

Climatology of the United States

No. 20

1971-2000

Station: PAONIA 1 SW, CO

COOP ID: 056306

Climate Division: CO 2

NWS Call Sign:

Elevation: 5,580 Feet Lat: 38° 51N

Lon: 107° 37W

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	38.5	14.7	26.6	63+	1986	30	35.8	1981	-31+	1963	13	17.2	1991	1190	0	.0	.0	3.8	6.9	30.3	4.3
Feb	45.0	21.1	33.1	70	1995	21	42.3	1995	-21	1916	1	22.8	1974	894	0	.0	.0	9.1	1.9	26.7	1.3
Mar	54.2	28.7	41.5	78	1907	19	48.4	1999	-4	1971	1	34.7	1977	730	0	.0	.0	21.4	.2	22.1	@
Apr	62.8	34.3	48.6	85+	1994	22	54.2	1992	5	1920	1	42.9	1975	494	0	.0	.0	26.7	.0	11.7	.0
May	73.0	42.2	57.6	93+	2000	30	61.9	1996	15	1972	1	53.2	1995	245	16	.0	.2	30.6	.0	2.7	.0
Jun	84.3	50.4	67.4	101	1990	30	71.8	1977	27	1919	1	62.7	1984	51	122	.1	9.0	30.0	.0	.1	.0
Jul	90.1	56.7	73.4	105	1989	6	77.0	1998	41	1916	3	70.0	1992	1	261	1.0	18.7	31.0	.0	.0	.0
Aug	87.7	55.7	71.7	104	1996	14	74.8	2000	39+	1968	24	68.8	1975	7	215	.2	13.4	31.0	.0	.0	.0
Sep	78.9	47.7	63.3	97	1995	2	68.6	1998	24	1978	20	58.7	1986	106	56	.0	2.2	30.0	.0	.7	.0
Oct	67.1	37.6	52.4	86+	1925	3	57.0	1988	7	1917	29	46.4	1984	395	2	.0	.0	29.3	.0	6.9	.0
Nov	51.2	26.7	39.0	77	1999	8	46.4	1999	-10	1916	14	32.5	2000	782	0	.0	.0	16.3	.5	22.9	.1
Dec	40.7	17.2	29.0	67	1999	2	38.6	1980	-19	1924	26	20.0	1978	1118	0	.0	.0	5.0	4.6	30.0	1.7
Ann	64.5	36.1	50.3	105	Jul 1989	6	77.0	Jul 1998	-31+	Jan 1963	13	17.2	Jan 1991	6013	672	1.3	43.5	264.2	14.1	154.1	7.4

+ 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: 1905-2001

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

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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: PAONIA 1 SW, CO

COOP ID: 056306

Climate Division: CO 2

NWS Call Sign:

Elevation: 5,580 Feet Lat: 38°51N

Lon: 107°37W

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	1.22	1.09	1.28	1914	27	2.88	1974	.22	1990	8.1	4.1	.4	@	.28	.39	.57	.73	.89	1.06	1.25	1.48	1.79	2.27	2.72
Feb	1.10	.87	1.10+	1996	21	2.89	1980	.12	1972	7.7	3.6	.4	@	.25	.35	.51	.66	.80	.96	1.13	1.33	1.60	2.03	2.44
Mar	1.48	1.32	2.11	1912	20	3.82	1992	.27	1977	8.9	4.9	.3	.1	.25	.38	.60	.80	1.01	1.23	1.49	1.80	2.22	2.89	3.53
Apr	1.18	1.15	1.53	1906	7	2.54	1999	.22	1989	8.4	4.1	.3	.0	.32	.43	.60	.75	.90	1.05	1.22	1.43	1.69	2.11	2.49
May	1.45	1.10	1.66	1906	13	3.69	1973	.06	1974	8.6	4.3	.7	.1	.15	.26	.46	.66	.88	1.12	1.41	1.77	2.25	3.05	3.84
Jun	.79	.59	1.70	1969	24	2.95	1984	.00	1980	5.0	2.6	.3	.1	.05	.13	.25	.37	.49	.62	.78	.97	1.23	1.65	2.06
Jul	1.14	1.04	1.10	1920	25	2.70	1999	.10	1994	8.4	3.3	.4	@	.23	.33	.50	.65	.81	.97	1.16	1.39	1.69	2.18	2.63
Aug	1.09	1.17	1.45	1916	13	1.82+	1992	.14	1972	8.2	3.9	.3	.0	.30	.41	.56	.70	.83	.97	1.13	1.31	1.55	1.92	2.27
Sep	1.37	1.17	1.38	1995	29	3.81	1985	.09	1987	7.8	3.8	.5	@	.15	.25	.44	.63	.83	1.06	1.33	1.67	2.13	2.88	3.62
Oct	1.70	1.73	1.43	1963	20	3.66	1984	.05	1999	7.3	4.6	1.0	.2	.24	.38	.62	.86	1.11	1.38	1.70	2.08	2.60	3.46	4.28
Nov	1.38	1.23	1.50	1919	27	3.40	1986	.05	1989	7.9	4.3	.6	.1	.18	.29	.49	.68	.88	1.11	1.37	1.69	2.12	2.83	3.52
Dec	1.17	.95	1.27	1908	16	3.73	1978	.00	1976	7.4	3.8	.5	.0	.14	.28	.48	.65	.82	1.00	1.20	1.45	1.77	2.29	2.78
Ann	15.07	15.21	2.11	Mar 1912	20	3.82	Mar 1992	.00+	Jun 1980	93.7	47.3	5.7	.6	8.76	9.89	11.39	12.56	13.62	14.66	15.76	16.99	18.51	20.77	22.76

