

Climatography of the United States No. 20

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

Station: FONTENELLE DAM, WY

1971-2000

COOP ID: 483396

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,480 Feet Lat: 41° 59N

Lon: 110° 04W

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	25.3	-2.4	11.5	52	1989	31	20.6	1996	-43+	1984	18	-.2	1979	1661	0	.0	.0	.1	22.0	30.9	17.1
Feb	30.1	1.1	15.6	57	1977	21	26.5	1991	-46	1985	2	-2.5	1993	1383	0	.0	.0	.9	14.6	28.2	12.0
Mar	40.1	13.5	26.8	67	1966	30	37.4	1992	-33+	1993	2	17.6	1998	1184	0	.0	.0	5.8	5.8	30.9	2.9
Apr	50.7	21.5	36.1	79	1992	29	44.5	1992	-9	1977	3	27.9+	1999	867	0	.0	.0	16.4	1.1	28.1	.1
May	61.2	30.8	46.0	83	1984	31	54.2	1992	8	1983	13	40.6	1999	589	0	.0	.0	27.0	.1	18.8	.0
Jun	72.7	38.3	55.5	94+	1990	30	62.0	1988	14	2001	4	43.8	1998	311	26	.0	.7	29.4	.0	5.5	.0
Jul	81.0	44.1	62.6	95+	1989	9	68.5	1989	21	1997	2	53.0	1993	152	76	.0	2.5	31.0	.0	1.1	.0
Aug	79.7	41.8	60.8	95+	1979	6	66.1	1971	17+	1992	27	54.6	1993	176	43	.0	1.1	31.0	.0	2.3	.0
Sep	68.4	31.4	49.9	88+	1979	8	56.7	1990	4	1985	30	43.2	2000	457	3	.0	.0	28.5	.1	15.8	.0
Oct	55.6	20.4	38.0	79+	1979	7	47.2	1988	-8	1975	25	31.3	2000	837	0	.0	.0	22.2	1.0	29.8	.4
Nov	37.1	8.7	22.9	67	1976	6	32.2	1995	-29	1976	27	6.5	2000	1263	0	.0	.0	5.4	9.9	29.9	6.3
Dec	26.7	-1.4	12.7	57	1995	1	25.2	1980	-46	1978	31	.6	1992	1625	0	.0	.0	.4	20.5	31.0	17.2
Ann	52.4	20.7	36.5	95+	Jul 1989	9	68.5	Jul 1989	-46+	Feb 1985	2	-2.5	Feb 1993	10505	148	.0	4.3	198.1	75.1	252.3	56.0

+ 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: 1963-2001

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

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: FONTENELLE DAM, WY

COOP ID: 483396

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,480 Feet Lat: 41°59N

Lon: 110°04W

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	.29	.27	.38	1980	13	1.01	1980	.00+	1989	3.5	1.1	.0	.0	.00	.00	.08	.14	.18	.23	.29	.36	.45	.60	.74	
Feb	.27	.20	.44	1995	14	.97	1986	.00+	1991	3.0	1.0	.0	.0	.00	.01	.05	.09	.13	.18	.25	.33	.44	.63	.82	
Mar	.36	.32	.55	1996	23	1.23	1998	.00+	1984	4.0	1.5	@	.0	.00	.04	.11	.17	.23	.29	.36	.45	.58	.77	.97	
Apr	.74	.58	1.20	1983	30	2.20	1999	.00	1985	4.9	2.7	.2	@	.02	.08	.18	.29	.40	.54	.70	.91	1.19	1.67	2.14	
May	1.23	1.02	1.42	1983	11	3.06	1987	.15	1974	7.6	4.1	.5	@	.25	.36	.54	.70	.87	1.05	1.25	1.50	1.82	2.34	2.83	
Jun	.78	.50	1.16	1967	23	3.44	1998	.02	1973	5.1	2.4	.3	.1	.04	.09	.18	.29	.41	.55	.72	.94	1.25	1.78	2.31	
Jul	.80	.67	1.50	1973	20	2.85	1973	.00	1988	5.7	2.7	.3	@	.06	.14	.26	.38	.50	.64	.80	.99	1.24	1.67	2.07	
Aug	.72	.51	1.08	1977	19	2.05	1997	.01	1985	5.3	2.4	.3	.1	.05	.09	.18	.28	.39	.52	.68	.87	1.15	1.61	2.07	
Sep	.93	.64	1.82	1982	14	5.24	1982	.00	1974	5.1	2.5	.4	.1	.04	.11	.24	.38	.52	.69	.89	1.14	1.48	2.05	2.61	
Oct	.67	.68	.76	1986	20	2.33	1986	.00+	1999	4.0	2.1	.2	.0	.00	.03	.13	.22	.34	.47	.62	.82	1.10	1.57	2.03	
Nov	.38	.30	.46	1983	8	1.24	1983	.00	1976	3.8	1.4	.0	.0	.03	.07	.13	.18	.24	.30	.38	.47	.59	.79	.98	
Dec	.21	.10	.53	1985	9	.92	1983	.00+	1998	2.9	.9	@	.0	.00	.00	.03	.06	.10	.14	.19	.25	.35	.50	.66	
Ann	7.38	6.91	1.82	Sep 1982	14	5.24	Sep 1982	.00+	Oct 1999	54.9	24.8	2.2	.3	3.55	4.18	5.05	5.75	6.39	7.04	7.73	8.51	9.50	10.98	12.31	

+ 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: 1963-2001
(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: FONTENELLE DAM, WY

