

Climatography of the United States

No. 20

1971-2000

Station: SAGE 4 NNW, WY

COOP ID: 487955

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,210 Feet Lat: 41° 52N

Lon: 111° 00W

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	26.8	-.5	13.2	55	1970	23	22.6	1981	-51	1979	1	3.0	1979	1610	0	.0	.0	.1	19.8	31.0	16.3
Feb	31.5	2.3	16.9	57	1950	25	24.9	1986	-51	1985	1	6.1	1985	1347	0	.0	.0	.4	12.8	28.2	12.5
Mar	42.4	15.8	29.1	70+	1986	30	35.7	1986	-30	1998	8	19.3	1998	1113	0	.0	.0	6.2	3.3	30.8	3.0
Apr	55.0	24.2	39.6	80	2000	27	45.3	1992	-3	1973	8	33.3	1975	763	0	.0	.0	20.2	.2	27.8	@
May	64.6	32.0	48.3	86+	2001	24	53.5	1992	7	1953	2	43.8	1983	518	0	.0	.0	28.4	.0	18.6	.0
Jun	74.8	38.6	56.7	92+	2001	30	62.5	1977	18	1960	21	52.4	1998	257	8	.0	.4	30.0	.0	6.3	.0
Jul	82.5	43.0	62.8	97+	2001	4	66.0	1975	23	1954	22	53.7	1993	124	53	.0	2.3	31.0	.0	2.2	.0
Aug	81.5	39.6	60.6	97+	2000	1	64.5	2000	14	1962	30	56.2	1993	158	20	.0	1.4	31.0	.0	5.6	.0
Sep	72.5	31.0	51.8	90	1990	12	57.3	1990	3	1983	20	45.4	1986	399	1	.0	@	29.2	@	19.6	.0
Oct	60.6	21.8	41.2	84	1996	10	44.0	1988	-4+	1971	30	34.7	1984	738	0	.0	.0	25.5	.5	28.8	.1
Nov	41.7	12.7	27.2	74	1999	6	34.5	1995	-34	1983	30	18.1	2000	1134	0	.0	.0	7.6	7.0	29.4	4.8
Dec	28.8	.9	14.9	61	1995	1	25.0	1995	-48	1978	30	2.3	1990	1556	0	.0	.0	.5	18.7	31.0	15.6
Ann	55.2	21.8	38.5	97+	Jul 2001	4	66.0	Jul 1975	-51+	Feb 1985	1	2.3	Dec 1990	9717	82	.0	4.1	210.1	62.3	259.3	52.3

+ 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

079-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: SAGE 4 NNW, WY

COOP ID: 487955

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,210 Feet Lat: 41°52N

Lon: 111°00W

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	.57	.56	1.00	1999	21	1.57	1999	.00+	1991	5.7	1.9	.2	@	.00	.00	.19	.29	.39	.49	.60	.73	.90	1.18	1.44
Feb	.42	.35	1.05	1995	14	1.90	1998	.00+	1991	5.7	1.5	.1	@	.00	.00	.09	.19	.27	.35	.44	.54	.68	.89	1.11
Mar	.63	.62	.78	1962	23	1.40	1973	.00+	1999	6.2	1.8	.1	.0	.00	.00	.21	.33	.44	.55	.67	.81	1.00	1.27	1.54
Apr	1.03	.93	1.47	1999	29	2.95	1999	.00	1996	5.8	2.7	.5	.1	.12	.25	.42	.57	.72	.88	1.05	1.27	1.55	2.00	2.42
May	1.24	1.02	.95	1952	16	2.92	1980	.33	1972	7.0	4.0	.4	.0	.36	.47	.65	.81	.96	1.11	1.29	1.49	1.76	2.17	2.56
Jun	.99	.91	1.36	1991	2	3.81	1998	.00+	2000	3.9	2.5	.5	.2	.00	.13	.31	.47	.63	.81	1.01	1.24	1.56	2.09	2.59
Jul	.95	.74	1.50	1999	29	2.50	1973	.09	1979	4.1	2.5	.4	.1	.18	.27	.41	.54	.67	.81	.97	1.16	1.41	1.82	2.21
Aug	.80	.61	1.33	1997	11	2.88	1983	.00+	1996	4.1	2.3	.4	.1	.00	.04	.16	.28	.41	.57	.75	.98	1.31	1.86	2.41
Sep	1.08	.75	1.51	1965	6	4.10	1982	.00	1993	4.3	2.8	.6	.1	.03	.11	.26	.42	.59	.79	1.02	1.32	1.74	2.44	3.13
Oct	1.02	.83	1.48	1998	3	2.69	1981	.00+	1999	3.9	2.7	.6	.1	.00	.00	.41	.58	.74	.91	1.09	1.30	1.55	1.98	2.37
Nov	.61	.52	1.11	1965	18	1.75	1973	.00+	1999	4.7	2.2	.1	.0	.00	.00	.19	.30	.40	.51	.63	.78	.96	1.27	1.57
Dec	.42	.30	.70	1964	23	1.47	1981	.00+	2000	5.5	2.2	@	.0	.00	.00	.00	.10	.20	.30	.42	.55	.73	1.03	1.31
Ann	9.76	9.96	1.51	Sep 1965	6	4.10	Sep 1982	.00+	Dec 2000	60.9	29.1	3.9	.7	6.09	6.76	7.65	8.33	8.95	9.55	10.18	10.89	11.75	13.02	14.13