+ 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: 1905-2001

(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: PAONIA 1 SW, CO

COOP ID: 056306

Climate Division: CO 2

NWS Call Sign:

Elevation: 5,580 Feet

Lat: 38° 51N

Lon: 107° 37W

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	13.7	11.0	5	3	12.0	1991	5	42.7	1974	24	1974	22	18	1974	5.6	4.5	1.8	.6	@	17.7	14.8	12.2	6.4
Feb	6.5	5.8	4	1	8.0	1979	1	15.5+	1987	26	1979	6	19	1979	3.7	2.8	1.2	.4	.0	10.9	8.4	7.2	2.8
Mar	5.4	4.0	#	#	14.5	1985	28	28.0	1985	15+	1985	28	2	1985	2.3	1.9	.7	.2	.1	2.4	.8	.3	.1
Apr	2.0	.3	#	0	14.0	1990	29	18.0	1990	10	1990	29	2	1975	.8	.6	.2	.1	@	.4	.1	@	@
May	.3	.0	0	0	5.5	1978	6	6.5	1978	0	0	0	0	0	.1	.1	@	@	.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	1.0	1996	19	1.0	1996	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Oct	1.1	.0	#	0	4.0	1972	30	8.0	1986	4+	1986	13	#+	1996	.7	.4	.1	.0	.0	.3	.1	.0	.0
Nov	5.5	5.1	#	#	8.0	1981	30	16.5	1992	8	1998	10	1	1998	3.0	2.3	.5	.2	.0	3.0	.9	.3	.0
Dec	11.4	8.2	2	1	12.0	1972	5	38.6	1971	15	1978	1	8	1978	4.8	3.5	1.4	.5	.1	12.1	6.8	4.3	.8
Ann	45.9	34.4	N/A	N/A	14.5	Mar 1985	28	42.7	Jan 1974	26	Feb 1979	6	19	Feb 1979	21.0	16.1	5.9	2.0	.2	46.8	31.9	24.3	10.1

+ 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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Lat: 38° 51N

Lon: 107° 37W

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	6/14	6/07	6/02	5/28	5/24	5/20	5/15	5/10	5/03
32	6/02	5/26	5/21	5/17	5/13	5/09	5/04	4/29	4/22
28	5/17	5/11	5/07	5/03	4/30	4/26	4/23	4/19	4/13
24	5/03	4/25	4/20	4/16	4/11	4/07	4/03	3/28	3/21
20	4/20	4/12	4/06	4/01	3/27	3/23	3/18	3/12	3/04
16	4/08	3/28	3/21	3/14	3/08	3/02	2/23	2/16	2/05
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	9/14	9/19	9/22	9/26	9/28	10/01	10/04	10/08	10/13
32	9/24	9/30	10/04	10/07	10/10	10/13	10/17	10/21	10/26
28	10/02	10/08	10/12	10/16	10/19	10/23	10/27	10/31	11/06
24	10/13	10/18	10/22	10/26	10/29	11/01	11/04	11/08	11/14
20	10/24	10/29	11/02	11/05	11/08	11/11	11/15	11/19	11/24
16	11/02	11/08	11/12	11/15	11/18	11/21	11/25	11/29	12/05
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	156	146	139	133	127	121	115	108	98
32	177	168	161	155	150	144	139	132	122
28	198	189	183	177	172	167	161	155	145
24	230	219	212	206	200	194	187	180	170
20	248	240	235	230	225	221	216	210	202
16	290	278	269	262	255	248	240	231	219

* 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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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	1190	894	730	494	245	51	1	7	106	395	782	1118	6013
60	1035	754	575	348	130	14	0	1	39	253	632	963	4744
57	942	670	485	267	79	5	0	0	17	180	542	870	4057
55	880	614	426	217	54	2	0	0	9	138	483	808	3631
50	734	480	288	116	15	0	0	0	1	60	341	653	2688
32	276	106	21	0	0	0	0	0	0	0	31	184	618

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	109	136	314	497	794	1060	1282	1231	939	631	239	88	7320
55	0	0	6	23	134	373	569	518	258	55	1	0	1937
57	0	0	3	13	98	315	507	456	206	36	0	0	1634
60	0	0	0	5	56	234	414	363	138	15	0	0	1225
65	0	0	0	0	16	122	261	215	56	2	0	0	672
70	0	0	0	0	2	47	122	94	14	0	0	0	279

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	0	28	128	287	557	829	1043	990	708	400	95	7	0	28	156	443	1000	1829	2872	3862	4570	4970	5065	5072
45	0	3	57	169	405	679	888	835	558	264	36	0	0	3	60	229	634	1313	2201	3036	3594	3858	3894	3894
50	0	0	16	83	267	530	733	680	411	145	11	0	0	0	16	99	366	896	1629	2309	2720	2865	2876	2876
55	0	0	0	33	149	383	578	525	272	57	0	0	0	0	0	33	182	565	1143	1668	1940	1997	1997	1997
60	0	0	0	5	59	243	423	370	148	16	0	0	0	0	0	5	64	307	730	1100	1248	1264	1264	1264
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	2	31	113	214	371	522	654	630	455	285	84	8	2	33	146	360	731	1253	1907	2537	2992	3277	3361	3369

(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