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: DEL NORTE 2 E, CO 1971-2000 COOP ID: 052184

Climate Division: CO 5 NWS Call Sign: Elevation: 7,870 Feet Lat: 37°40N Lon: 106°19W

									r	Гетр	eratur	re (°F)											
	Mea	n (1)						Extr	emes					Degree Base To	•	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	34.0	4.7	19.4	61+	1971	31	28.2	1981	-34	1963	13	9.3	1984	1415	0	.0	.0	1.8	12.4	31.0	8.0		
Feb	39.8	10.6	25.2	68	1986	25	35.2	1995	-25	1951	1	17.0	1984	1115	0	.0	.0	5.7	6.0	28.1	3.1		
Mar	48.8	19.4	34.1	73	1978	31	40.1	1972	-10	1952	22	28.9	1984	958	0	.0	.0	15.7	.7	29.8	.3		
Apr	56.7	25.5	41.1	80+	1981	30	46.1	1981	-4	1973	8	36.0	1983	718	0	.0	.0	24.7	.1	23.4	.1		
May	66.0	34.9	50.5	87	1984	22	55.8	1996	15	1950	5	47.3	1995	451	0	.0	.0	30.3	.0	8.7	.0		
Jun	74.7	42.3	58.5	91	1994	26	62.2	1981	26+	1999	5	55.6	1975	200	5	.0	.1	30.0	.0	.7	.0		
Jul	77.6	48.0	62.8	91	1951	7	66.0	1980	32	1955	12	60.2	1973	88	20	.0	.0	31.0	.0	.0	.0		
Aug	75.7	47.0	61.4	89	1981	6	64.7	1983	32	1964	21	58.1	1976	130	16	.0	.0	31.0	.0	.0	.0		
Sep	70.0	38.8	54.4	87+	1984	5	58.3	1983	15	1999	28	51.8	1993	319	0	.0	.0	30.0	.0	2.3	.0		
Oct	61.1	29.2	45.2	81	1980	1	49.0	1987	5	1993	30	40.3	1984	615	0	.0	.0	27.9	.1	18.6	.0		
Nov	45.8	16.5	31.2	70	1980	7	37.5	1999	-19	1952	27	22.2	1972	1016	0	.0	.0	12.5	3.1	29.0	1.0		
Dec	35.8	6.7	21.3	62	1958	8	32.0	1980	-23+	1978	9	12.2	1978	1356	0	.0	.0	2.5	9.9	31.0	5.5		
Ann	57.2	27.0	42.1	91+	Jun 1994	26	66.0	Jul 1980	-34	Jan 1963	13	9.3	Jan 1984	8381	41	.0	.1	243.1	32.3	202.6	18.0		

⁺ Also occurred on an earlier date(s)

