U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

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: RAYMONDVILLE, TX **COOP ID: 417458**

Climate Division: TX10 **NWS Call Sign:** **Elevation: 31 Feet** **Lat: 26˚29N** **Lon: 97˚49W**

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	68.6	47.5	58.1	92+	1972	24	64.9	2000	14+	1962	13	51.4+	1978	270	54	.0	.2	28.5	.0	1.9	.0
Feb	72.6	50.2	61.4	99	1940	28	68.7	2000	19	1951	3	52.7	1978	157	56	.0	.9	27.1	@	1.3	.0
Mar	79.6	56.9	68.3	105	1945	24	73.2	2000	21	1917	5	62.2	1987	43	143	.3	4.0	30.9	.0	.2	.0
Apr	84.4	62.7	73.6	106+	1984	27	78.2	1999	33	1987	1	68.3	1987	6	261	.3	8.9	30.0	.0	.0	.0
May	88.4	69.4	78.9	107	1984	4	83.5	1989	45+	1925	2	74.6	1992	0	431	.6	16.6	31.0	.0	.0	.0
Jun	92.4	72.9	82.7	109	1916	6	88.1	1998	56+	1919	4	79.3	1972	0	529	1.9	26.3	30.0	.0	.0	.0
Jul	95.3	73.7	84.5	107+	1998	7	89.0	1998	63+	1985	1	80.1	1972	0	605	7.6	28.9	31.0	.0	.0	.0
Aug	95.5	73.8	84.7	107+	1969	18	87.3	1998	60+	1967	15	80.7	1973	0	609	8.6	29.0	31.0	.0	.0	.0
Sep	91.2	70.9	81.1	107	2000	6	84.3	1986	45	2000	27	77.0	1979	0	481	2.1	22.7	30.0	.0	.0	.0
Oct	85.4	63.7	74.6	100+	1990	5	77.1+	1991	33	1993	31	66.8	1976	5	300	@	12.4	30.9	.0	.0	.0
Nov	77.3	55.8	66.6	99	1988	5	73.3	1973	28	1959	29	57.3	1976	98	145	.0	2.7	29.6	.0	.2	.0
Dec	70.1	48.9	59.5	94+	1977	6	67.3	1984	15+	1989	24	48.9	1989	226	56	.0	.2	29.3	.1	1.7	.0
Ann	83.4	62.2	72.8	109	Jun 1916	6	89.0	Jul 1998	14+	Jan 1962	13	48.9	Dec 1989	805	3670	21.4	152.8	359.3	.1	5.3	.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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1910-2001

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

Issue Date: February 2004

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Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	1.36	.82	7.30	1941	28	4.83	1978	.00	1996
Feb	1.59	1.08	2.84	1982	20	5.51	1982	.01	1974
Mar	1.44	.91	3.70	1997	12	8.40	1997	.00	1971
Apr	1.53	1.09	4.00	1981	25	5.92	1979	.00+	1999
May	2.80	2.35	7.00	1924	15	8.74	1982	.00+	1998
Jun	3.22	2.84	6.23	1993	21	10.49	1993	.00	1998
Jul	1.91	1.16	3.40	1913	19	7.57	1976	.00+	1996
Aug	3.06	2.17	6.80	1936	30	9.20	1973	.29	1997
Sep	5.40	4.86	9.90	1975	1	13.96	1971	.66	2000
Oct	3.17	2.52	4.90	1912	16	9.81	1998	.07	1989
Nov	1.38	.62	6.85	1995	18	8.77	1995	.04	1999
Dec	1.11	.89	2.05	1934	27	4.57	1986	.09	1988
Ann	27.97	28.31	9.90	Sep 1975	1	13.96	Sep 1971	.00+	Apr 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	6.9	2.8	.7	.3
Feb	5.5	2.7	.9	.4
Mar	4.1	1.9	.6	.4
Apr	3.8	2.1	.9	.4
May	5.4	3.3	1.6	.9
Jun	6.3	4.4	2.1	.8
Jul	5.3	3.6	1.3	.5
Aug	7.0	4.6	1.7	.9
Sep	9.2	6.7	3.1	1.6
Oct	5.7	3.8	1.7	1.0
Nov	4.9	2.5	.7	.4
Dec	6.7	2.4	.5	.2
Ann	70.8	40.8	15.8	7.8

