

Climatology of the United States

No. 20

1971-2000

Station: YAMPA, CO

COOP ID: 059265

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,890 Feet Lat: 40°09N

Lon: 106°55W

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	30.2	4.4	17.3	55+	1986	30	25.1	1981	-31	1985	31	9.5	1979	1478	0	.0	.0	.4	16.7	31.0	8.9
Feb	33.8	6.8	20.3	57+	1976	28	28.1	1995	-35+	1989	6	9.5	1985	1252	0	.0	.0	.9	10.0	28.1	6.2
Mar	40.4	14.6	27.5	68	1978	31	33.4	1999	-24	1975	28	19.9	1977	1163	0	.0	.0	6.1	4.5	30.2	2.2
Apr	49.5	23.1	36.3	73+	1992	30	42.3	1981	-14	1974	16	29.6	1984	862	0	.0	.0	17.7	.9	26.4	.7
May	60.7	31.7	46.2	85	1978	16	50.0	1993	5	1968	7	41.8	1983	584	0	.0	.0	28.0	.0	15.7	.0
Jun	70.8	38.8	54.8	90	1978	23	59.5	1988	18+	1981	15	51.1+	1998	310	2	.0	.1	29.8	.0	4.6	.0
Jul	75.9	45.0	60.5	90	1978	27	63.7	2000	29	1983	4	57.8	1986	147	6	.0	.1	31.0	.0	.2	.0
Aug	74.8	44.0	59.4	89	1974	29	63.5	2000	24	1974	21	55.9	1974	181	7	.0	.0	31.0	.0	.6	.0
Sep	67.4	35.4	51.4	86+	1998	8	56.8	1998	12+	1985	30	46.8	1985	410	0	.0	.0	29.3	.0	7.9	.0
Oct	56.3	25.7	41.0	76+	1998	1	46.7	1992	-5	1991	29	34.3	1984	745	0	.0	.0	24.4	.8	23.8	.2
Nov	40.0	14.3	27.2	69	1999	15	36.0	1999	-25	1976	28	19.0+	2000	1136	0	.0	.0	7.2	7.0	29.0	2.7
Dec	31.5	6.5	19.0	61	1999	1	29.8	1980	-36	1990	23	12.1	1990	1427	0	.0	.0	.8	15.0	30.8	7.4
Ann	52.6	24.2	38.4	90+	Jul 1978	27	63.7	Jul 2000	-36	Dec 1990	23	9.5+	Feb 1985	9695	15	.0	.2	206.6	54.9	228.3	28.3

+ 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

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No. 20 1971-2000

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

Station: YAMPA, CO

COOP ID: 059265

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,890 Feet Lat: 40°09N

Lon: 106°55W

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	1.25	1.11	.87	1996	31	2.89	1996	.37	1984	10.7	4.8	.2	.0	.40	.52	.69	.84	.99	1.14	1.30	1.50	1.75	2.14	2.50
Feb	.99	.94	.90	1986	20	3.16	1996	.13	1973	8.2	3.5	.2	.0	.18	.27	.41	.54	.68	.83	1.00	1.20	1.47	1.91	2.32
Mar	1.29	1.18	1.65	1989	4	3.13	1989	.39	1986	9.1	4.4	.3	.1	.42	.54	.72	.87	1.02	1.17	1.34	1.54	1.79	2.18	2.54
Apr	1.39	1.28	.98	1962	29	2.86	1999	.47	1980	9.8	4.5	.4	.0	.51	.64	.83	.99	1.14	1.29	1.46	1.65	1.89	2.27	2.62
May	1.60	1.57	1.20	1972	6	3.47	1995	.15	1998	10.1	5.4	.6	.1	.37	.52	.75	.96	1.17	1.39	1.64	1.94	2.33	2.95	3.53
Jun	1.33	1.34	1.15	1957	15	2.65	1984	.10	1980	7.8	4.2	.6	@	.33	.45	.65	.82	.99	1.17	1.37	1.61	1.92	2.41	2.88
Jul	2.05	1.99	1.50	1977	23	3.97	1973	.37	1993	9.9	6.1	.9	.1	.58	.77	1.07	1.32	1.57	1.83	2.12	2.46	2.91	3.60	4.24
Aug	1.67	1.68	1.53	1971	29	3.81	1997	.43	1974	10.5	5.6	.5	.1	.60	.75	.98	1.17	1.35	1.54	1.74	1.98	2.28	2.75	3.18
Sep	1.43	1.39	1.80	1961	22	3.90	1997	.26	1979	8.4	4.8	.5	.1	.39	.52	.73	.91	1.09	1.27	1.48	1.72	2.04	2.54	3.00
Oct	1.27	1.03	1.20+	1978	22	3.62	1972	.36	1999	7.0	4.0	.5	@	.37	.49	.67	.83	.98	1.14	1.32	1.53	1.80	2.22	2.61
Nov	1.25	1.01	.96+	1990	27	2.98	1985	.30	1999	9.4	4.1	.3	.0	.35	.47	.65	.81	.96	1.12	1.30	1.51	1.78	2.21	2.60
Dec	1.17	.98	.78	1964	28	3.17	1983	.31	1986	9.7	4.2	.2	.0	.34	.45	.62	.76	.91	1.05	1.21	1.40	1.65	2.03	2.39
Ann	16.69	16.50	1.80	Sep 1961	22	3.97	Jul 1973	.10	Jun 1980	110.6	55.6	5.2	.5	13.02	13.75	14.68	15.38	15.99	16.57	17.17	17.83	18.62	19.75	20.72

