

Climatology of the United States

No. 20

1971-2000

Station: WESTON 1 E, WY

COOP ID: 489580

Climate Division: WY 5

NWS Call Sign:

Elevation: 3,525 Feet Lat: 44° 38N

Lon: 105° 18W

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	38.1	7.8	23.0	70	1981	23	34.2	1981	-39	1963	19	4.9	1979	1303	0	.0	.0	3.2	11.5	30.7	9.1
Feb	44.8	13.7	29.3	79	1995	24	38.3	1999	-47	1989	3	14.4	1989	1002	0	.0	.0	7.7	7.1	27.4	5.0
Mar	52.3	22.0	37.2	79	1986	27	45.5	1986	-29	1978	3	27.4	1996	865	0	.0	.0	15.3	3.3	27.2	1.7
Apr	60.6	30.4	45.5	88+	1989	21	52.0	1981	-4	1997	12	37.5	1997	585	0	.0	.0	22.4	.8	18.0	.1
May	69.6	39.8	54.7	95	1969	27	58.8	1987	11	1983	13	49.9	1983	326	6	.0	.4	29.7	.0	5.4	.0
Jun	79.2	48.5	63.9	104	1988	20	74.6	1988	28	1969	14	57.6	1998	122	88	.6	4.5	29.9	.0	.3	.0
Jul	87.7	53.8	70.8	108	1981	6	74.9	1989	35	1971	28	62.8	1993	36	213	1.9	13.3	31.0	.0	.0	.0
Aug	87.1	52.0	69.6	106	1965	12	76.7	1983	30	1992	30	64.1	1993	47	189	.9	13.1	31.0	.0	.1	.0
Sep	76.1	41.3	58.7	103	1978	6	66.0	1998	15	1984	25	54.7	1993	222	32	.3	3.5	29.1	.0	4.4	.0
Oct	62.8	30.6	46.7	90+	1992	2	50.1	1983	-17	1991	30	43.0	1984	566	0	.0	.1	26.1	.5	17.8	.1
Nov	46.3	18.4	32.4	77+	1999	15	44.0	1999	-28+	1985	27	16.7	1985	980	0	.0	.0	11.6	5.2	27.5	2.3
Dec	38.2	9.4	23.8	68	1973	1	32.0	1979	-47	1983	24	5.5	1983	1278	0	.0	.0	4.1	10.3	30.3	6.6
Ann	61.9	30.6	46.3	108	Jul 1981	6	76.7	Aug 1983	-47+	Feb 1989	3	4.9	Jan 1979	7332	528	3.7	34.9	241.1	38.7	189.1	24.9

+ 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: 1951-2001

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

096-A

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: WESTON 1 E, WY

COOP ID: 489580

Climate Division: WY 5

NWS Call Sign:

Elevation: 3,525 Feet Lat: 44°38N

Lon: 105°18W

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	.32	.24	1.25	1999	11	1.25	1999	.00	1998	4.4	.9	.1	@	.01	.04	.09	.14	.19	.25	.31	.40	.51	.70	.89
Feb	.30	.24	1.00+	1955	3	1.65	1978	.00+	1999	3.5	1.1	.1	.0	.00	.00	.06	.11	.17	.23	.29	.38	.50	.69	.89
Mar	.58	.48	.80	1995	12	1.26	1989	.00	2000	5.4	1.9	.2	.0	.06	.13	.22	.31	.39	.48	.59	.71	.88	1.14	1.40
Apr	1.35	1.29	2.52	1990	27	3.56	1990	.08	1981	7.6	4.1	.5	.1	.25	.37	.57	.75	.94	1.14	1.37	1.65	2.01	2.61	3.17
May	2.54	2.08	3.01	1968	27	8.26	1978	.45	1983	9.6	6.4	1.5	.3	.66	.90	1.26	1.59	1.91	2.25	2.62	3.07	3.65	4.57	5.42
Jun	2.50	2.57	4.25	1998	22	6.74	1998	.34	1988	8.4	5.5	1.5	.3	.58	.81	1.17	1.50	1.83	2.18	2.57	3.03	3.65	4.62	5.54
Jul	1.48	1.36	2.87	1958	19	3.41	1997	.31	1975	6.6	3.9	.8	.2	.30	.44	.66	.85	1.05	1.27	1.51	1.80	2.19	2.81	3.39
Aug	1.06	1.22	1.39	1995	26	2.72	1980	.00	1988	4.7	2.7	.6	.1	.04	.13	.29	.44	.61	.80	1.02	1.30	1.68	2.31	2.93
Sep	1.11	.94	1.43	1986	25	5.47	1986	.21	1983	5.0	2.9	.6	.1	.16	.26	.42	.57	.73	.91	1.11	1.36	1.69	2.23	2.75
Oct	1.27	.86	2.45	1994	16	5.94	1994	.20+	1991	4.9	2.8	.8	.2	.12	.20	.38	.55	.74	.96	1.22	1.55	2.00	2.75	3.48
Nov	.46	.36	.90	1989	27	1.50	1989	.02	1981	4.2	1.7	.1	.0	.06	.09	.16	.22	.29	.37	.45	.56	.71	.95	1.18
Dec	.33	.33	.50+	1982	9	1.25	1996	.00+	1999	4.6	1.2	@	.0	.00	.00	.06	.13	.19	.26	.33	.42	.55	.74	.94
Ann	13.30	12.79	4.25	Jun 1998	22	8.26	May 1978	.00+	Mar 2000	68.9	35.1	6.8	1.3	8.66	9.53	10.66	11.53	12.31	13.07	13.86	14.74	15.81	17.39	18.77

