

Climatology of the United States

No. 20

1971-2000

Station: CHANNING 2, TX

COOP ID: 411649

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,790 Feet Lat: 35°41N

Lon: 102°20W

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	47.5	20.0	33.8	77	1972	24	40.6	1986	-9	1979	2	25.4	1979	969	0	.0	.0	16.0	4.0	29.3	.5
Feb	52.8	23.9	38.4	82+	1981	20	45.2	2000	-2	1996	3	28.4	1978	746	0	.0	.0	15.9	2.8	23.6	.5
Mar	60.9	30.2	45.6	92	1971	28	50.5	1974	1	1996	7	41.3	1998	604	0	.0	.1	26.4	.7	16.8	.0
Apr	68.6	39.0	53.8	92+	1981	27	60.7	1981	17	1997	12	46.9	1973	346	10	.0	.5	28.4	.1	5.6	.0
May	77.9	49.3	63.6	101	1996	17	69.9	1996	29	1979	4	59.3	1995	118	75	.1	3.6	30.8	.0	.1	.0
Jun	87.3	58.9	73.1	108+	1981	21	78.8	1980	42	1970	4	67.9+	1989	16	259	2.7	13.6	30.0	.0	.0	.0
Jul	90.9	64.1	77.5	106+	1994	3	83.5	1980	52+	1995	5	73.5	1972	0	388	2.1	14.8	31.0	.0	.0	.0
Aug	88.5	62.7	75.6	103+	1994	19	81.4	2000	50	1972	25	70.2	1974	5	334	.7	16.1	31.0	.0	.0	.0
Sep	81.1	54.5	67.8	103	1995	6	74.8	1998	31	2000	25	60.0	1974	58	142	.3	6.7	29.7	.0	.2	.0
Oct	71.4	42.2	56.8	96+	1994	1	61.9	1978	22	1997	26	50.6	1976	266	11	.0	.7	30.1	.1	2.8	.0
Nov	57.7	29.8	43.8	87	1980	8	51.2	1999	8	1980	26	35.0	1972	638	0	.0	.0	22.5	.8	16.9	.1
Dec	48.6	21.5	35.1	76+	1973	3	40.8	1994	-3+	1996	18	24.5	1983	929	0	.0	.0	16.7	3.2	28.1	.9
Ann	69.4	41.3	55.4	108+	Jun 1981	21	83.5	Jul 1980	-9	Jan 1979	2	24.5	Dec 1983	4695	1219	5.9	56.1	308.5	11.7	123.4	2.0

+ 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: 1967-2001

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

059-A

Climatology 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: CHANNING 2, TX

COOP ID: 411649

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,790 Feet Lat: 35°41N

Lon: 102°20W

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	.35	.32	.89	1999	30	.96	1999	.00+	1998	3.9	1.4	.2	.0	.00	.00	.09	.16	.22	.29	.36	.45	.57	.75	.93
Feb	.45	.32	.58	1971	22	1.25	1978	.00+	1999	2.8	1.3	.2	.0	.00	.00	.00	.12	.22	.32	.43	.57	.77	1.09	1.39
Mar	.76	.34	2.25	1999	19	4.26	2000	.00+	1997	3.9	2.3	.5	.3	.00	.00	.04	.14	.27	.43	.63	.90	1.30	1.98	2.69
Apr	1.10	.70	2.17	1999	14	4.63	1997	.00+	1996	4.3	2.6	.7	.1	.00	.07	.24	.41	.59	.80	1.05	1.36	1.78	2.50	3.20
May	1.88	1.67	1.62	1967	27	4.75	1978	.30	1998	6.4	4.9	1.6	.6	.53	.71	.98	1.22	1.45	1.69	1.95	2.27	2.67	3.31	3.90
Jun	2.30	2.29	2.20	2000	28	4.83	1982	.31	1998	7.5	4.9	1.6	.5	.63	.85	1.18	1.47	1.75	2.05	2.38	2.77	3.27	4.06	4.80
Jul	2.59	2.26	2.12	1982	30	7.82	1972	.17	1987	6.0	4.1	1.4	.6	.47	.70	1.08	1.43	1.79	2.18	2.62	3.16	3.88	5.03	6.13
Aug	3.50	3.32	2.26	1977	21	9.48	1981	.61	1983	9.8	6.5	1.9	.9	1.05	1.38	1.88	2.31	2.73	3.16	3.64	4.20	4.92	6.06	7.11
Sep	1.66	1.41	2.30	1969	18	7.07	1976	.00+	2000	4.0	2.4	.8	.3	.00	.21	.53	.79	1.06	1.35	1.69	2.08	2.62	3.49	4.33
Oct	1.33	.72	3.05	1998	31	5.95	1998	.00+	1977	3.8	2.0	.8	.3	.00	.07	.27	.47	.69	.94	1.25	1.63	2.16	3.06	3.95
Nov	.61	.49	1.60	2001	16	2.25	1972	.00+	1999	2.3	1.4	.2	@	.00	.00	.11	.21	.32	.44	.58	.76	1.00	1.41	1.81
Dec	.67	.26	3.80	1997	24	9.06	1997	.00+	1979	2.0	1.5	.5	.1	.00	.00	.04	.11	.21	.34	.52	.76	1.12	1.77	2.44
Ann	17.20	16.57	3.80	Dec 1997	24	9.48	Aug 1981	.00+	Sep 2000	56.7	35.3	10.4	3.7	10.94	12.10	13.61	14.78	15.83	16.85	17.92	19.12	20.58	22.72	24.60

