

Climatography of the United States

No. 20

1971-2000

Station: CHEYENNE WELLS, CO

COOP ID: 051564

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,250 Feet Lat: 38°49N

Lon: 102°22W

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	42.9	16.8	29.9	78+	1989	31	40.0	1986	-23	1918	11	19.3	1979	1089	0	.0	.0	10.5	6.7	30.5	3.0
Feb	48.4	20.9	34.7	79+	1962	11	44.4	1999	-31	1936	9	23.0	1978	849	0	.0	.0	13.7	4.1	26.1	1.8
Mar	56.6	27.4	42.0	88	1946	31	48.3	1986	-16	1960	3	36.5	1980	714	0	.0	.0	21.4	1.6	23.9	.2
Apr	65.4	34.9	50.2	95+	1992	30	56.8	1981	-2	1920	4	43.4	1984	450	4	.0	.3	26.8	.4	11.9	.0
May	75.0	45.2	60.1	102	2000	29	65.1	1974	23+	1966	12	54.0	1995	187	34	@	1.4	30.5	.0	1.4	.0
Jun	86.3	54.1	70.2	107	1990	29	75.0	1988	31+	1975	10	65.8	1982	27	182	1.1	10.7	29.9	.0	@	.0
Jul	92.4	59.7	76.1	109	1936	24	79.6	1999	40	1952	8	72.5	1992	0	342	2.5	19.8	31.0	.0	.0	.0
Aug	89.9	59.0	74.5	107	1931	15	79.5	1995	39	1964	28	69.9+	1992	7	299	1.2	16.3	31.0	.0	.0	.0
Sep	81.7	50.5	66.1	100+	2000	6	70.9	1998	18	1985	29	62.0	1971	70	103	.2	6.8	29.6	.0	1.1	.0
Oct	69.6	38.6	54.1	96	1922	4	56.6	1999	6	1993	31	49.6	1976	340	1	.0	.7	29.1	.2	8.2	.0
Nov	53.2	26.3	39.8	89	1933	1	50.0	1999	-10	1976	27	31.3	1972	759	0	.0	.0	18.4	2.4	23.9	.2
Dec	44.2	18.5	31.4	88	1939	6	39.0	1980	-26	1989	22	17.2	1983	1043	0	.0	.0	10.9	5.2	29.7	2.2
Ann	67.1	37.7	52.4	109	Jul 1936	24	79.6	Jul 1999	-31	Feb 1936	9	17.2	Dec 1983	5535	965	5.0	56.0	282.8	20.6	156.7	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: 1918-2001

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

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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: CHEYENNE WELLS, CO

COOP ID: 051564

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,250 Feet Lat: 38°49N

Lon: 102°22W

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	.25	.23	1.24	1944	26	.57	1990	.00+	1998	2.5	.9	@	.0	.00	.04	.09	.13	.16	.21	.25	.31	.38	.50	.61
Feb	.34	.27	.94	1939	26	1.02	1983	.00+	1977	2.8	1.2	.1	.0	.00	.01	.05	.10	.16	.22	.31	.41	.57	.83	1.09
Mar	.86	.54	1.50	1948	4	3.59	1981	.00	1989	4.9	2.7	.3	.0	.02	.07	.17	.29	.43	.59	.79	1.04	1.40	2.01	2.62
Apr	1.29	1.02	1.84	1983	21	3.92	1999	.08	1992	5.4	3.1	.7	.2	.16	.26	.44	.62	.81	1.02	1.27	1.57	1.99	2.66	3.32
May	2.80	2.84	2.47	1979	20	6.93	1995	.97+	1994	8.9	5.6	1.8	.7	.80	1.07	1.47	1.82	2.16	2.51	2.91	3.37	3.97	4.91	5.78
Jun	2.41	2.50	3.40	1925	7	5.57	1989	.22	1976	7.5	5.0	1.6	.7	.43	.65	1.00	1.33	1.66	2.03	2.44	2.94	3.61	4.68	5.70
Jul	2.63	2.60	4.00	1958	18	5.90	1996	.46	1983	7.6	5.3	1.8	.5	.74	.99	1.37	1.70	2.02	2.36	2.73	3.17	3.73	4.63	5.46
Aug	2.45	2.05	4.05	1959	6	6.24	1989	.45	1983	6.9	4.4	1.7	.5	.42	.63	.99	1.32	1.67	2.04	2.47	2.99	3.68	4.80	5.87
Sep	1.31	.96	3.95	1941	22	4.74	1973	.06+	1992	5.1	2.7	.7	.2	.07	.14	.29	.47	.67	.91	1.20	1.58	2.11	3.01	3.92
Oct	.81	.57	3.90	1965	17	2.90	1993	.00+	1987	3.4	2.2	.6	@	.00	.00	.10	.22	.36	.52	.72	.98	1.34	1.97	2.60
Nov	.60	.52	1.30	1994	20	1.79	1991	.00+	1999	3.3	1.6	.4	.1	.00	.07	.18	.27	.37	.48	.60	.75	.95	1.28	1.59
Dec	.25	.21	1.00	1921	3	1.35	1979	.00+	1996	2.6	.8	@	.0	.00	.00	.06	.10	.14	.19	.25	.32	.41	.57	.72
Ann	16.00	16.23	4.05	Aug 1959	6	6.93	May 1995	.00+	Nov 1999	60.9	35.5	9.7	2.9	11.74	12.57	13.64	14.44	15.15	15.84	16.55	17.32	18.27	19.63	20.80

+ 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: 1918-2001

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

Complete documentation available from:

