

# 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: LEROY 5 WSW, CO

1971-2000

COOP ID: 054945

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,470 Feet Lat: 40° 30N

Lon: 102° 59W

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	38.9	13.4	26.2	75	1997	3	33.9	1981	-23+	1984	19	14.5	1979	1204	0	.0	.0	5.8	10.0	30.5	5.1
Feb	45.1	18.3	31.7	75	1970	18	39.6	1991	-25	1982	5	21.4	1989	932	0	.0	.0	10.8	6.1	26.6	2.4
Mar	52.5	24.4	38.5	84	1989	11	45.7	1986	-9	1980	1	33.0	1980	824	0	.0	.0	17.7	4.0	25.3	.7
Apr	61.5	32.9	47.2	91	1989	22	53.5	1981	-3	1975	2	40.7	1984	535	0	.0	.1	23.4	.9	14.9	@
May	70.6	43.0	56.8	97	1989	29	61.7	1994	24+	1989	1	48.7	1995	274	21	.0	.4	29.4	.0	2.2	.0
Jun	81.6	53.0	67.3	107	1990	28	72.5	1994	34	1970	4	62.6	1982	62	131	.5	6.0	29.9	.0	.0	.0
Jul	88.7	58.5	73.6	108	1990	2	76.7	1980	35	1982	10	69.1	1972	3	270	2.0	14.8	31.0	.0	.0	.0
Aug	86.9	57.0	72.0	102+	1995	8	77.1	1983	41	1993	31	66.8	1992	15	230	.5	12.3	31.0	.0	.0	.0
Sep	78.3	46.7	62.5	102	1985	1	69.3	1998	14	1985	30	58.0	1971	142	66	.1	4.7	29.1	.0	1.6	.0
Oct	66.1	34.9	50.5	92	1989	1	53.7	1979	3	1991	31	46.1	1984	450	0	.0	.3	27.1	.4	10.6	.0
Nov	49.7	23.3	36.5	80	1999	8	46.0	1999	-10	1976	27	26.8	1972	856	0	.0	.0	15.1	4.9	24.6	.7
Dec	41.4	15.6	28.5	72+	1980	18	37.8	1980	-25	1989	22	13.7	1983	1132	0	.0	.0	7.9	8.2	29.6	3.3
Ann	63.4	35.1	49.3	108	Jul 1990	2	77.1	Aug 1983	-25+	Dec 1989	22	13.7	Dec 1983	6429	718	3.1	38.6	258.2	34.5	165.9	12.2

+ 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](http://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

067-A

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**Station: LEROY 5 WSW, CO**

**COOP ID: 054945**

**Climate Division: CO 3**

**NWS Call Sign:**

**Elevation: 4,470 Feet Lat: 40°30N**

**Lon: 102°59W**

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	.34	.25	.95	1990	19	1.01	1990	.00+	1998	2.4	1.2	.1	.0	.00	.04	.10	.16	.21	.27	.34	.42	.53	.71	.89
Feb	.35	.22	1.41	1987	27	1.87	1987	.00+	1979	2.7	1.2	.1	@	.00	.00	.05	.10	.16	.23	.32	.43	.58	.84	1.11
Mar	1.03	.95	1.40	1959	25	3.44	1981	.07	1978	4.7	2.7	.6	.1	.09	.16	.30	.44	.60	.78	.99	1.25	1.61	2.22	2.82
Apr	1.56	1.44	1.83	1986	4	4.45	1986	.24	1992	6.5	4.2	.8	.2	.29	.43	.66	.87	1.09	1.32	1.59	1.91	2.33	3.02	3.68
May	3.09	2.74	2.51	1995	9	6.83	1995	.62	1974	9.9	7.0	1.9	.6	.91	1.20	1.64	2.02	2.39	2.78	3.20	3.71	4.36	5.37	6.32
Jun	2.92	2.67	3.87	1989	9	7.42	1989	.52	1990	8.6	6.1	1.9	.4	.71	.98	1.41	1.79	2.16	2.56	3.01	3.53	4.22	5.32	6.35
Jul	3.33	2.93	5.03	1997	30	7.28	1997	.23	1978	8.1	5.6	1.9	.9	.81	1.13	1.61	2.04	2.47	2.92	3.42	4.02	4.81	6.05	7.22
Aug	2.04	1.98	2.90	1969	1	4.98	1992	.32	1994	7.2	4.6	1.3	.4	.39	.57	.87	1.15	1.43	1.73	2.07	2.48	3.03	3.90	4.73
Sep	1.20	1.04	1.41	1996	19	4.41	1996	.00	1978	5.3	3.1	.7	.1	.05	.14	.31	.49	.68	.90	1.15	1.48	1.92	2.66	3.39
Oct	.86	.55	1.30	1949	10	4.42	1994	.00+	1988	3.7	2.4	.4	.1	.00	.00	.15	.29	.44	.61	.82	1.07	1.42	2.02	2.60
Nov	.57	.51	1.00	1952	17	1.84	1987	.00+	1996	3.2	2.0	.1	.0	.00	.00	.14	.24	.34	.45	.57	.72	.92	1.26	1.58
Dec	.36	.30	.74	1960	4	1.01	1985	.00+	1981	2.6	1.4	@	.0	.00	.02	.08	.13	.19	.26	.34	.44	.58	.81	1.04
Ann	17.65	18.00	5.03	Jul 1997	30	7.42	Jun 1989	.00+	Jan 1998	64.9	41.5	9.8	2.8	11.91	13.00	14.40	15.47	16.43	17.36	18.33	19.40	20.71	22.61	24.27