COOP ID: 483396

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,480 Feet

Lat: 41°59N

Lon: 110°04W

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	5.2	4.0	3	1	5.0	1997	27	10.1	1996	24	1993	18	19	1993	3.2	2.3	.9	.1	.0	-9.9	-9.9	-9.9	-9.9
Feb	5.8	6.5	3	3	8.0	1995	14	16.8	1995	18	1993	28	16	1993	2.5	2.2	.7	.1	.0	-9.9	-9.9	-9.9	-9.9
Mar	2.7	2.5	1	#	7.5	1996	23	9.5	1996	18	1993	2	8	1993	1.4	1.1	.6	.1	.0	-9.9	-9.9	-9.9	-9.9
Apr	1.7	.0	#	0	4.0	1995	26	8.0	1995	5	1999	21	1+	1999	.8	.7	.4	.0	.0	.2	.1	.0	.0
May	.8	.0	#	0	6.0	2000	10	6.0	2000	2	2000	10	#	2000	.2	.2	.1	.1	.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	.1	.0	#	0	1.0	1995	20	1.0	1995	1	1995	20	#+	1996	.1	.1	.0	.0	.0	@	.0	.0	.0
Oct	2.3	.0	#	0	7.0	1991	28	12.0	1991	9	1991	29	1	1993	.9	.8	.4	.2	.0	.5	.4	.2	.0
Nov	1.0	-99.9	1	#	5.0	1991	29	5.0	1991	6	2000	13	3	2000	2.2	1.8	.5	.1	.0	4.7	3.6	.9	.0
Dec	3.7	.9	2	1	9.0	1971	24	18.0	1971	14	1992	30	9	1992	2.7	1.3	.3	.1	.0	-9.9	-9.9	-9.9	-9.9
Ann	23.3	-9.9	N/A	N/A	9.0	Dec 1971	24	18.0	Dec 1971	24	Jan 1993	18	19	Jan 1993	14.0	10.5	3.9	.8	.0	-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

Complete documentation available from:

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

Climatography of the United States

No. 20 1971-2000

Station: FONTENELLE DAM, WY

COOP ID: 483396

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,480 Feet

Lat: 41° 59N

Lon: 110° 04W

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	7/27	7/21	7/18	7/14	7/11	7/08	7/05	7/01	6/26
32	7/16	7/09	7/04	6/30	6/26	6/22	6/17	6/12	6/05
28	7/08	6/29	6/23	6/18	6/13	6/08	6/03	5/28	5/20
24	6/23	6/14	6/07	6/02	5/27	5/22	5/17	5/10	5/01
20	6/02	5/26	5/20	5/16	5/12	5/08	5/03	4/28	4/21
16	5/17	5/11	5/07	5/03	4/29	4/26	4/22	4/17	4/11
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	8/04	8/09	8/13	8/16	8/19	8/21	8/24	8/28	9/02
32	8/10	8/16	8/20	8/23	8/27	8/30	9/02	9/06	9/12
28	8/19	8/25	8/29	9/02	9/05	9/08	9/12	9/16	9/22
24	9/03	9/08	9/11	9/14	9/16	9/19	9/22	9/25	9/30
20	9/09	9/15	9/20	9/23	9/27	9/30	10/04	10/08	10/14
16	9/21	9/27	10/01	10/04	10/08	10/11	10/15	10/19	10/24
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	58	51	46	42	37	33	29	24	17
32	90	80	73	67	61	56	50	42	33
28	111	102	95	89	83	77	72	65	55
24	143	132	124	117	111	105	98	90	79
20	161	153	147	142	137	132	127	121	113
16	189	179	172	166	161	155	149	142	133

* 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:

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

**Climatography
of the United States
No. 20
1971-2000**

Station: FONTENELLE DAM, WY

COOP ID: 483396

Climate Division: WY 3

NWS Call Sign:

Elevation: 6,480 Feet Lat: 41°59N

Lon: 110°04W

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	1661	1383	1184	867	589	311	152	176	457	837	1263	1625	10505
60	1506	1243	1029	717	439	200	75	87	319	682	1113	1470	8880
57	1413	1159	936	629	354	146	42	49	245	589	1023	1377	7962
55	1351	1103	874	573	300	115	28	32	201	528	963	1315	7383
50	1196	963	723	434	183	54	9	8	110	382	813	1160	6035
32	651	492	264	89	6	0	0	0	1	49	329	626	2507

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	12	34	102	212	440	705	947	891	537	235	57	24	4196
55	0	0	0	6	21	130	262	209	47	2	0	0	677
57	0	0	0	1	13	101	215	165	32	1	0	0	528
60	0	0	0	0	5	65	154	109	16	0	0	0	349
65	0	0	0	0	0	26	76	43	3	0	0	0	148
70	0	0	0	0	0	9	27	12	0	0	0	0	48

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	0	64	233	475	715	660	332	87	0	0	0	0	0	64	297	772	1487	2147	2479	2566	2566	2566
45	0	0	0	20	123	336	560	506	208	30	0	0	0	0	0	20	143	479	1039	1545	1753	1783	1783	1783
50	0	0	0	5	53	204	407	354	106	3	0	0	0	0	0	5	58	262	669	1023	1129	1132	1132	1132
55	0	0	0	0	10	110	261	208	36	0	0	0	0	0	0	0	10	120	381	589	625	625	625	625
60	0	0	0	0	0	42	129	91	7	0	0	0	0	0	0	0	0	42	171	262	269	269	269	269
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	0	17	84	201	350	493	472	297	140	14	0	0	0	17	101	302	652	1145	1617	1914	2054	2068	2068

(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.

- 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