

Climatography of the United States

No. 20

1971-2000

Station: DALECARLIA RESERVOIR, MD

COOP ID: 182325

Climate Division: MD 4

NWS Call Sign:

Elevation: 150 Feet

Lat: 38°56N

Lon: 77°07W

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	44.0	23.9	34.0	79	1950	27	42.2	1998	-11	1985	21	23.8	1977	962	0	.0	.0	8.1	3.8	25.8	.3
Feb	48.4	26.3	37.4	81+	1985	24	45.6	1976	-10	1996	5	25.9	1979	774	0	.0	.0	12.3	2.5	20.7	.1
Mar	57.9	33.4	45.7	91	1998	30	50.9	2000	5	1960	11	39.2	1984	601	0	.0	@	23.1	.2	14.1	.0
Apr	68.9	42.3	55.6	94	1985	22	61.4	1994	19	1982	6	51.3	1975	289	7	.0	.4	29.5	.0	3.5	.0
May	77.6	52.2	64.9	98+	1996	20	69.4	1991	26	1966	10	61.0	1994	88	84	.0	2.3	31.0	.0	.1	.0
Jun	85.2	61.1	73.2	100+	1988	22	76.4	1994	37	1992	23	69.7	1992	5	249	.1	7.8	30.0	.0	.0	.0
Jul	89.1	66.1	77.6	103+	1954	31	82.6	1999	44	1988	1	74.2	2000	0	390	.9	15.1	31.0	.0	.0	.0
Aug	87.4	64.9	76.2	105	1997	17	79.9	1999	41	1986	29	72.4	1990	1	345	.3	10.5	31.0	.0	.0	.0
Sep	80.7	57.9	69.3	99+	1953	2	76.4	1998	31	1956	21	65.8	1975	31	160	.0	3.3	30.0	.0	.0	.0
Oct	69.8	44.7	57.3	93	1951	5	63.6	1984	19	1992	20	51.2	1988	263	23	.0	.1	30.8	.0	3.0	.0
Nov	58.6	35.7	47.2	87	1971	1	53.9	1999	9	1970	24	41.7	1976	536	0	.0	.0	23.8	.0	11.8	.0
Dec	48.4	28.0	38.2	82	1998	6	46.2	1971	-2+	1989	22	24.1	1989	832	0	.0	.0	13.6	1.7	21.2	.1
Ann	68.0	44.7	56.4	105	Aug 1997	17	82.6	Jul 1999	-11	Jan 1985	21	23.8	Jan 1977	4382	1258	1.3	39.5	294.2	8.2	100.2	.5

+ 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

010-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: DALECARLIA RESERVOIR, MD

COOP ID: 182325

Climate Division: MD 4

NWS Call Sign:

Elevation: 150 Feet Lat: 38°56N

Lon: 77°07W

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	3.48	3.02	3.50	1999	8	7.36	1996	.47	1981	11.0	6.8	2.7	.7	.95	1.28	1.78	2.22	2.65	3.10	3.60	4.20	4.97	6.19	7.32
Feb	3.01	2.85	1.65	1972	13	6.65	1998	.63	1978	9.6	5.9	2.4	.8	.82	1.11	1.54	1.92	2.29	2.68	3.11	3.62	4.29	5.33	6.30
Mar	4.13	4.02	5.20	1999	9	9.23	1999	1.01	1986	11.3	7.0	2.9	1.1	1.38	1.77	2.34	2.83	3.30	3.78	4.31	4.93	5.72	6.96	8.09
Apr	3.54	3.20	3.13	1970	14	8.55	1983	.35	1985	10.6	6.8	2.5	.8	1.08	1.41	1.91	2.35	2.76	3.20	3.68	4.24	4.97	6.10	7.15
May	4.42	4.38	3.14	1989	6	9.41	1989	1.41	1986	12.0	8.7	3.1	.9	1.71	2.12	2.71	3.19	3.65	4.12	4.63	5.22	5.97	7.12	8.16
Jun	3.69	3.27	5.92	1972	22	12.78	1972	1.26	1988	10.2	6.3	2.6	.8	1.10	1.45	1.97	2.43	2.87	3.33	3.84	4.43	5.21	6.41	7.54
Jul	4.26	4.04	5.04	1991	25	9.59	1975	.81	1999	10.9	7.7	2.8	1.2	1.33	1.73	2.33	2.85	3.35	3.86	4.43	5.09	5.95	7.29	8.52
Aug	3.98	4.03	5.36	2001	11	8.74	1986	.24	1989	9.3	6.2	2.4	1.3	.96	1.34	1.92	2.44	2.95	3.49	4.10	4.82	5.77	7.27	8.68
Sep	4.30	3.83	5.50	1966	14	11.61	1975	.70	1977	9.3	6.1	2.7	1.3	.78	1.16	1.79	2.38	2.97	3.62	4.35	5.24	6.42	8.31	10.12
Oct	3.48	3.03	4.14	1990	23	7.17	1976	.22	2000	8.4	5.4	2.5	1.1	.77	1.09	1.60	2.06	2.52	3.01	3.56	4.22	5.09	6.47	7.78
Nov	3.41	3.01	4.45	1993	28	7.44	1972	.54	1981	9.7	5.7	2.3	.9	.87	1.19	1.69	2.13	2.56	3.01	3.51	4.11	4.90	6.13	7.28
Dec	3.41	3.02	2.36	1977	18	6.64	1983	.76	1980	11.1	6.5	2.5	.9	.85	1.17	1.67	2.11	2.55	3.01	3.52	4.13	4.92	6.18	7.36
Ann	45.11	43.74	5.92	Jun 1972	22	12.78	Jun 1972	.22	Oct 2000	123.4	79.1	31.4	11.8	32.66	35.09	38.19	40.54	42.62	44.63	46.70	48.98	51.75	55.76	59.21

