

Climatology of the United States

No. 20

1971-2000

Station: TRINIDAD, CO

COOP ID: 058429

Climate Division: CO 1

NWS Call Sign:

Elevation: 6,030 Feet Lat: 37° 11N

Lon: 104° 29W

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	49.5	19.1	34.3	78	1997	1	41.3	1986	-32	1963	12	24.5	1979	952	0	.0	.0	16.3	3.5	29.1	1.5
Feb	53.0	22.4	37.7	78	1957	12	44.9	1999	-21	1948	12	30.5	1989	764	0	.0	.0	18.4	2.4	24.7	1.2
Mar	59.2	28.5	43.9	84	1971	26	49.5	1989	-15	1948	5	38.0	1984	655	0	.0	.0	24.8	.8	21.4	@
Apr	66.6	34.7	50.7	86+	1992	30	57.8	1981	2	1997	12	43.0	1973	436	5	.0	.0	27.3	.3	12.0	.0
May	75.1	43.8	59.5	96	2000	30	66.4	1996	22	1978	7	54.6	1983	207	35	.0	.4	30.5	.0	2.2	.0
Jun	84.6	52.7	68.7	101+	1994	27	74.0	1990	31	1954	3	63.6	1983	32	141	.1	6.4	30.0	.0	@	.0
Jul	87.6	57.3	72.5	99+	1992	6	75.1	1980	43+	1980	27	70.3	1992	0	231	.0	9.5	31.0	.0	.0	.0
Aug	85.2	55.8	70.5	95+	1974	18	74.1	2000	37	1979	17	67.5	1974	7	177	.0	4.5	31.0	.0	.0	.0
Sep	79.9	48.6	64.3	94+	1999	8	67.8	2000	23+	1985	29	59.9	1974	85	63	.0	1.1	29.8	.0	.8	.0
Oct	70.6	37.5	54.1	90	1964	1	56.4	1979	2	1993	30	48.8	1984	340	1	.0	.0	29.8	.2	7.5	.0
Nov	57.0	26.7	41.9	80+	1980	10	47.9	1981	-15	1976	28	33.9	1992	694	0	.0	.0	21.3	1.1	22.2	.3
Dec	49.5	19.9	34.7	82+	1964	22	43.2	1980	-16	1983	25	24.7	1983	939	0	.0	.0	16.0	3.3	28.5	1.3
Ann	68.2	37.3	52.7	101+	Jun 1994	27	75.1	Jul 1980	-32	Jan 1963	12	24.5	Jan 1979	5111	653	.1	21.9	306.2	11.6	148.4	4.3

+ 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: 1948-2001

(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: TRINIDAD, CO

COOP ID: 058429

Climate Division: CO 1

NWS Call Sign:

Elevation: 6,030 Feet Lat: 37° 11N

Lon: 104° 29W

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	.46	.40	.90	1991	20	1.48	1990	.01	1977	4.2	1.7	.2	.0	.04	.08	.14	.20	.27	.35	.45	.56	.73	.99	1.26
Feb	.49	.36	.90	1987	5	2.66	1987	.00	2000	4.0	1.7	.1	.0	.01	.04	.11	.17	.25	.35	.46	.60	.80	1.14	1.48
Mar	1.16	.89	1.09	1948	1	3.04	1994	.13+	1995	6.5	3.2	.6	.0	.16	.26	.43	.59	.75	.94	1.15	1.41	1.76	2.33	2.89
Apr	1.22	1.01	2.15	1980	24	3.74	1980	.20	1972	6.4	3.1	.7	.1	.19	.29	.47	.64	.82	1.01	1.23	1.49	1.85	2.44	3.00
May	1.95	1.77	3.72	1955	19	5.27	1979	.00	1998	8.4	4.6	1.2	.2	.23	.47	.80	1.08	1.36	1.66	2.00	2.40	2.94	3.79	4.60
Jun	1.62	1.29	1.98	1996	15	4.06	1986	.19	1971	7.4	4.2	.8	.2	.24	.37	.60	.83	1.06	1.32	1.61	1.97	2.46	3.25	4.01
Jul	2.69	2.06	2.50	1981	3	8.07	1998	.26	1987	11.1	5.6	1.5	.5	.53	.77	1.17	1.53	1.90	2.29	2.74	3.28	3.99	5.13	6.22
Aug	2.75	2.04	4.20	1981	11	8.54	1981	.63	1973	11.6	5.9	1.5	.4	.56	.81	1.21	1.58	1.95	2.35	2.80	3.34	4.06	5.21	6.29
Sep	1.29	1.16	1.87	2001	16	4.44	1982	.06	1992	6.1	3.2	.6	.3	.16	.26	.45	.63	.82	1.03	1.27	1.57	1.99	2.66	3.31
Oct	1.01	.68	1.88	1986	20	2.95	1998	.00	1995	4.8	2.4	.6	.1	.04	.12	.26	.41	.57	.75	.97	1.24	1.62	2.25	2.87
Nov	.99	.95	1.14	1990	3	2.42	1992	.05	1989	5.1	2.8	.6	@	.15	.23	.38	.51	.66	.81	.99	1.21	1.50	1.98	2.43
Dec	.48	.39	.46	1982	27	1.48	1973	.13+	1994	4.5	1.9	.0	.0	.12	.16	.23	.30	.36	.42	.50	.59	.70	.88	1.06
Ann	16.11	16.02	4.20	Aug 1981	11	8.54	Aug 1981	.00+	Feb 2000	80.1	40.3	8.4	1.8	10.99	11.97	13.23	14.19	15.04	15.88	16.74	17.70	18.86	20.56	22.04

