

Climatology of the United States

No. 20

1971-2000

Station: JUNCTION 4 SSW, TX

COOP ID: 414670

Climate Division: TX 7

NWS Call Sign:

Elevation: 1,747 Feet Lat: 30° 27N

Lon: 99° 48W

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	61.0	29.3	45.2	90	1943	23	50.6	1989	-4	1949	31	39.3	1977	616	0	.0	.0	26.0	.5	18.5	.0
Feb	65.8	34.1	50.0	98	1917	26	56.5	1976	-5	1951	2	41.5	1978	423	1	.0	.3	25.8	.5	11.6	.0
Mar	73.1	41.8	57.5	100	1946	30	64.3	1974	5	1932	13	52.2	1987	252	16	.0	1.1	30.3	.0	5.8	.0
Apr	79.5	50.5	65.0	104	1925	18	71.7	1986	21	1971	7	58.8	1997	83	84	.1	4.2	30.0	.0	1.5	.0
May	85.9	59.6	72.8	110	1984	7	78.4	1996	31	1979	12	68.3	1976	13	253	.8	11.3	31.0	.0	@	.0
Jun	91.6	66.5	79.1	110	1980	27	86.8	1980	38	1919	3	75.6	1973	0	421	2.5	20.9	30.0	.0	.0	.0
Jul	94.8	68.4	81.6	109+	1980	2	87.3	1980	54+	1947	20	76.1	1976	0	515	6.0	27.6	31.0	.0	.0	.0
Aug	94.4	67.1	80.8	110	1936	11	83.9	1980	44	1915	31	75.5	1971	0	488	3.8	26.9	31.0	.0	.0	.0
Sep	88.8	61.9	75.4	108	1953	27	81.0	1977	32	1942	27	68.0	1974	4	315	1.1	16.1	30.0	.0	.0	.0
Oct	80.2	51.3	65.8	104	1951	3	69.4	1983	21	1993	31	57.2	1976	69	93	.0	3.8	30.8	.0	1.0	.0
Nov	69.2	39.2	54.2	92+	1988	7	59.4	1973	9	1911	29	47.5	1976	332	7	.0	@	28.9	.1	7.9	.0
Dec	62.1	31.4	46.8	91+	1955	24	55.2	1984	-11	1929	22	38.9	1983	565	0	.0	.0	27.3	.4	16.0	@
Ann	78.9	50.1	64.5	110+	May 1984	7	87.3	Jul 1980	-11	Dec 1929	22	38.9	Dec 1983	2357	2193	14.3	112.2	352.1	1.5	62.3	@

+ 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: 1897-2001

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

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No. 20 1971-2000

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

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COOP ID: 414670

Climate Division: TX 7

NWS Call Sign:

Elevation: 1,747 Feet Lat: 30°27N

Lon: 99°48W

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	.77	.65	1.85	1902	14	2.44	1985	.00+	1990	3.6	1.9	.4	.1	.00	.00	.14	.27	.40	.55	.73	.96	1.26	1.78	2.28
Feb	1.43	1.16	2.00	1990	21	4.33	1992	.01	1999	3.6	2.8	1.1	.4	.09	.18	.36	.55	.77	1.03	1.34	1.74	2.29	3.22	4.15
Mar	1.42	1.27	2.58	1997	10	5.42	1997	.04	1991	3.9	2.8	1.0	.4	.12	.22	.41	.60	.82	1.07	1.36	1.73	2.24	3.10	3.94
Apr	1.95	1.54	4.50	1918	15	5.17	1990	.30	1983	3.7	2.9	1.3	.6	.30	.47	.75	1.02	1.30	1.60	1.95	2.38	2.95	3.88	4.77
May	3.23	3.13	4.85	1914	21	8.18	1975	.49	1998	5.2	4.1	2.0	.8	.85	1.16	1.63	2.04	2.44	2.87	3.34	3.90	4.63	5.78	6.85
Jun	3.10	2.54	6.00	1935	14	9.55	1997	.00	1990	5.0	4.4	1.9	1.0	.49	.90	1.43	1.86	2.28	2.73	3.22	3.81	4.58	5.79	6.93
Jul	1.55	1.57	4.44	1907	12	5.40	1973	.00+	1997	3.4	2.7	1.1	.7	.00	.08	.30	.53	.79	1.09	1.45	1.90	2.54	3.61	4.68
Aug	2.20	1.21	3.67	1974	30	13.70	1974	.00	1999	4.0	3.2	1.7	.7	.03	.14	.39	.69	1.04	1.46	1.97	2.65	3.61	5.26	6.92
Sep	2.28	1.88	6.10	1980	8	10.54	1980	.00	1979	4.7	3.2	1.4	.6	.09	.27	.59	.93	1.29	1.70	2.19	2.80	3.64	5.05	6.44
Oct	2.68	2.14	5.81	1957	14	8.11	1973	.00+	1993	4.1	3.2	1.8	.8	.00	.00	.43	.86	1.32	1.86	2.51	3.32	4.44	6.34	8.23
Nov	1.37	.93	4.75	2000	3	9.50	2000	.00+	1999	3.4	2.5	1.0	.3	.00	.11	.34	.55	.78	1.04	1.34	1.70	2.21	3.05	3.88
Dec	1.26	.91	5.75	1984	31	6.73	1984	.00+	1988	2.8	2.2	.7	.3	.00	.00	.16	.38	.61	.87	1.18	1.58	2.12	3.02	3.92
Ann	23.24	23.59	6.10	Sep 1980	8	13.70	Aug 1974	.00+	Nov 1999	47.4	35.9	15.4	6.7	14.23	15.88	18.04	19.72	21.24	22.72	24.28	26.02	28.16	31.31	34.08

