

Climatology of the United States

No. 20

1971-2000

Station: KAUFMAN 3 SE, TX

COOP ID: 414705

Climate Division: TX 3

NWS Call Sign:

Elevation: 420 Feet Lat: 32°34N Lon: 96°16W

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	54.0	32.3	43.2	91	1911	31	49.6	1990	-3	1940	23	33.5	1978	679	0	.0	.0	19.9	1.5	15.4	.0
Feb	59.4	36.7	48.1	96	1996	22	55.0	1976	-1	1949	1	37.1	1978	478	4	.0	.1	22.1	1.0	9.3	.0
Mar	67.0	44.4	55.7	93+	1971	29	61.2	1974	11	1943	3	51.0	1975	297	8	.0	.1	29.3	.1	3.0	.0
Apr	74.3	51.6	63.0	100	1963	11	68.9	1981	28	1989	11	58.6	1983	115	54	.0	.5	29.9	.0	.4	.0
May	81.5	61.1	71.3	104	1928	27	77.7	1996	37+	1954	5	66.7	1976	20	216	.0	3.1	31.0	.0	.0	.0
Jun	89.2	68.6	78.9	108	1936	21	84.0	1998	47	1903	1	74.6	1983	0	416	.9	16.7	30.0	.0	.0	.0
Jul	94.6	72.3	83.5	112	1978	16	89.5	1998	56	1972	6	79.2	1976	0	571	4.8	27.4	31.0	.0	.0	.0
Aug	95.1	71.4	83.3	113	1936	10	86.4	1980	54	1992	28	78.5	1992	0	566	7.0	27.2	31.0	.0	.0	.0
Sep	88.4	65.0	76.7	110	2000	5	82.5	1998	38+	1942	29	69.1	1974	4	354	1.5	16.0	30.0	.0	.0	.0
Oct	78.4	53.6	66.0	102	1938	1	68.7	1991	21	1993	31	58.1	1976	67	98	.0	2.9	30.9	.0	.3	.0
Nov	65.6	42.9	54.3	90+	1955	2	60.0	1973	14+	1976	29	47.0	1976	336	13	.0	.0	27.4	.0	4.3	.0
Dec	56.6	34.6	45.6	88+	1955	25	52.8	1984	-3	1989	23	34.6	1983	603	1	.0	.0	23.4	.9	12.5	.1
Ann	75.3	52.9	64.1	113	Aug 1936	10	89.5	Jul 1998	-3+	Dec 1989	23	33.5	Jan 1978	2599	2301	14.2	94.0	335.9	3.5	45.2	.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: 1900-2001

(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: KAUFMAN 3 SE, TX

COOP ID: 414705

Climate Division: TX 3

NWS Call Sign:

Elevation: 420 Feet Lat: 32°34N

Lon: 96°16W

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	2.74	2.39	4.10	1990	19	8.77	1990	.19	1976	5.7	4.5	1.9	.7	.27	.47	.84	1.22	1.64	2.11	2.66	3.35	4.29	5.86	7.39
Feb	3.04	3.21	3.50	1907	28	6.89	1997	.00	1996	5.7	4.7	2.2	1.1	.18	.47	.94	1.39	1.86	2.38	2.99	3.75	4.77	6.45	8.08
Mar	3.37	3.24	4.05	1945	28	7.23	1990	.59	1986	6.4	5.0	2.5	1.3	.83	1.14	1.63	2.07	2.50	2.96	3.47	4.08	4.87	6.13	7.32
Apr	3.06	2.59	5.01	1973	24	9.15	1973	.05	1983	5.8	4.5	2.0	1.1	.35	.59	1.02	1.45	1.90	2.41	3.00	3.74	4.74	6.39	8.00
May	4.45	4.11	5.73	1932	16	10.83	1990	.49	1998	6.9	5.5	3.1	1.8	.70	1.07	1.72	2.33	2.97	3.66	4.46	5.43	6.73	8.84	10.87
Jun	3.31	2.47	6.00	1943	6	9.61	1981	.95	1978	5.8	4.7	2.4	1.1	.75	1.06	1.54	1.98	2.41	2.87	3.39	4.02	4.83	6.13	7.36
Jul	2.12	1.64	12.75	1962	27	9.64	1971	.21	1993	4.0	3.0	1.4	.6	.18	.32	.60	.89	1.21	1.58	2.03	2.58	3.35	4.63	5.89
Aug	1.98	1.30	13.66	1908	23	6.33	1986	.00+	2000	3.8	3.3	1.1	.5	.00	.07	.30	.58	.91	1.29	1.77	2.39	3.27	4.78	6.29
Sep	2.77	2.71	12.90	1936	27	6.64+	1986	.20	1997	4.8	4.0	1.8	.9	.57	.83	1.23	1.60	1.98	2.38	2.83	3.37	4.08	5.23	6.31
Oct	4.81	3.95	7.72	1985	19	11.84	1993	.07	1995	5.5	4.8	2.8	1.7	.39	.71	1.34	2.00	2.74	3.58	4.58	5.85	7.60	10.53	13.42
Nov	3.80	3.60	6.82	1918	8	7.34	1998	.18	1999	5.4	4.3	2.7	1.2	.60	.92	1.48	2.00	2.54	3.14	3.82	4.65	5.76	7.56	9.29
Dec	3.45	2.84	7.53	1913	3	10.96	1971	.22	1981	5.2	4.1	2.4	1.3	.66	.97	1.47	1.94	2.41	2.92	3.50	4.20	5.13	6.61	8.03
Ann	38.90	39.90	13.66	Aug 1908	23	11.84	Oct 1993	.00+	Aug 2000	65.0	52.4	26.3	13.3	25.47	27.99	31.25	33.77	36.02	38.21	40.49	43.03	46.13	50.67	54.63