+ 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: SAGE 4 NNW, WY

COOP ID: 487955

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,210 Feet

Lat: 41°52N

Lon: 111°00W

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	8.6	6.3	5	4	8.0	1992	7	20.5	1971	18	1997	7	18	1997	1.9	1.6	.7	.3	.0	-9.9	-9.9	-9.9	-9.9
Feb	3.5	2.4	5	#	16.0	1995	14	16.0	1995	24	1993	28	23	1993	1.5	1.2	.2	.1	.1	-9.9	-9.9	-9.9	-9.9
Mar	3.7	.0	1	0	5.0	1973	21	22.3	1973	14	1998	7	14	1998	1.1	.9	.4	.1	.0	-9.9	-9.9	-9.9	-9.9
Apr	1.3	.0	0	0	12.0	1972	13	12.0	1972	0	0	0	0	0	.4	.4	.3	.1	.1	.0	.0	.0	.0
May	.4	.0	0	0	10.0	1983	11	10.0+	1983	0	0	0	0	0	.3	.2	@	@	@	.0	.0	.0	.0
Jun	.2	.0	0	0	3.0	1995	8	3.0	1995	0	0	0	0	0	.1	.1	@	.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	.2	.0	#	0	5.0	2000	23	5.0	2000	6	1978	18	#	1978	.1	.1	.1	@	.0	.0	.0	.0	.0
Oct	1.9	.0	#	0	7.0	1971	28	14.0	1971	2	1989	31	#+	1993	.4	.4	.2	.1	.0	.1	.0	.0	.0
Nov	3.2	2.5	1	0	6.0	1992	22	8.0	1990	12	1979	30	8	1979	1.2	.9	.4	.2	.0	-9.9	-9.9	-9.9	-9.9
Dec	5.6	.7	3	#	6.0	1971	6	24.0	1972	24	1983	4	24	1983	1.8	1.6	.5	.2	.0	-9.9	-9.9	-9.9	-9.9
Ann	28.6	11.9	N/A	N/A	16.0	Feb 1995	14	24.0	Dec 1972	24+	Feb 1993	28	24	Dec 1983	8.8	7.4	2.8	1.1	.2	-9.9	-9.9	-9.9	-9.9

+ 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 3

NWS Call Sign:

Elevation: 6,210 Feet

Lat: 41° 52N

Lon: 111° 00W

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	8/04	7/29	7/25	7/22	7/18	7/15	7/11	7/07	7/01
32	8/01	7/24	7/18	7/13	7/08	7/03	6/28	6/21	6/13
28	7/12	7/04	6/28	6/24	6/19	6/14	6/09	6/04	5/27
24	6/10	6/04	5/30	5/26	5/22	5/18	5/14	5/09	5/02
20	5/27	5/21	5/17	5/13	5/09	5/06	5/02	4/27	4/21
16	5/11	5/04	4/29	4/25	4/21	4/17	4/13	4/08	4/02
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	7/30	8/01	8/04	8/06	8/08	8/10	8/12	8/15	8/18
32	7/31	8/04	8/08	8/12	8/15	8/18	8/22	8/26	8/31
28	8/11	8/16	8/20	8/24	8/27	8/30	9/02	9/06	9/11
24	8/22	8/28	9/01	9/04	9/08	9/11	9/15	9/19	9/25
20	9/06	9/11	9/14	9/17	9/20	9/23	9/26	9/29	10/04
16	9/12	9/18	9/22	9/25	9/29	10/02	10/06	10/10	10/16
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	43	35	30	25	20	15	10	5	0
32	73	61	52	45	38	31	23	14	2
28	101	90	82	75	68	62	55	46	35
24	134	125	119	113	108	103	98	91	82
20	157	149	143	138	133	129	124	118	110
16	182	175	169	164	160	155	151	145	138

* 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: 6,210 Feet Lat: 41°52N

Lon: 111°00W

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	1610	1347	1113	763	518	257	124	158	399	738	1134	1556	9717
60	1455	1207	958	613	364	136	48	61	257	583	984	1401	8067
57	1362	1123	865	523	276	82	21	27	182	490	894	1308	7153
55	1300	1067	803	463	221	54	12	14	138	428	834	1246	6580
50	1145	927	653	321	108	13	1	1	56	278	684	1091	5278
32	604	443	209	24	0	0	0	0	0	9	223	557	2069

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	18	20	119	251	505	742	952	885	592	294	79	24	4481
55	0	0	0	0	13	105	251	186	40	0	0	0	595
57	0	0	0	0	6	73	198	137	24	0	0	0	438
60	0	0	0	0	1	38	132	78	9	0	0	0	258
65	0	0	0	0	0	8	53	20	1	0	0	0	82
70	0	0	0	0	0	1	13	2	0	0	0	0	16

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	1	74	258	487	698	632	331	97	4	0	0	0	1	75	333	820	1518	2150	2481	2578	2582	2582
45	0	0	0	22	136	339	543	477	202	25	0	0	0	0	0	22	158	497	1040	1517	1719	1744	1744	1744
50	0	0	0	2	54	204	389	325	94	1	0	0	0	0	0	2	56	260	649	974	1068	1069	1069	1069
55	0	0	0	0	11	93	239	179	28	0	0	0	0	0	0	0	11	104	343	522	550	550	550	550
60	0	0	0	0	0	25	104	63	7	0	0	0	0	0	0	0	0	25	129	192	199	199	199	199
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	16	112	236	373	504	487	331	188	25	0	0	0	16	128	364	737	1241	1728	2059	2247	2272	2272

(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