+ 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: 1897-2001

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Climate Division: TX 7

NWS Call Sign:

Elevation: 1,747 Feet

Lat: 30°27N

Lon: 99°48W

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	1.6	.0	#	0	13.5	1973	25	13.7	1985	10	1985	13	#	1985	.3	.2	.2	.1	.1	.1	@	@	@
Feb	.6	.0	#	0	5.5	1973	8	10.7	1973	1	1985	2	#	1985	.2	.2	.1	.1	.0	@	.0	.0	.0
Mar	#	.0	0	0	#	1974	24	#	1974	0	0	0	0	0	.0	.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	#	1998	.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	0	5.0	1996	24	5.0	1996	0	0	0	0	0	.1	.1	.1	.1	.0	.0	.0	.0	.0
Dec	#	.0	0	0	#	1990	21	#+	1990	#	1982	27	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	2.5	.0	N/A	N/A	13.5	Jan 1973	25	13.7	Jan 1985	10	Jan 1985	13	#+	May 1998	.6	.5	.4	.3	.1	.1	.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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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	5/03	4/27	4/22	4/18	4/14	4/10	4/06	4/02	3/26
32	4/25	4/17	4/12	4/07	4/02	3/29	3/24	3/18	3/10
28	4/11	4/03	3/28	3/23	3/19	3/14	3/09	3/03	2/24
24	3/26	3/18	3/12	3/07	3/02	2/26	2/21	2/15	2/07
20	3/08	2/28	2/22	2/17	2/12	2/07	2/02	1/27	1/17
16	2/24	2/13	2/05	1/30	1/23	1/16	1/06	12/21	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	10/02	10/09	10/14	10/18	10/22	10/26	10/30	11/04	11/10
32	10/15	10/21	10/25	10/29	11/01	11/05	11/08	11/12	11/18
28	10/25	10/31	11/05	11/08	11/12	11/15	11/18	11/23	11/29
24	10/31	11/08	11/13	11/18	11/23	11/28	12/03	12/08	12/16
20	11/15	11/25	12/02	12/08	12/13	12/19	12/25	1/02	1/14
16	11/27	12/07	12/14	12/21	12/27	1/04	1/13	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	217	208	201	195	190	185	179	172	163
32	239	230	223	217	212	207	201	194	185
28	267	257	249	243	237	231	225	218	208
24	298	287	278	271	265	258	251	243	232
20	340	324	316	309	303	298	292	285	275
16	>365	>365	>365	359	339	328	318	308	295

* 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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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	616	423	252	83	13	0	0	0	4	69	332	565	2357
60	462	292	137	27	2	0	0	0	0	21	205	417	1563
57	377	220	87	11	0	0	0	0	0	8	144	332	1179
55	320	177	60	6	0	0	0	0	0	4	110	278	955
50	196	93	19	0	0	0	0	0	0	0	48	166	522
32	6	0	0	0	0	0	0	0	0	0	0	4	10

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	414	501	788	991	1263	1411	1538	1511	1301	1047	666	461	11892
55	14	35	135	306	550	721	825	798	611	337	85	23	4440
57	9	21	99	252	488	661	763	736	551	279	59	14	3932
60	2	10	57	178	397	571	670	643	461	200	31	6	3226
65	0	1	16	84	253	421	515	488	315	93	7	0	2193
70	0	0	2	28	135	276	360	334	185	31	0	0	1351

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	260	361	594	779	1045	1182	1308	1278	1081	828	472	289	260	621	1215	1994	3039	4221	5529	6807	7888	8716	9188	9477
45	152	239	445	629	890	1032	1153	1123	931	674	330	169	152	391	836	1465	2355	3387	4540	5663	6594	7268	7598	7767
50	75	140	306	484	735	882	998	968	781	520	209	87	75	215	521	1005	1740	2622	3620	4588	5369	5889	6098	6185
55	31	69	188	343	580	732	843	813	631	375	120	38	31	100	288	631	1211	1943	2786	3599	4230	4605	4725	4763
60	4	28	98	216	427	582	688	658	481	237	54	7	4	32	130	346	773	1355	2043	2701	3182	3419	3473	3480
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	220	275	411	519	696	789	851	831	718	554	331	230	220	495	906	1425	2121	2910	3761	4592	5310	5864	6195	6425

(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