+ 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

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: DALECARLIA RESERVOIR, MD

COOP ID: 182325

Climate Division: MD 4

NWS Call Sign:

Elevation: 150 Feet

Lat: 38°56N

Lon: 77°07W

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	4.1	3.5	1	#	9.5	1971	1	14.0	2000	21	1996	10	10	1971	1.3	1.2	.7	.3	.0	2.0	1.1	.6	.0
Feb	4.7	.0	1	0	18.2	1983	11	31.1	1979	24	1979	19	8	1979	1.0	1.0	.4	.2	.1	2.2	1.5	.9	.4
Mar	1.3	.0	#	0	5.2	1999	9	8.0	1978	11	1993	14	1	1993	.4	.3	.2	.1	.0	.3	.1	.1	.0
Apr	#	.0	0	0	#	1973	12	#+	1973	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	#	0	#	1983	25	#+	1983	8	1987	11	1	1987	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.5	.0	#	0	5.0	1982	12	6.4	1982	5	1982	12	1	1982	.3	.1	.1	.1	.0	.6	.1	@	.0
Ann	10.6	3.5	N/A	N/A	18.2	Feb 1983	11	31.1	Feb 1979	24	Feb 1979	19	10	Jan 1971	3.0	2.6	1.4	.7	.1	5.1	2.8	1.6	.4

+ 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/normal/usnormals.html

Climatography of the United States

No. 20 1971-2000

Station: DALECARLIA RESERVOIR, MD

COOP ID: 182325

Climate Division: MD 4

NWS Call Sign:

Elevation: 150 Feet

Lat: 38°56N

Lon: 77°07W

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	5/19	5/12	5/08	5/04	4/30	4/27	4/23	4/18	4/12
32	5/04	4/27	4/22	4/18	4/15	4/11	4/07	4/02	3/27
28	4/20	4/14	4/10	4/06	4/02	3/29	3/26	3/21	3/15
24	4/06	3/31	3/27	3/24	3/21	3/17	3/14	3/10	3/04
20	3/30	3/23	3/18	3/13	3/09	3/05	2/28	2/23	2/15
16	3/14	3/07	3/01	2/24	2/20	2/15	2/11	2/05	1/28
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	9/27	10/02	10/06	10/09	10/12	10/15	10/18	10/22	10/27
32	10/06	10/12	10/16	10/19	10/23	10/26	10/29	11/02	11/08
28	10/14	10/21	10/26	10/30	11/03	11/07	11/11	11/16	11/22
24	10/26	11/03	11/08	11/13	11/17	11/22	11/26	12/02	12/09
20	11/15	11/22	11/27	12/02	12/06	12/10	12/15	12/20	12/28
16	11/26	12/03	12/09	12/14	12/19	12/23	12/28	1/03	1/10
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	193	183	176	170	164	158	152	145	136
32	220	210	203	196	190	184	178	171	160
28	241	232	225	219	214	209	203	196	187
24	271	260	253	247	241	235	229	221	211
20	306	294	286	278	272	265	258	249	238
16	334	323	315	307	301	294	287	279	268

* 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: DALECARLIA RESERVOIR, MD

COOP ID: 182325

Climate Division: MD 4

NWS Call Sign:

Elevation: 150 Feet

Lat: 38°56N

Lon: 77°07W

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	962	774	601	289	88	5	0	1	31	263	536	832	4382
60	807	634	447	164	30	0	0	0	7	151	392	677	3309
57	714	550	360	106	13	0	0	0	2	101	311	590	2747
55	652	499	304	74	6	0	0	0	1	74	260	533	2403
50	509	370	182	24	0	0	0	0	0	27	154	394	1660
32	120	62	6	0	0	0	0	0	0	0	4	70	262

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	182	212	428	708	1020	1235	1413	1368	1119	783	458	262	9188
55	1	6	13	93	313	545	700	655	430	144	24	11	2935
57	0	0	8	64	257	485	638	593	371	109	15	7	2547
60	0	0	1	33	182	395	545	500	286	67	6	0	2015
65	0	0	0	7	84	249	390	345	160	23	0	0	1258
70	0	0	0	1	27	124	240	202	68	5	0	0	667

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	50	94	234	485	776	1004	1176	1130	888	546	251	91	50	144	378	863	1639	2643	3819	4949	5837	6383	6634	6725
45	23	45	135	344	621	854	1021	975	738	394	151	43	23	68	203	547	1168	2022	3043	4018	4756	5150	5301	5344
50	5	18	66	215	468	704	866	820	588	257	78	18	5	23	89	304	772	1476	2342	3162	3750	4007	4085	4103
55	1	3	32	120	325	554	711	665	440	146	32	4	1	4	36	156	481	1035	1746	2411	2851	2997	3029	3033
60	0	0	9	56	195	406	556	510	298	67	11	1	0	0	9	65	260	666	1222	1732	2030	2097	2108	2109
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	35	67	159	306	500	673	803	781	588	347	159	58	35	102	261	567	1067	1740	2543	3324	3912	4259	4418	4476

(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