+ 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: 1948-2001

(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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Station: TRINIDAD, CO

COOP ID: 058429

Climate Division: CO 1

NWS Call Sign:

Elevation: 6,030 Feet

Lat: 37° 11N

Lon: 104° 29W

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	5.9	5.5	1	#	11.0	1990	19	12.0	1976	9	1990	20	4	1985	2.4	1.8	1.0	.4	@	3.3	2.1	.7	.0
Feb	6.0	6.0	1	1	11.0	1977	25	14.0	1989	13	1990	20	4	1994	1.9	1.6	1.0	.4	@	3.2	2.3	1.0	.1
Mar	10.1	8.8	1	#	14.0	1977	11	32.5	1994	14	1973	30	10	1974	2.3	2.1	1.4	.9	.1	2.0	1.3	.6	.1
Apr	5.8	2.5	#	#	13.0	1993	3	27.5	1997	13	1993	3	5	1973	1.2	1.1	.7	.6	.2	1.0	.7	.3	@
May	1.2	.0	#	0	13.5	1990	3	13.5	1990	10	1990	3	#+	1999	.2	.2	.2	.1	@	.1	@	@	@
Jun	.0	.0	#	0	.0	0	0	.0	0	#	1993	26	#	1993	.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	.1	.0	#	0	3.0	1984	29	3.0	1984	#	1984	28	#	1984	@	@	@	.0	.0	.0	.0	.0	.0
Oct	2.1	.0	#	0	13.0	1996	27	17.0	1996	11	1996	27	1	1997	.4	.4	.2	.1	@	.3	.2	.1	.1
Nov	8.6	8.0	1	1	11.0	1990	3	24.0	1991	15	1983	27	12	1975	1.6	1.5	1.0	.5	.1	2.4	1.4	1.0	.1
Dec	7.8	6.3	1	1	9.5	1982	27	20.2	1973	12	1987	14	4	1997	2.3	1.8	1.1	.4	.0	5.2	3.2	1.2	.0
Ann	47.6	37.1	N/A	N/A	14.0	Mar 1977	11	32.5	Mar 1994	15	Nov 1983	27	12	Nov 1975	12.3	10.5	6.6	3.4	.4	17.5	11.2	4.9	.4

+ 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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Elevation: 6,030 Feet

Lat: 37° 11N

Lon: 104° 29W

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	6/03	5/29	5/25	5/22	5/19	5/16	5/13	5/09	5/04
32	5/23	5/18	5/14	5/11	5/08	5/05	5/02	4/28	4/23
28	5/10	5/05	5/01	4/28	4/26	4/23	4/20	4/17	4/12
24	4/28	4/24	4/20	4/17	4/14	4/12	4/09	4/05	3/31
20	4/19	4/14	4/09	4/06	4/02	3/30	3/27	3/22	3/17
16	4/15	4/07	4/02	3/28	3/23	3/19	3/14	3/09	3/01
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	9/16	9/20	9/23	9/25	9/28	9/30	10/03	10/06	10/10
32	9/20	9/24	9/28	10/01	10/03	10/06	10/09	10/12	10/17
28	9/26	10/02	10/07	10/11	10/14	10/18	10/22	10/26	11/01
24	10/11	10/16	10/20	10/23	10/26	10/29	11/02	11/06	11/11
20	10/26	10/30	11/01	11/03	11/05	11/07	11/09	11/11	11/15
16	10/27	11/02	11/06	11/09	11/12	11/15	11/19	11/23	11/28
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	152	145	139	135	131	127	122	117	110
32	171	163	157	152	147	143	138	132	124
28	189	183	178	174	171	167	163	159	153
24	214	208	203	198	194	190	186	181	174
20	235	229	224	220	216	212	208	203	196
16	257	249	243	238	233	228	223	218	209

* 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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Elevation: 6,030 Feet Lat: 37° 11N Lon: 104° 29W

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	952	764	655	436	207	32	0	7	85	340	694	939	5111
60	797	624	501	301	111	7	0	0	25	198	545	784	3893
57	704	540	410	229	69	2	0	0	9	128	460	691	3242
55	642	484	351	187	48	1	0	0	4	91	405	629	2842
50	491	351	217	102	15	0	0	0	0	32	276	478	1962
32	85	34	4	0	0	0	0	0	0	0	26	79	228

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	156	194	372	559	851	1099	1254	1193	968	684	322	163	7815
55	0	0	6	56	186	410	541	480	282	62	11	0	2034
57	0	0	3	38	145	351	479	418	227	37	6	0	1704
60	0	0	1	20	94	266	386	326	153	14	1	0	1261
65	0	0	0	5	35	141	231	177	63	1	0	0	653
70	0	0	0	0	9	54	89	61	16	0	0	0	229

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	47	82	181	333	592	849	1000	942	722	436	147	54	47	129	310	643	1235	2084	3084	4026	4748	5184	5331	5385
45	13	27	91	212	443	699	845	787	573	295	72	17	13	40	131	343	786	1485	2330	3117	3690	3985	4057	4074
50	1	3	33	112	299	549	690	632	425	171	28	0	1	4	37	149	448	997	1687	2319	2744	2915	2943	2943
55	0	0	5	45	172	401	535	477	287	73	1	0	0	0	5	50	222	623	1158	1635	1922	1995	1996	1996
60	0	0	1	10	75	260	380	322	159	19	0	0	0	0	1	11	86	346	726	1048	1207	1226	1226	1226
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	66	94	162	253	390	542	655	614	469	318	133	65	66	160	322	575	965	1507	2162	2776	3245	3563	3696	3761

(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