+ 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

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Station: LEROY 5 WSW, CO

COOP ID: 054945

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,470 Feet

Lat: 40° 30N

Lon: 102° 59W

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	5.8	4.9	2	1	12.0	1990	19	16.2	1992	15	1984	23	10	1984	2.5	2.0	.8	.3	@	12.3	6.8	4.6	.6
Feb	4.5	4.0	1	1	8.0	1987	27	16.0	1987	14	1984	19	8	1984	2.7	1.8	.6	.1	.0	7.4	3.8	1.4	@
Mar	8.9	9.3	1	1	10.0	1981	4	25.5	1983	11	1971	5	3	1983	3.5	2.8	1.2	.4	@	5.3	2.8	1.1	.1
Apr	7.1	4.0	1	#	10.5	1986	4	32.0	1984	13	1984	3	5	1973	2.0	1.7	1.1	.6	.1	2.3	1.4	.8	.4
May	.9	.0	#	0	6.0	1979	10	9.0	1979	6	1979	10	#+	1997	.3	.3	.2	.1	.0	.2	.2	.1	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	#+	1998	23	#+	1998	.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	1.1	.0	#	0	9.5	1985	29	9.5	1985	10	1985	29	1	1985	.2	.2	.2	.1	.0	.2	.2	.1	@
Oct	2.9	1.9	#	#	10.5	1972	31	10.5	1972	11	1972	31	1	1997	.9	.9	.4	.1	.1	1.2	.6	.3	.1
Nov	6.0	4.0	1	#	9.0	1972	13	14.5+	1990	23	1983	30	11	1972	2.5	1.9	.9	.5	.0	5.2	3.1	1.5	.1
Dec	5.9	4.8	2	1	12.5	1985	9	23.5	1985	24	1983	1	10	1985	2.6	2.0	.7	.2	@	9.8	5.7	2.7	.9
Ann	43.1	32.9	N/A	N/A	12.5	Dec 1985	9	32.0	Apr 1984	24	Dec 1983	1	11	Nov 1972	17.2	13.6	6.1	2.4	.2	43.9	24.6	12.6	2.2

+ 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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**COOP ID: 054945**

**Climate Division: CO 3**

**NWS Call Sign:**

**Elevation: 4,470 Feet**

**Lat: 40° 30N**

**Lon: 102° 59W**

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	5/31	5/26	5/23	5/20	5/17	5/14	5/11	5/08	5/03
32	5/19	5/15	5/12	5/10	5/08	5/06	5/03	5/01	4/27
28	5/14	5/09	5/05	5/02	4/29	4/27	4/23	4/20	4/15
24	4/30	4/25	4/22	4/19	4/17	4/14	4/11	4/08	4/04
20	4/24	4/19	4/15	4/12	4/10	4/07	4/04	3/31	3/26
16	4/13	4/06	4/01	3/27	3/23	3/19	3/15	3/10	3/03
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	9/11	9/15	9/18	9/20	9/22	9/24	9/26	9/29	10/03
32	9/16	9/21	9/24	9/27	9/30	10/03	10/06	10/09	10/14
28	9/23	9/29	10/03	10/06	10/09	10/13	10/16	10/20	10/26
24	10/02	10/07	10/12	10/15	10/18	10/22	10/25	10/29	11/04
20	10/13	10/18	10/21	10/24	10/27	10/30	11/01	11/05	11/10
16	10/23	10/28	10/31	11/03	11/06	11/09	11/12	11/16	11/20
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	145	139	135	131	127	124	120	116	110
32	162	156	151	148	144	141	137	133	127
28	184	177	171	167	162	158	153	148	140
24	204	197	192	188	184	180	175	170	163
20	217	211	207	203	200	196	192	188	182
16	251	243	237	232	227	222	217	211	203

\* 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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**NWS Call Sign:**

**Elevation: 4,470 Feet Lat: 40°30N**

**Lon: 102°59W**

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	1204	932	824	535	274	62	3	15	142	450	856	1132	6429
60	1049	792	669	390	160	20	0	3	64	297	706	977	5127
57	956	708	576	307	107	9	0	1	34	212	617	884	4411
55	894	652	514	256	78	5	0	0	20	161	564	822	3966
50	740	523	367	148	29	0	0	0	4	66	425	675	2977
32	263	150	34	2	0	0	0	0	0	0	92	230	771

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	82	142	234	457	769	1059	1291	1238	915	574	226	122	7109
55	0	0	0	22	134	374	578	525	245	22	8	1	1909
57	0	0	0	13	101	318	516	464	198	10	1	0	1621
60	0	0	0	5	61	239	423	373	139	3	0	0	1243
65	0	0	0	0	21	131	270	230	66	0	0	0	718
70	0	0	0	0	4	56	136	115	24	0	0	0	335

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	8	43	117	251	512	809	1039	987	684	357	91	29	8	51	168	419	931	1740	2779	3766	4450	4807	4898	4927
45	0	12	56	154	367	659	884	832	544	233	46	6	0	12	68	222	589	1248	2132	2964	3508	3741	3787	3793
50	0	1	17	77	237	512	729	677	402	134	17	0	0	1	18	95	332	844	1573	2250	2652	2786	2803	2803
55	0	0	6	35	132	369	575	522	272	62	0	0	0	0	6	41	173	542	1117	1639	1911	1973	1973	1973
60	0	0	0	9	55	235	420	369	163	19	0	0	0	0	0	9	64	299	719	1088	1251	1270	1270	1270
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	23	51	108	199	321	505	659	625	432	265	87	37	23	74	182	381	702	1207	1866	2491	2923	3188	3275	3312

(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](http://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](http://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"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
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## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)