+ 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: 1951-2001

(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: WESTON 1 E, WY

COOP ID: 489580

Climate Division: WY 5

NWS Call Sign:

Elevation: 3,525 Feet

Lat: 44° 38N

Lon: 105° 18W

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	4.0	4	3	8.0	1986	21	18.0	1994	16	1977	17	11	1977	3.6	2.7	.3	.1	.0	17.2	13.9	8.6	2.3
Feb	5.7	6.3	3	1	6.0	1977	22	17.3	1978	18	1978	20	12	1979	3.0	2.5	.5	.1	.0	10.0	6.5	4.5	2.3
Mar	7.0	8.0	2	1	8.0	1983	6	13.2	1982	12	1979	4	8	1979	3.4	3.0	.8	.3	.0	7.4	5.2	2.9	.6
Apr	3.9	2.0	1	#	18.0	1984	25	18.0	1984	22	1984	26	6	1997	1.7	1.6	.6	.2	.1	1.6	1.0	.7	.3
May	1.1	.0	#	0	8.0	1975	20	8.0+	1986	7	1984	1	1	1984	.2	.2	.2	.1	.0	.1	@	@	.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	.5	.0	#	0	4.0	1984	24	7.0	1984	2	1984	24	#+	2000	.2	.2	.1	.0	.0	@	.0	.0	.0
Oct	2.2	1.0	#	#	8.0	1973	10	12.0	1973	7	1973	10	1	1991	1.0	.8	.3	.1	.0	1.0	.3	.1	.0
Nov	4.9	4.4	1	1	6.0	1985	18	12.0	1986	14	1985	30	6	1985	2.6	2.3	.6	.2	.0	5.5	3.5	1.2	.2
Dec	6.1	4.8	3	2	7.0	1972	4	14.0+	1989	14	1985	2	10	1983	3.2	2.8	.8	.2	.0	14.2	8.4	5.3	.8
Ann	37.3	30.5	N/A	N/A	18.0	Apr 1984	25	18.0+	Jan 1994	22	Apr 1984	26	12	Feb 1979	18.9	16.1	4.2	1.3	.1	57.0	38.8	23.3	6.5

+ 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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Climate Division: WY 5

NWS Call Sign:

Elevation: 3,525 Feet

Lat: 44° 38N

Lon: 105° 18W

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	6/28	6/20	6/15	6/10	6/06	6/01	5/28	5/22	5/15
32	6/09	6/03	5/29	5/25	5/22	5/18	5/14	5/10	5/03
28	5/19	5/15	5/12	5/09	5/07	5/04	5/01	4/28	4/24
24	5/11	5/07	5/04	5/01	4/29	4/26	4/24	4/20	4/16
20	5/02	4/27	4/23	4/19	4/16	4/13	4/10	4/06	3/31
16	4/27	4/20	4/15	4/10	4/06	4/02	3/29	3/24	3/17
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	8/31	9/03	9/05	9/07	9/09	9/11	9/13	9/16	9/19
32	9/06	9/10	9/12	9/15	9/17	9/19	9/21	9/24	9/27
28	9/12	9/17	9/20	9/23	9/25	9/28	9/30	10/04	10/08
24	9/14	9/21	9/25	9/29	10/03	10/06	10/10	10/15	10/21
20	9/22	9/29	10/04	10/09	10/13	10/17	10/21	10/26	11/02
16	10/13	10/18	10/22	10/25	10/28	10/31	11/03	11/07	11/12
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	117	110	104	99	95	90	86	80	72
32	139	131	126	121	117	113	108	103	95
28	158	152	148	144	141	137	134	130	124
24	176	169	164	160	156	152	148	143	136
20	198	191	187	182	179	175	171	166	159
16	224	217	212	208	204	200	195	190	183

* 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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NWS Call Sign:

Elevation: 3,525 Feet Lat: 44° 38N Lon: 105° 18W

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	1303	1002	865	585	326	122	36	47	222	566	980	1278	7332
60	1148	862	710	439	194	54	11	15	119	411	830	1123	5916
57	1055	786	617	356	130	28	4	6	73	320	740	1030	5145
55	995	734	557	303	95	17	1	3	49	261	687	968	4670
50	849	604	413	187	35	4	0	0	13	135	547	822	3609
32	378	235	67	7	0	0	0	0	0	3	169	351	1210

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	98	157	226	412	703	956	1201	1164	800	460	179	96	6452
55	2	12	2	17	85	283	489	454	159	5	7	0	1515
57	0	8	0	11	58	234	429	395	123	2	0	0	1260
60	0	0	0	4	29	170	344	311	79	0	0	0	937
65	0	0	0	0	6	88	213	189	32	0	0	0	528
70	0	0	0	0	1	35	117	99	10	0	0	0	262

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	1	16	69	198	449	721	954	921	565	253	49	7	1	17	86	284	733	1454	2408	3329	3894	4147	4196	4203
45	0	3	26	103	304	572	799	766	421	141	17	1	0	3	29	132	436	1008	1807	2573	2994	3135	3152	3153
50	0	0	5	47	177	424	644	611	287	63	2	0	0	0	5	52	229	653	1297	1908	2195	2258	2260	2260
55	0	0	0	17	90	279	489	457	175	19	0	0	0	0	0	17	107	386	875	1332	1507	1526	1526	1526
60	0	0	0	4	31	162	337	305	86	3	0	0	0	0	0	4	35	197	534	839	925	928	928	928
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	3	34	75	164	299	452	597	577	388	216	58	12	3	37	112	276	575	1027	1624	2201	2589	2805	2863	2875

(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