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	.03	.12	.30	.49	.71	.96	1.27	1.65	2.20	3.11	4.02
Feb	.03	.09	.24	.43	.66	.96	1.35	1.86	2.61	3.94	5.30
Mar	.00	.04	.14	.30	.51	.79	1.15	1.65	2.39	3.72	5.10
Apr	.00	.03	.19	.39	.63	.93	1.31	1.81	2.54	3.80	5.09
May	.00	.24	.71	1.15	1.62	2.14	2.74	3.48	4.50	6.18	7.83
Jun	.19	.50	1.00	1.48	1.98	2.53	3.18	3.97	5.05	6.83	8.55
Jul	.00	.02	.17	.39	.68	1.05	1.54	2.20	3.18	4.93	6.72
Aug	.31	.53	.95	1.38	1.84	2.36	2.97	3.73	4.78	6.51	8.21
Sep	1.05	1.53	2.33	3.05	3.79	4.59	5.49	6.57	8.01	10.32	12.51
Oct	.30	.53	.96	1.40	1.88	2.42	3.06	3.87	4.97	6.80	8.60
Nov	.04	.10	.23	.41	.62	.87	1.20	1.63	2.26	3.35	4.46
Dec	.07	.14	.28	.43	.60	.80	1.04	1.35	1.78	2.51	3.23
Ann	16.70	18.74	21.43	23.52	25.42	27.28	29.23	31.42	34.12	38.10	41.61

\+ 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: 1910-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.0	.0	0	0
Feb	.0	.0	0	0
Mar	.0	.0	0	0
Apr	.0	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	.0	.0	0	0
Dec	.0	.0	0	0
Ann	.0	.0	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	.0	0	0	.0	0	0	0	0	0	0
Feb	.0	0	0	.0	0	0	0	0	0	0
Mar	.0	0	0	.0	0	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	.0	0	0	.0	0	0	0	0	0	0
Ann	.0	0	0	.0	0	0	0	0	0	0

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.0	.0	.0	.0	.0
Feb	.0	.0	.0	.0	.0
Mar	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.0	.0	.0	.0	.0
Dec	.0	.0	.0	.0	.0
Ann	.0	.0	.0	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	.0	.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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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	3/19	3/09	3/01	2/22	2/16	2/10	2/03	1/24	1/07
32	3/04	2/18	2/07	1/29	1/19	1/09	12/26	0/00	0/00
28	2/02	1/19	1/06	12/21	0/00	0/00	0/00	0/00	0/00
24	1/10	12/23	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	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	11/16	11/24	11/30	12/05	12/10	12/15	12/20	12/27	1/09
32	11/27	12/08	12/17	12/24	1/01	1/09	1/20	0/00	0/00
28	12/17	12/30	1/10	1/25	0/00	0/00	0/00	0/00	0/00
24	12/29	1/17	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	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	>365	330	314	304	295	287	279	269	256
32	>365	>365	>365	>365	352	335	321	308	290
28	>365	>365	>365	>365	>365	>365	>365	>365	334
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	270	157	43	6	0	0	0	0	0	5	98	226	805
60	175	83	11	0	0	0	0	0	0	1	44	136	450
57	128	50	4	0	0	0	0	0	0	0	25	92	299
55	99	34	2	0	0	0	0	0	0	0	17	67	219
50	45	11	0	0	0	0	0	0	0	0	5	27	88
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	808	824	1122	1245	1454	1519	1628	1632	1471	1318	1037	853	14911
55	194	213	411	555	741	829	915	919	781	605	363	207	6733
57	161	173	351	495	679	769	853	857	721	543	312	170	6084
60	115	122	265	405	586	679	760	764	631	451	241	121	5140
65	54	56	143	261	431	529	605	609	481	300	145	56	3670
70	23	19	59	138	281	379	450	454	331	163	73	22	2392

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	590	647	901	1030	1236	1307	1410	1413	1257	1101	825	632	590	1237	2138	3168	4404	5711	7121	8534	9791	10892	11717	12349
45	442	505	747	880	1081	1157	1255	1258	1107	946	676	486	442	947	1694	2574	3655	4812	6067	7325	8432	9378	10054	10540
50	313	376	594	730	926	1007	1100	1103	957	792	531	345	313	689	1283	2013	2939	3946	5046	6149	7106	7898	8429	8774
55	201	257	446	580	771	857	945	948	807	638	396	231	201	458	904	1484	2255	3112	4057	5005	5812	6450	6846	7077
60	114	155	306	432	616	707	790	793	657	484	267	135	114	269	575	1007	1623	2330	3120	3913	4570	5054	5321	5456
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	366	413	597	700	856	892	932	931	855	747	545	402	366	779	1376	2076	2932	3824	4756	5687	6542	7289	7834	8236

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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