

Climatography of the United States No. 20

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

Station: SIERRA BLANCA 2 E, TX

1971-2000

COOP ID: 418305

Climate Division: TX 5

NWS Call Sign:

Elevation: 4,535 Feet Lat: 31° 11N

Lon: 105° 19W

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	57.2	25.1	41.2	77	1974	21	45.5	1999	0	1975	13	37.3	1992	740	0	.0	.0	26.1	.3	25.3	@
Feb	62.8	28.7	45.8	89	1976	27	53.1	1976	-10	1985	2	41.3	1985	539	0	.0	.0	26.7	.2	18.0	.0
Mar	69.5	34.0	51.8	96	1982	22	56.5	1972	6+	1984	6	47.0	1987	411	1	.0	@	30.7	@	10.9	.0
Apr	77.2	40.7	59.0	96	1989	22	63.7	1989	19	1983	8	53.6	1983	207	25	.0	.9	29.8	.0	4.2	.0
May	85.5	51.2	68.4	101	1994	31	74.7	1996	26+	1970	3	63.3	1975	44	147	.1	9.8	31.0	.0	.1	.0
Jun	93.0	59.8	76.4	109+	1994	28	82.1	1990	40	1975	1	72.7	1979	2	343	5.1	24.1	30.0	.0	.0	.0
Jul	92.0	62.9	77.5	108	1994	1	81.1	1994	52	1988	23	73.6	1975	0	386	2.8	23.3	31.0	.0	.0	.0
Aug	89.8	61.4	75.6	102+	1980	2	79.9	1977	49	1970	29	72.6+	1990	1	328	.4	18.8	31.0	.0	.0	.0
Sep	85.0	54.9	70.0	99+	1995	7	75.2	1977	35	2000	25	65.5	1974	26	175	.0	9.5	30.0	.0	.0	.0
Oct	77.2	43.7	60.5	94+	2000	3	63.3	1972	19+	1996	23	55.2	1976	167	26	.0	1.3	30.7	.0	1.8	.0
Nov	66.3	32.2	49.3	89	1975	5	53.7	1998	9	1976	28	41.6	2000	473	1	.0	.0	28.4	@	14.5	.0
Dec	57.9	25.3	41.6	82	1975	13	47.1	1977	1+	1989	23	36.8	2000	726	0	.0	.0	26.2	.2	24.2	.0
Ann	76.1	43.3	59.8	109+	Jun 1994	28	82.1	Jun 1990	-10	Feb 1985	2	36.8	Dec 2000	3336	1432	8.4	87.7	351.6	.7	99.0	@

+ 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: 1897-2001

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

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Station: SIERRA BLANCA 2 E, TX

COOP ID: 418305

Climate Division: TX 5

NWS Call Sign:

Elevation: 4,535 Feet Lat: 31°11N

Lon: 105°19W

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	.68	1984	8	1.41	1991	.00+	2000	3.0	1.8	.1	.0	.00	.00	.03	.12	.22	.32	.45	.61	.84	1.21	1.60
Feb	.41	.37	.77	1989	16	1.73	1973	.00+	1999	2.2	1.2	@	.0	.00	.00	.00	.13	.22	.31	.41	.53	.69	.95	1.20
Mar	.26	.14	.75	1985	13	1.26	1983	.00+	1996	2.1	.8	@	.0	.00	.00	.00	.05	.10	.16	.23	.32	.44	.65	.85
Apr	.29	.11	1.22	1993	29	1.43	1993	.00+	1998	1.5	.9	.1	@	.00	.00	.00	.00	.04	.13	.24	.36	.53	.81	1.08
May	.53	.33	.99	1992	5	4.17	1992	.00+	1977	2.8	1.3	.3	.0	.00	.00	.05	.12	.21	.32	.45	.64	.90	1.35	1.82
Jun	1.11	.86	2.67	1970	22	4.09	1986	.00+	1974	4.0	2.7	.7	.1	.00	.03	.15	.30	.48	.70	.97	1.33	1.85	2.75	3.66
Jul	2.11	1.94	2.03	1988	5	5.37	1973	.56	1994	6.0	3.7	1.3	.6	.54	.74	1.05	1.32	1.58	1.86	2.17	2.54	3.03	3.79	4.50
Aug	2.29	2.12	2.00+	1989	24	4.96	1984	.09	1976	6.8	4.8	1.3	.3	.45	.65	.99	1.30	1.61	1.95	2.33	2.79	3.39	4.37	5.29
Sep	2.19	1.38	3.32	1978	25	10.21	1978	.00+	2000	5.8	4.5	1.3	.5	.00	.08	.35	.66	1.02	1.45	1.98	2.65	3.61	5.26	6.90
Oct	1.15	.77	2.15	1986	10	4.71	1986	.00+	1979	3.8	2.9	.6	.1	.00	.05	.21	.38	.57	.79	1.06	1.40	1.88	2.69	3.50
Nov	.44	.35	1.31	1968	26	1.33	2000	.00+	1999	2.6	1.6	.1	.0	.00	.00	.08	.19	.28	.36	.46	.57	.72	.95	1.19
Dec	.66	.41	1.77	1991	21	3.22	1991	.00+	1996	3.0	1.9	.3	@	.00	.00	.05	.15	.26	.40	.58	.80	1.13	1.68	2.24
Ann	11.93	11.37	3.32	Sep 1978	25	10.21	Sep 1978	.00+	Sep 2000	43.6	28.1	6.1	1.6	6.57	7.51	8.76	9.75	10.65	11.54	12.48	13.54	14.86	16.82	18.55