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

Issue Date: February 2004 029-A

[@] Denotes mean number of days greater than 0 but less than .05

⁽¹⁾ From the 1971-2000 Monthly Normals

⁽²⁾ Derived from station's available digital record: 1948-2001

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

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										Pı	recipi	tation	(incl	nes)												
	Me	ans/	P	recip	itatio	on Total						ays (3	5)	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												
	Medi	ans(1)				Extremes	3			L	aily Pre	сіріtатіо	n		Th	ese value	s were det	ermined	from the i	incomplet	e gamma	distributi	ion			
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	.31	.22	.70	1987	16	.95	1987	.00+	1998	3.0	1.1	@	.0	.00	.00	.05	.11	.16	.22	.29	.38	.51	.72	.93		
Feb	.34	.28	.58	1986	7	1.00	1987	.01	1972	3.3	1.1	.1	.0	.02	.05	.09	.14	.19	.25	.32	.41	.53	.75	.95		
Mar	.83	.68	2.55	1985	29	3.13	1985	.08	1977	4.8	2.5	.3	.1	.10	.17	.28	.40	.52	.66	.82	1.02	1.28	1.72	2.14		
Apr	.71	.62	1.36	1952	20	2.07	1990	.00+	1974	4.8	2.1	.3	.0	.00	.04	.13	.24	.36	.49	.66	.87	1.16	1.65	2.15		
May	.89	.83	1.03	1978	2	2.71	1980	.00+	1998	6.3	2.5	.4	.1	.00	.06	.19	.33	.48	.64	.84	1.09	1.44	2.02	2.60		
Jun	.77	.70	1.33	1969	26	2.09	1996	.00+	1998	5.6	2.5	.2	.1	.00	.18	.34	.46	.57	.69	.81	.96	1.15	1.45	1.74		
Jul	1.59	1.46	1.51	1999	24	3.86+	1999	.15	1994	9.9	4.8	.7	.1	.30	.44	.68	.89	1.11	1.34	1.61	1.93	2.36	3.04	3.70		
Aug	1.94	1.78	1.45	1992	24	4.91	1982	.57	1978	12.7	5.7	.6	.1	.68	.87	1.13	1.35	1.57	1.78	2.02	2.30	2.66	3.20	3.71		
Sep	1.13	.97	1.06	1985	20	2.86	1997	.35	1988	8.0	4.0	.5	@	.29	.40	.56	.71	.85	1.00	1.17	1.37	1.63	2.04	2.42		
Oct	.83	.82	1.31	1959	1	3.15	1972	.02	1995	4.8	2.7	.3	.0	.06	.12	.22	.34	.46	.61	.78	1.00	1.31	1.82	2.33		
Nov	.65	.65	.80	1993	14	1.61	1986	.00+	1999	3.9	2.0	.3	.0	.00	.08	.20	.30	.41	.52	.65	.81	1.02	1.37	1.70		
Dec	.47	.23	1.08	1978	6	1.71	1978	.00	1996	3.4	1.6	.1	@	.01	.03	.09	.15	.22	.31	.42	.56	.76	1.10	1.44		
Ann	10.46	10.25	2.55	Mar 1985	29	4.91	Aug 1982	+00.	Nov 1999	70.5	32.6	3.8	.5	7.22	7.84	8.63	9.23	9.77	10.29	10.83	11.43	12.15	13.21	14.13		

⁺ Also occurred on an earlier date(s)

Complete documentation available from:

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

[#] 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: 1948-2001

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Station: DEL NORTE 2 E, CO

Climate Division: CO 5 NWS Call Sign: Elevation: 7,870 Feet Lat: 37°40N Lon: 106°19W

										Snov	w (inc	hes)														
						Sn	ow To	tals							Mean Number of Days (1)											
	Mean	s/Medi	ians (1))					Extre	mes (2)							ow Fa		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	5.7	4.3	2	1	8.5	1987	16	18.1	1975	11	1993	25	9	1988	3.0	1.9	.6	.2	.0	7.8	5.9	4.0	.0			
Feb	5.4	4.0	2	1	10.0	1986	7	15.0	1997	13	1989	6	7	1993	2.8	1.8	.7	.3	@	4.7	3.1	1.9	.0			
Mar	9.6	9.5	1	#	15.1	1985	29	27.4	2000	15	1985	29	4	1992	4.0	2.5	1.1	.5	@	2.9	1.2	.5	.1			
Apr	4.1	2.3	#	#	11.0	1990	30	14.0	1995	10	2000	1	2	1980	2.1	1.3	.6	.2	@	1.3	.4	.2	.0			
May	1.6	.0	#	0	7.0	1990	1	11.8	1978	10	1990	1	1	1990	.6	.5	.2	.2	.0	.2	.1	.1	.1			
Jun	#	.0	0	0	#	1979	9	#	1979	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Jul	#	.0	#	0	#	1995	3	#	1995	#+	1998	29	#+	1998	.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	#	1971	19	#	1971	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0			
Oct	3.0	1.0	#	0	14.4	1972	31	15.1	1972	9	1996	27	1	1996	1.0	.8	.4	.2	@	.9	.4	.2	.0			
Nov	6.5	5.4	1	#	12.0	1997	14	20.0	1997	12	1997	14	4	1991	3.0	2.1	1.0	.4	@	7.2	3.9	2.0	.1			
Dec	7.4	4.0	2	#	14.5	1978	6	23.2	1978	11	1987	27	8	1991	3.4	2.2	1.1	.4	@	11.0	8.5	5.5	.2			
Ann	43.3	30.5	N/A	N/A	15.1	Mar 1985	29	27.4	Mar 2000	15	Mar 1985	29	9	Jan 1988	19.9	13.1	5.7	2.4	@	36.0	23.5	14.4	.5			

⁺ Also occurred on an earlier date(s) #Denotes trace amounts

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

[@] 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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COOP ID: 052184