+ 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: YAMPA, CO

COOP ID: 059265

Climate Division: CO 2

NWS Call Sign:

Elevation: 7,890 Feet

Lat: 40°09N

Lon: 106°55W

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	17.7	16.5	14	14	19.0	1996	31	32.7	1999	31	1980	29	25	1984	10.1	8.8	2.8	.8	.1	29.6	29.5	29.1	24.4
Feb	15.2	14.0	16	16	13.5	1996	1	40.5	1996	31	1996	1	26	1980	7.5	6.5	1.9	.5	.1	27.4	27.2	26.2	21.9
Mar	17.5	16.0	13	13	12.0	1991	5	34.5	1974	35	1980	7	28	1980	8.1	6.8	2.5	.8	.1	25.0	23.0	20.4	16.9
Apr	12.1	11.0	3	1	10.0	1997	10	28.0	1984	27	1984	2	16	1984	5.2	4.7	1.6	.6	@	7.7	5.8	4.3	2.7
May	3.0	1.3	#	#	10.0	1983	17	15.0+	1983	7	1982	13	1	1979	1.4	1.1	.4	.1	@	.4	.2	.1	.0
Jun	.2	.0	#	0	4.0	1976	14	4.0	1976	1+	1998	5	#+	1998	.1	.1	@	.0	.0	.1	.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	.1	.0	0	0	1.5	1977	27	1.5	1977	0	0	0	0	0	@	@	.0	.0	.0	.0	.0	.0	.0
Sep	.7	.0	#	0	5.0	1971	17	5.0	1971	5	1971	17	#+	2000	.4	.3	.1	@	.0	.1	@	@	.0
Oct	7.1	6.3	#	#	10.0	1985	8	21.0	1972	11	1972	30	2	1984	2.4	2.2	1.0	.5	@	2.9	1.7	.5	.1
Nov	18.4	16.5	3	3	11.3	1995	10	44.0	1985	18	1985	30	11	1985	8.0	6.6	2.6	1.0	.1	16.0	11.1	7.0	1.7
Dec	20.2	15.0	8	9	12.0	1981	31	59.7	1983	30	1983	27	19	1983	9.2	7.7	2.9	.7	.1	28.2	24.9	21.0	11.4
Ann	112.2	96.6	N/A	N/A	19.0	Jan 1996	31	59.7	Dec 1983	35	Mar 1980	7	28	Mar 1980	52.4	44.8	15.8	5.0	.5	137.4	123.4	108.6	79.1

+ 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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NWS Call Sign:

Elevation: 7,890 Feet

Lat: 40° 09N

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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	7/22	7/15	7/11	7/07	7/03	6/29	6/25	6/21	6/14
32	7/04	6/29	6/25	6/22	6/19	6/16	6/13	6/09	6/04
28	6/21	6/15	6/11	6/07	6/04	5/31	5/27	5/23	5/17
24	6/15	6/07	6/01	5/27	5/23	5/18	5/14	5/08	4/30
20	5/30	5/23	5/17	5/13	5/09	5/04	4/30	4/24	4/17
16	5/10	5/04	4/29	4/26	4/22	4/19	4/15	4/11	4/04
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	8/07	8/13	8/18	8/22	8/25	8/29	9/02	9/07	9/13
32	8/22	8/28	9/02	9/05	9/09	9/12	9/15	9/20	9/26
28	9/02	9/07	9/11	9/14	9/17	9/20	9/24	9/28	10/03
24	9/10	9/16	9/19	9/23	9/26	9/29	10/02	10/06	10/11
20	9/18	9/23	9/27	10/01	10/04	10/07	10/10	10/14	10/20
16	9/23	9/30	10/05	10/09	10/14	10/18	10/22	10/27	11/04
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	82	72	65	59	53	47	41	34	24
32	107	98	92	86	81	76	70	64	55
28	131	122	116	110	105	100	94	88	79
24	154	144	137	131	125	120	114	106	97
20	174	165	158	153	148	142	137	130	121
16	206	195	187	180	174	167	160	152	141

* 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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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	1478	1252	1163	862	584	310	147	181	410	745	1136	1427	9695
60	1323	1112	1008	712	429	176	43	70	267	590	986	1272	7988
57	1230	1028	915	622	337	112	13	31	191	497	896	1179	7051
55	1168	972	853	562	277	78	4	16	146	436	836	1117	6465
50	1013	832	698	418	148	22	0	2	62	288	686	962	5131
32	463	343	197	60	1	0	0	0	0	14	211	417	1706

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	8	16	58	188	441	683	882	849	581	292	65	13	4076
55	0	0	0	0	4	70	174	152	37	1	0	0	438
57	0	0	0	0	1	45	120	105	22	0	0	0	293
60	0	0	0	0	0	18	57	51	8	0	0	0	134
65	0	0	0	0	0	2	6	7	0	0	0	0	15
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	8	69	249	469	663	631	388	143	14	0	0	0	8	77	326	795	1458	2089	2477	2620	2634	2634
45	0	0	0	24	127	324	508	476	249	55	0	0	0	0	0	24	151	475	983	1459	1708	1763	1763	1763
50	0	0	0	1	46	189	354	321	130	13	0	0	0	0	0	1	47	236	590	911	1041	1054	1054	1054
55	0	0	0	0	8	81	202	170	42	1	0	0	0	0	0	0	8	89	291	461	503	504	504	504
60	0	0	0	0	0	20	69	50	7	0	0	0	0	0	0	0	0	20	89	139	146	146	146	146
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	13	80	200	337	435	413	285	146	22	0	0	0	13	93	293	630	1065	1478	1763	1909	1931	1931

(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.

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