/11	11/14	11/17	11/21	11/24	11/28	12/04
20	11/05	11/12	11/18	11/22	11/27	12/01	12/05	12/11	12/18
16	11/18	11/26	12/02	12/07	12/12	12/16	12/22	12/28	1/06
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	199	192	187	182	178	174	170	165	158
32	232	223	217	211	206	201	196	190	181
28	250	242	235	230	225	220	214	208	199
24	276	265	257	251	245	239	233	225	214
20	302	290	282	275	268	261	254	246	234
16	362	336	322	310	300	291	280	268	252

* 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:

www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

**Climatography
of the United States
No. 20
1971-2000**

Station: PLAINS, TX

COOP ID: 417074

Climate Division: TX 1 NWS Call Sign: Elevation: 3,675 Feet Lat: 33° 11N Lon: 102° 50W

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	802	578	442	208	54	8	0	2	36	168	508	750	3556
60	647	438	301	110	16	0	0	0	10	70	366	595	2553
57	554	359	226	68	6	0	0	0	4	36	287	502	2042
55	496	307	182	46	3	0	0	0	0	21	239	441	1735
50	353	191	95	13	0	0	0	0	0	4	138	296	1090
32	35	6	0	0	0	0	0	0	0	0	3	12	56

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	256	352	584	810	1121	1314	1430	1382	1151	879	486	286	10051
55	4	10	53	165	411	624	717	669	461	187	31	1	3333
57	0	5	35	127	352	564	655	607	404	140	19	0	2908
60	0	1	17	80	269	474	562	514	320	82	9	0	2328
65	0	0	4	28	152	332	407	361	197	25	0	0	1506
70	0	0	0	6	70	203	260	218	105	4	0	0	866

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	96	183	363	567	862	1065	1175	1131	906	628	280	125	96	279	642	1209	2071	3136	4311	5442	6348	6976	7256	7381
45	39	98	231	422	707	915	1020	976	756	476	169	56	39	137	368	790	1497	2412	3432	4408	5164	5640	5809	5865
50	9	42	121	287	553	765	865	821	607	329	86	16	9	51	172	459	1012	1777	2642	3463	4070	4399	4485	4501
55	1	13	51	170	401	615	710	666	466	202	28	0	1	14	65	235	636	1251	1961	2627	3093	3295	3323	3323
60	0	0	11	81	259	465	555	511	320	96	3	0	0	0	11	92	351	816	1371	1882	2202	2298	2301	2301
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	117	177	287	388	543	678	763	737	586	411	226	139	117	294	581	969	1512	2190	2953	3690	4276	4687	4913	5052

(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