Lon: 106°19W

Lat: 37°40N

Station: DEL NORTE 2 E, CO

Climate Division: CO 5 NWS Call Sign:

Freeze Data Spring Freeze Dates (Month/Day) Probability of later date in spring (thru Jul 31) than indicated(*) Temp (F) .10 .20 .30 .40 .70 .80 .90 36 6/30 6/24 6/20 6/16 6/12 6/09 6/05 6/01 5/26 32 6/04 6/12 6/07 6/01 5/29 5/26 5/23 5/19 5/14 28 5/30 5/25 5/21 5/18 5/15 5/12 5/09 5/05 4/30 5/10 24 5/16 5/06 5/02 4/29 4/25 4/22 4/17 4/11 20 5/04 4/28 4/24 4/20 4/17 4/14 4/10 4/01 4/06 4/08 4/05 16 4/21 4/16 4/13 4/11 4/03 3/31 3/26 Fall Freeze Dates (Month/Day) Probability of earlier date in fall (beginning Aug 1) than indicated(*) Temp (F) .20 .30 .40 .50 .70 .10 .60 .80 .90 36 9/05 9/08 9/11 9/13 9/15 9/17 9/19 9/21 9/24 32 9/12 9/16 9/19 9/21 9/23 9/25 9/28 9/30 10/04 10/12 10/17 28 9/19 9/24 9/27 9/30 10/03 10/06 10/09 24 10/02 10/06 10/09 10/12 10/14 10/17 10/19 10/22 10/27 20 10/05 10/10 10/13 10/16 10/19 10/22 10/25 10/29 11/03 10/21 10/25 10/28 10/31 16 10/15 11/03 11/07 11/10 11/16 Freeze Free Period **Probability of longer than indicated freeze free period (Days)** Temp (F) .10 .20 .30 .40 .50 .60 .70 .80 .90 114 107 102 98 93 89 85 80 73 36 32 133 128 124 120 117 113 110 106 100 28 154 149 144 131 161 140 136 126 119 24 189 181 176 172 168 164 159 154 147 194 20 207 199 189 185 180 175 170 162 221 16 229 215 210 205 201 196 190 182

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:

Elevation: 7,870 Feet

^{*} Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1415	1115	958	718	451	200	88	130	319	615	1016	1356	8381		
60	1260	975	803	568	300	84	15	40	177	460	866	1201	6749		
57	1167	891	710	478	216	40	3	13	107	368	776	1108	5877		
55	1105	835	648	419	166	22	0	5	70	309	716	1046	5341		
50	950	695	493	279	71	2	0	0	15	177	567	891	4140		
32	433	254	82	11	0	0	0	0	0	4	141	371	1296		

Base						Coolin	g Degree I	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	41	62	147	283	572	796	955	909	672	411	114	39	5001
55	0	0	0	1	25	127	242	201	52	4	0	0	652
57	0	0	0	0	12	86	183	147	29	1	0	0	458
60	0	0	0	0	3	40	102	81	9	0	0	0	235
65	0	0	0	0	0	5	20	16	0	0	0	0	41
70	0	0	0	0	0	0	0	1	0	0	0	0	1

										Gro	wing	Degre	e Uni	ts (2)														
Base	Growing Degree Units (Monthly)														Growing Degree Units (Accumulated Monthly)													
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec													Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec				
40	0	1	41	152	366	585	732	683	473	225	27	0	0	1	42	194	560	1145	1877	2560	3033	3258	3285	3285				
45	0	0	8	61	221	436	577	528	326	108	2	0	0	0	8	69	290	726	1303	1831	2157	2265	2267	2267				
50	0	0	0	15	99	288	422	373	185	33	0	0	0	0	0	15	114	402	824	1197	1382	1415	1415	1415				
55	0	0	0	0	26	150	267	220	73	1	0	0	0	0	0	0	26	176	443	663	736	737	737	737				
60	0	0	0	0	1	48	121	82	11	0	0	0	0	0	0	0	1	49	170	252	263	263	263	263				
Base		•	•	Gro	wing De	gree Unit	s for Co	rn (Mont	thly)		•		Growing Degree Units for Corn (Accumulated Monthly)															
50/86	0	15	63	154	279	393	458	425	321	198	47	0	0	15	78	232	511	904	1362	1787	2108	2306	2353	2353				

(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

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

- c. Snow Tables
 - 1. Snow Climatology
 - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

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