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

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: CHEYENNE WELLS, CO

COOP ID: 051564

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,250 Feet

Lat: 38°49N

Lon: 102°22W

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	3.6	3.3	1	#	8.0	1990	19	9.5	1988	8	1990	19	4	1984	1.9	1.8	.4	.1	.0	7.3	3.1	.9	.0
Feb	3.7	3.3	1	#	8.0	1990	20	10.0	1997	10	1975	17	2	1998	1.9	1.8	.4	.1	.0	4.6	1.2	.2	.0
Mar	4.6	3.5	#	#	8.0	1980	27	15.0	1995	8	1980	28	1	1995	2.2	2.0	.6	.1	.0	2.4	.8	.2	.0
Apr	4.1	3.0	#	#	12.0	1995	22	27.0	1995	8	1994	11	1	1995	1.3	1.3	.6	.2	@	1.1	.3	.2	.0
May	.8	.0	#	0	6.0	1973	1	6.0+	1990	4	1978	6	#+	1995	.2	.2	.2	.1	.0	.1	@	.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	.3	.0	#	0	4.0	1995	21	4.0	1995	1	1985	29	#+	1994	.1	.1	@	.0	.0	@	.0	.0	.0
Oct	1.8	1.0	#	0	8.0	1997	25	11.0	1997	11	1997	26	1	1997	.8	.8	.2	.1	.0	.5	.3	.2	@
Nov	3.4	2.5	#	#	10.0	1993	14	11.0+	1993	10	1975	21	3	1997	1.5	1.4	.3	.2	@	2.9	1.4	.6	.1
Dec	3.1	2.0	1	#	7.0	1987	26	10.0+	1987	9	1972	13	4	1972	2.0	1.6	.3	.1	.0	5.3	1.4	.6	.0
Ann	25.4	18.6	N/A	N/A	12.0	Apr 1995	22	27.0	Apr 1995	11	Oct 1997	26	4+	Jan 1984	11.9	11.0	3.0	1.0	@	24.2	8.5	2.9	.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

Complete documentation available from:

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No. 20 1971-2000

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COOP ID: 051564

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,250 Feet

Lat: 38° 49N

Lon: 102° 22W

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	5/27	5/23	5/19	5/16	5/14	5/11	5/08	5/05	4/30
32	5/20	5/15	5/11	5/08	5/05	5/02	4/29	4/26	4/20
28	5/07	5/03	4/30	4/27	4/25	4/22	4/20	4/17	4/12
24	4/24	4/19	4/16	4/13	4/10	4/08	4/05	4/02	3/28
20	4/18	4/13	4/09	4/06	4/03	3/30	3/27	3/23	3/18
16	4/13	4/06	4/01	3/27	3/23	3/19	3/14	3/09	3/02
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	9/13	9/17	9/20	9/22	9/25	9/27	9/30	10/03	10/07
32	9/15	9/20	9/24	9/28	10/01	10/04	10/08	10/12	10/17
28	10/03	10/08	10/11	10/14	10/17	10/20	10/23	10/26	10/31
24	10/06	10/12	10/16	10/20	10/24	10/27	10/31	11/04	11/10
20	10/19	10/24	10/27	10/30	11/02	11/05	11/08	11/12	11/17
16	10/29	11/04	11/08	11/11	11/14	11/17	11/20	11/24	11/29
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	151	145	141	137	133	130	126	122	116
32	169	162	157	152	148	144	139	134	127
28	191	186	181	178	175	171	168	164	158
24	217	209	204	200	195	191	187	181	174
20	234	227	221	217	213	209	204	199	192
16	263	253	247	241	235	230	224	217	207

* 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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No. 20
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COOP ID: 051564

Climate Division: CO 3

NWS Call Sign:

Elevation: 4,250 Feet Lat: 38°49N Lon: 102°22W

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	1089	849	714	450	187	27	0	7	70	340	759	1043	5535
60	934	709	559	313	92	5	0	1	20	196	611	888	4328
57	841	625	468	239	54	2	0	0	7	127	528	795	3686
55	779	575	411	196	35	0	0	0	3	90	472	734	3295
50	630	444	272	108	9	0	0	0	0	34	342	588	2427
32	192	107	17	0	0	0	0	0	0	0	59	167	542

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	126	182	326	545	870	1146	1365	1315	1022	685	290	147	8019
55	0	6	7	50	193	456	652	602	335	62	13	1	2377
57	0	0	2	34	149	397	590	540	279	36	9	0	2036
60	0	0	0	17	94	311	497	448	203	13	2	0	1585
65	0	0	0	4	34	182	342	299	103	1	0	0	965
70	0	0	0	0	7	85	195	168	41	0	0	0	496

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	22	62	158	330	610	895	1100	1054	767	440	119	35	22	84	242	572	1182	2077	3177	4231	4998	5438	5557	5592
45	1	22	82	211	459	745	945	899	619	302	59	10	1	23	105	316	775	1520	2465	3364	3983	4285	4344	4354
50	0	4	32	118	316	598	790	744	475	184	19	0	0	4	36	154	470	1068	1858	2602	3077	3261	3280	3280
55	0	0	10	50	187	450	635	589	336	93	1	0	0	0	10	60	247	697	1332	1921	2257	2350	2351	2351
60	0	0	0	20	95	308	480	434	214	33	0	0	0	0	0	20	115	423	903	1337	1551	1584	1584	1584
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	42	77	151	249	386	563	696	669	490	315	113	43	42	119	270	519	905	1468	2164	2833	3323	3638	3751	3794

(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.

- | | |
|---|---|
| <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