+ 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: 1897-2001

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

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

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1971-2000

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Station: SIERRA BLANCA 2 E, TX

COOP ID: 418305

Climate Division: TX 5

NWS Call Sign:

Elevation: 4,535 Feet

Lat: 31° 11N

Lon: 105° 19W

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	#	.0	0	0	#	1995	30	#+	1995	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.2	.0	0	0	2.5	1973	8	2.5	1973	0	0	0	0	0	.1	.1	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1989	4	#+	1989	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	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	#	1991	31	#	1991	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	0	0	#	1982	27	#	1982	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	#	.0	#	0	#	1996	16	#+	1996	#	1996	16	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.2	.0	N/A	N/A	2.5	Feb 1973	8	2.5	Feb 1973	#	Dec 1996	16	#	Dec 1996	.1	.1	.0	.0	.0	.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

Complete documentation available from:

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No. 20 1971-2000

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COOP ID: 418305

Climate Division: TX 5

NWS Call Sign:

Elevation: 4,535 Feet

Lat: 31° 11N

Lon: 105° 19W

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	5/10	5/05	5/02	4/30	4/27	4/25	4/22	4/19	4/15
32	5/03	4/28	4/24	4/21	4/18	4/15	4/12	4/08	4/03
28	4/23	4/17	4/13	4/10	4/07	4/04	4/01	3/28	3/22
24	4/08	4/02	3/28	3/24	3/20	3/16	3/12	3/08	3/01
20	3/25	3/17	3/11	3/06	3/01	2/24	2/19	2/13	2/04
16	3/09	2/26	2/18	2/11	2/05	1/29	1/23	1/15	1/04
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	10/04	10/09	10/13	10/16	10/19	10/22	10/26	10/29	11/04
32	10/16	10/20	10/24	10/26	10/29	11/01	11/04	11/07	11/12
28	10/21	10/26	10/30	11/03	11/06	11/09	11/12	11/16	11/22
24	10/30	11/04	11/08	11/12	11/15	11/19	11/22	11/26	12/02
20	11/08	11/16	11/22	11/27	12/01	12/06	12/11	12/16	12/24
16	11/20	11/26	12/01	12/05	12/09	12/13	12/17	12/22	12/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	196	188	183	179	174	170	166	160	153
32	209	204	200	197	193	190	187	183	177
28	236	228	222	217	212	207	202	196	188
24	266	257	250	245	239	234	228	222	212
20	310	298	289	282	275	268	260	252	240
16	342	330	321	314	307	300	292	283	271

* 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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Station: SIERRA BLANCA 2 E, TX

COOP ID: 418305

Climate Division: TX 5 NWS Call Sign: Elevation: 4,535 Feet Lat: 31°11N Lon: 105°19W

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	740	539	411	207	44	2	0	1	26	167	473	726	3336
60	585	399	263	107	11	0	0	0	5	71	330	571	2342
57	492	317	184	63	4	0	0	0	1	36	252	478	1827
55	430	264	138	42	2	0	0	0	0	21	204	418	1519
50	280	146	54	11	0	0	0	0	0	4	109	272	876
32	4	0	0	0	0	0	0	0	0	0	0	7	11

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	287	385	613	808	1126	1331	1409	1351	1139	883	518	304	10154
55	0	5	38	159	415	641	696	638	449	190	32	2	3265
57	0	2	21	121	355	581	634	576	390	144	20	0	2844
60	0	0	8	74	269	491	541	483	304	85	8	0	2263
65	0	0	1	25	147	343	386	328	175	26	1	0	1432
70	0	0	0	5	62	206	236	181	81	4	0	0	775

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	127	236	419	613	901	1119	1182	1114	929	663	312	144	127	363	782	1395	2296	3415	4597	5711	6640	7303	7615	7759
45	47	124	273	467	746	969	1027	959	779	509	188	61	47	171	444	911	1657	2626	3653	4612	5391	5900	6088	6149
50	7	54	149	322	591	819	872	804	629	359	89	17	7	61	210	532	1123	1942	2814	3618	4247	4606	4695	4712
55	0	18	62	193	436	669	717	649	480	224	26	0	0	18	80	273	709	1378	2095	2744	3224	3448	3474	3474
60	0	2	14	88	283	519	562	494	333	105	2	0	0	2	16	104	387	906	1468	1962	2295	2400	2402	2402
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	149	220	333	438	579	696	769	732	603	449	267	156	149	369	702	1140	1719	2415	3184	3916	4519	4968	5235	5391

(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/normal/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