+ 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: 1967-2001

(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

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

Station: CHANNING 2, TX

COOP ID: 411649

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,790 Feet

Lat: 35°41N

Lon: 102°20W

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	1.2	.6	#	#	8.5	1999	30	8.5	1999	6	1997	14	1	1997	.9	.5	.2	.1	.0	.9	.3	.0	.0
Feb	1.4	.0	#	0	6.0	1971	22	10.5	1971	6	1971	22	#+	1999	.6	.5	.1	.1	.0	.6	.2	.1	.0
Mar	.6	.0	#	0	4.7	1994	8	6.3	1999	4	1994	9	#+	2000	.4	.3	.2	.0	.0	.4	.1	.0	.0
Apr	.0	.0	#	0	.5	1977	4	.5	1977	#+	1997	26	#+	1997	.1	.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	.1	.0	#	0	1.7	1996	22	1.7	1996	#	1997	25	#	1997	.1	.1	.0	.0	.0	.0	.0	.0	.0
Nov	1.4	.0	#	0	4.0	2000	8	14.7	1972	7	1972	21	1	1972	.4	.4	.2	.0	.0	.8	.7	.2	.0
Dec	1.7	.0	#	0	9.5	2000	27	9.5	2000	13	2000	27	2	2000	.9	.8	.5	.2	.0	1.8	1.0	.5	.1
Ann	6.4	.6	N/A	N/A	9.5	Dec 2000	27	14.7	Nov 1972	13	Dec 2000	27	2	Dec 2000	3.4	2.6	1.2	.4	.0	4.5	2.3	.8	.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:

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

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No. 20 1971-2000

Station: CHANNING 2, TX

COOP ID: 411649

Climate Division: TX 1

NWS Call Sign:

Elevation: 3,790 Feet

Lat: 35° 41N

Lon: 102° 20W

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	5/11	5/06	5/03	5/01	4/28	4/26	4/23	4/20	4/16
32	5/01	4/27	4/24	4/22	4/19	4/17	4/15	4/12	4/08
28	4/19	4/15	4/12	4/09	4/07	4/04	4/02	3/30	3/26
24	4/09	4/03	3/30	3/27	3/24	3/21	3/17	3/13	3/08
20	4/03	3/27	3/21	3/17	3/13	3/09	3/04	2/27	2/20
16	3/26	3/17	3/11	3/06	3/01	2/24	2/19	2/13	2/04
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	9/29	10/04	10/07	10/10	10/12	10/15	10/18	10/21	10/26
32	10/02	10/08	10/12	10/15	10/19	10/22	10/26	10/30	11/05
28	10/18	10/23	10/26	10/29	11/01	11/04	11/07	11/11	11/16
24	10/28	11/01	11/05	11/07	11/10	11/13	11/16	11/19	11/23
20	11/05	11/11	11/15	11/18	11/21	11/24	11/27	12/01	12/06
16	11/11	11/19	11/24	11/29	12/03	12/07	12/12	12/17	12/25
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	184	178	173	170	166	163	159	155	149
32	200	194	189	185	182	178	174	170	164
28	224	219	214	211	208	204	201	197	191
24	251	244	239	235	231	227	222	217	210
20	278	269	263	257	252	247	242	235	226
16	305	295	288	282	276	270	264	257	247

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

Station: CHANNING 2, TX

COOP ID: 411649

Climate Division: TX 1 NWS Call Sign: Elevation: 3,790 Feet Lat: 35°41N Lon: 102°20W

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	969	746	604	346	118	16	0	5	58	266	638	929	4695
60	814	606	449	220	49	3	0	0	18	145	492	774	3570
57	721	522	359	158	25	0	0	0	7	91	409	681	2973
55	659	470	302	122	14	0	0	0	3	64	355	619	2608
50	506	341	172	54	3	0	0	0	0	21	235	468	1800
32	89	44	2	0	0	0	0	0	0	0	18	72	225

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	143	222	421	654	980	1233	1411	1352	1074	769	370	166	8795
55	0	4	8	86	281	543	698	639	387	119	17	0	2782
57	0	0	3	61	230	483	636	577	331	84	10	0	2415
60	0	0	1	34	161	396	543	484	251	46	4	0	1920
65	0	0	0	10	75	259	388	334	142	11	0	0	1219
70	0	0	0	2	26	146	239	197	66	1	0	0	677

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	55	107	260	463	766	1023	1115	1122	864	556	214	69	55	162	422	885	1651	2674	3789	4911	5775	6331	6545	6614
45	19	52	151	330	612	873	960	967	716	409	125	28	19	71	222	552	1164	2037	2997	3964	4680	5089	5214	5242
50	0	21	75	208	459	723	805	812	570	271	56	4	0	21	96	304	763	1486	2291	3103	3673	3944	4000	4004
55	0	3	27	110	317	573	650	657	425	156	15	0	0	3	30	140	457	1030	1680	2337	2762	2918	2933	2933
60	0	0	1	44	185	424	495	502	292	71	1	0	0	0	1	45	230	654	1149	1651	1943	2014	2015	2015
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	77	108	217	321	481	652	734	745	559	365	166	84	77	185	402	723	1204	1856	2590	3335	3894	4259	4425	4509

(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