

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: MOUNT VERNON 3 WNW, WA

1971-2000

COOP ID: 455678

Climate Division: WA 2

NWS Call Sign:

Elevation: 14 Feet

Lat: 48°26N

Lon: 122°23W

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	45.7	34.1	39.9	66	1981	21	46.4	1986	-4	1957	26	33.1	1979	778	0	.0	.0	9.0	1.3	12.5	.0
Feb	49.5	35.9	42.7	71	1986	27	47.3	1991	8+	1990	18	34.4	1989	625	0	.0	.0	13.0	.4	9.5	.0
Mar	53.4	37.9	45.7	72	1994	29	49.3	1986	9	1989	3	41.5	1976	600	0	.0	.0	23.1	.0	6.5	.0
Apr	58.1	40.5	49.3	80	1976	30	52.0	1996	25	1975	1	45.1	1975	471	0	.0	.0	28.0	.0	1.7	.0
May	64.0	45.4	54.7	89+	1969	23	59.2	1993	32+	1965	6	51.0	1974	321	0	.0	.0	30.9	.0	.0	.0
Jun	68.4	49.4	58.9	92	1970	1	62.1	1992	38+	1976	3	55.8	1971	187	3	.0	@	30.0	.0	.0	.0
Jul	73.0	51.5	62.3	94	1994	20	65.3	1985	38+	1962	3	60.2	1974	101	15	.0	.1	31.0	.0	.0	.0
Aug	74.1	51.6	62.9	98	1960	9	65.9	1997	36	1980	29	59.7	1973	90	23	.0	.2	31.0	.0	.0	.0
Sep	69.1	47.5	58.3	89+	1981	7	61.6	1995	30+	1972	27	54.0	1972	208	6	.0	.0	30.0	.0	.1	.0
Oct	60.0	41.8	50.9	83	1987	1	53.5	1993	19	1991	29	47.9	1972	437	0	.0	.0	30.1	.0	2.8	.0
Nov	50.9	38.1	44.5	71	1981	1	49.0	1995	7+	1985	27	33.8	1985	614	0	.0	.0	17.5	.4	7.4	.0
Dec	46.0	34.6	40.3	65	1963	24	45.2	1991	-1	1968	29	35.0	1984	765	0	.0	.0	9.1	1.8	12.6	.0
Ann	59.4	42.4	50.9	98	Aug 1960	9	65.9	Aug 1997	-4	Jan 1957	26	33.1	Jan 1979	5197	47	.0	.3	282.7	3.9	53.1	.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: 1956-2001

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

060-A

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Climate Division: WA 2

NWS Call Sign:

Elevation: 14 Feet

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Lon: 122°23W

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	4.22	3.95	2.06	1982	23	12.61	1974	.59	1985	17.0	10.9	2.1	.5	1.02	1.41	2.03	2.58	3.12	3.70	4.34	5.11	6.11	7.71	9.20
Feb	2.85	2.87	1.62	1986	23	4.15	1974	.48	1993	15.1	8.8	1.1	.2	1.23	1.49	1.85	2.14	2.41	2.69	2.99	3.33	3.76	4.41	5.00
Mar	2.81	2.81	1.23	1984	20	5.23	1989	.83	1992	15.9	9.1	1.3	.1	1.26	1.51	1.86	2.14	2.40	2.67	2.95	3.27	3.68	4.30	4.86
Apr	2.53	2.40	1.76	2000	13	4.62	1972	1.40	1998	13.8	8.0	1.1	.1	1.41	1.61	1.87	2.08	2.26	2.45	2.65	2.87	3.14	3.55	3.91
May	2.42	2.33	1.86	1988	16	4.64	2000	.46	1994	12.1	7.0	1.2	.1	.74	.97	1.32	1.61	1.89	2.19	2.52	2.90	3.39	4.16	4.87
Jun	1.95	2.11	2.03	1990	6	4.81	1990	.23	1996	10.4	5.5	1.0	.2	.45	.63	.92	1.18	1.43	1.70	2.01	2.37	2.85	3.61	4.32
Jul	1.20	1.03	1.58	1986	16	2.98	1986	.02	1984	6.3	3.5	.6	.1	.16	.26	.43	.60	.77	.97	1.19	1.47	1.84	2.46	3.05
Aug	1.34	1.17	2.42	1962	4	3.81	1995	.00	1986	5.9	3.2	.9	.2	.05	.15	.34	.53	.75	.99	1.28	1.64	2.14	2.99	3.81
Sep	1.70	1.48	2.43	1983	1	3.80	1978	.17	1989	8.2	4.4	.9	.2	.20	.34	.58	.81	1.06	1.34	1.67	2.07	2.62	3.52	4.40
Oct	2.89	2.50	1.44	1956	20	7.34	1985	.49	1980	13.3	8.0	1.5	.3	.84	1.11	1.52	1.88	2.23	2.59	2.99	3.47	4.08	5.04	5.93
Nov	4.83	4.64	3.01	1990	9	13.62	1990	1.11	1976	18.0	12.4	2.3	.6	1.39	1.85	2.54	3.14	3.73	4.34	5.01	5.80	6.83	8.45	9.94
Dec	3.96	3.47	2.05	1967	24	7.80	1979	.88	1985	17.4	11.5	2.0	.4	1.66	2.02	2.52	2.94	3.33	3.72	4.15	4.64	5.26	6.20	7.06
Ann	32.70	32.61	3.01	Nov 1990	9	13.62	Nov 1990	.00	Aug 1986	153.4	92.3	16.0	3.0	23.54	25.32	27.60	29.32	30.85	32.33	33.85	35.53	37.57	40.52	43.07