+ 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: 1900-2001

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

Complete documentation available from:
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Station: KAUFMAN 3 SE, TX

COOP ID: 414705

Climate Division: TX 3

NWS Call Sign:

Elevation: 420 Feet

Lat: 32°34N

Lon: 96°16W

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	.5	.0	#	0	4.5	1977	31	4.5	1977	#	1988	11	#	1988	.2	.2	.1	.0	.0	.0	.0	.0	.0
Feb	.4	.0	#	0	2.5	1978	7	4.0	1978	1	1988	11	#+	1994	.2	.2	.0	.0	.0	.1	.0	.0	.0
Mar	#	.0	#	0	#	1987	30	#+	1987	#	1971	3	#	1971	.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	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	.2	.0	#	0	2.0	1976	13	2.0	1976	2	1976	13	#+	1993	.1	.1	.0	.0	.0	.1	.0	.0	.0
Dec	.5	.0	0	0	8.0	1983	17	8.0	1983	0	0	0	0	0	.1	.1	.1	.1	.0	.0	.0	.0	.0
Ann	1.6	.0	N/A	N/A	8.0	Dec 1983	17	8.0	Dec 1983	2	Nov 1976	13	#+	Feb 1994	.6	.6	.2	.1	.0	.2	.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

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Climate Division: TX 3

NWS Call Sign:

Elevation: 420 Feet

Lat: 32°34N

Lon: 96°16W

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	4/17	4/12	4/09	4/06	4/03	3/31	3/28	3/25	3/20
32	4/08	4/01	3/27	3/23	3/19	3/15	3/11	3/06	2/27
28	3/27	3/18	3/12	3/06	3/01	2/24	2/19	2/13	2/04
24	3/09	3/01	2/24	2/19	2/14	2/10	2/05	1/30	1/23
20	2/26	2/16	2/09	2/03	1/28	1/22	1/15	1/03	0/00
16	2/19	2/08	1/31	1/23	1/15	1/06	12/19	0/00	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	10/20	10/27	10/31	11/04	11/07	11/11	11/15	11/19	11/26
32	10/25	11/01	11/06	11/10	11/14	11/18	11/22	11/27	12/04
28	11/02	11/10	11/15	11/20	11/24	11/28	12/03	12/08	12/16
24	11/14	11/24	12/01	12/08	12/14	12/19	12/26	1/02	1/12
20	12/02	12/10	12/16	12/21	12/26	1/01	1/07	1/17	0/00
16	12/12	12/23	12/31	1/07	1/15	1/26	0/00	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	242	233	227	222	218	213	208	202	194
32	271	260	252	246	240	233	227	219	208
28	302	290	281	274	267	260	253	244	232
24	336	322	313	306	299	293	286	278	267
20	>365	>365	>365	346	333	323	315	305	292
16	>365	>365	>365	>365	>365	357	340	326	311

* 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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Climate Division: TX 3 NWS Call Sign: Elevation: 420 Feet Lat: 32°34N Lon: 96°16W

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	679	478	297	115	20	0	0	0	4	67	336	603	2599
60	532	349	170	43	4	0	0	0	0	21	214	457	1790
57	445	278	112	19	1	0	0	0	0	8	156	372	1391
55	390	235	81	10	0	0	0	0	0	4	123	319	1162
50	266	147	29	1	0	0	0	0	0	0	60	205	708
32	24	7	0	0	0	0	0	0	0	0	0	12	43

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	369	457	734	929	1219	1406	1594	1589	1340	1054	668	433	11792
55	21	41	101	249	506	716	881	876	650	345	100	27	4513
57	15	28	71	198	444	656	819	814	590	287	73	18	4013
60	8	15	35	132	354	566	726	721	500	207	42	10	3316
65	0	4	8	54	216	416	571	566	354	98	13	1	2301
70	0	0	0	14	107	270	416	411	221	33	2	0	1474

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	201	300	516	717	998	1188	1362	1360	1122	830	465	252	201	501	1017	1734	2732	3920	5282	6642	7764	8594	9059	9311
45	112	196	374	568	843	1038	1207	1205	972	675	330	150	112	308	682	1250	2093	3131	4338	5543	6515	7190	7520	7670
50	53	111	248	424	688	888	1052	1050	822	523	216	77	53	164	412	836	1524	2412	3464	4514	5336	5859	6075	6152
55	20	55	142	281	533	738	897	895	672	377	124	34	20	75	217	498	1031	1769	2666	3561	4233	4610	4734	4768
60	0	20	67	162	379	588	742	740	526	246	59	13	0	20	87	249	628	1216	1958	2698	3224	3470	3529	3542
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	133	196	317	453	679	819	913	897	751	541	284	162	133	329	646	1099	1778	2597	3510	4407	5158	5699	5983	6145

(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