+ 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: 1956-2001

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

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1971-2000

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Station: MOUNT VERNON 3 WNW, WA

COOP ID: 455678

Climate Division: WA 2

NWS Call Sign:

Elevation: 14 Feet

Lat: 48°26N

Lon: 122°23W

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	1.6	1.0	#	0	5.5	1971	12	5.8	1980	7	1980	9	1	1972	1.2	.9	.2	.1	.0	.5	.0	.0	.0
Feb	.6	.0	#	0	4.0	1971	27	4.5	1971	4	1971	27	#+	1979	.3	.2	.1	.0	.0	.3	@	.0	.0
Mar	.1	.0	#	0	1.0	1974	6	2.0	1974	1	1974	8	#	1974	.1	.1	.0	.0	.0	.1	.0	.0	.0
Apr	.0	.0	#	0	.5	1972	17	.5	1972	1	1972	17	#+	1976	.1	.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	.4	.0	#	0	2.0	1973	4	2.0+	1975	1+	1978	23	#+	1978	.2	.2	.0	.0	.0	.1	.0	.0	.0
Dec	1.6	.0	#	0	5.0	1971	26	9.6	1971	6	1971	27	1	1972	.9	.9	.2	.2	.0	.6	.4	.3	.0
Ann	4.3	1.0	N/A	N/A	5.5	Jan 1971	12	9.6	Dec 1971	7	Jan 1980	9	1+	Dec 1972	2.8	2.3	.5	.3	.0	1.6	.4	.3	.0

+ 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

Station: MOUNT VERNON 3 WNW, WA

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Climate Division: WA 2

NWS Call Sign:

Elevation: 14 Feet

Lat: 48° 26N

Lon: 122° 23W

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	5/14	5/11	5/08	5/05	5/02	4/29	4/25	4/20
32	4/25	4/20	4/16	4/12	4/09	4/06	4/02	3/29	3/24
28	3/29	3/19	3/12	3/06	3/01	2/23	2/17	2/10	2/01
24	2/27	2/18	2/11	2/06	2/01	1/26	1/20	1/13	1/02
20	2/25	2/12	2/03	1/25	1/18	1/09	12/31	12/18	0/00
16	2/05	1/21	1/10	12/29	12/15	0/00	0/00	0/00	0/00
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	9/19	9/24	9/28	10/01	10/05	10/08	10/13	10/19
32	10/04	10/10	10/14	10/18	10/22	10/25	10/29	11/02	11/08
28	10/20	10/29	11/05	11/11	11/17	11/22	11/28	12/05	12/14
24	11/08	11/18	11/26	12/03	12/09	12/15	12/22	12/31	1/13
20	11/27	12/09	12/18	12/26	1/02	1/10	1/18	1/30	0/00
16	12/07	12/19	12/29	1/08	1/20	0/00	0/00	0/00	0/00
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	174	165	159	154	149	144	138	132	123
32	222	213	206	200	195	189	184	177	168
28	292	281	273	267	260	254	247	239	228
24	354	335	325	317	310	303	295	287	275
20	>365	>365	>365	364	347	336	325	314	300
16	>365	>365	>365	>365	>365	>365	>365	337	313

* 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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COOP ID: 455678

Climate Division: WA 2 NWS Call Sign: Elevation: 14 Feet Lat: 48°26N Lon: 122°23W

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	778	625	600	471	321	187	101	90	208	437	614	765	5197
60	623	485	445	321	175	69	20	18	91	282	464	610	3603
57	530	401	352	233	103	27	4	4	43	191	381	517	2786
55	473	345	293	178	67	11	1	1	22	135	325	456	2307
50	330	217	155	69	13	0	0	0	2	39	201	311	1337
32	27	4	0	0	0	0	0	0	0	0	7	16	54

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	272	303	423	519	702	806	937	956	788	587	383	274	6950
55	5	0	3	7	56	128	225	244	120	9	11	1	809
57	0	0	0	2	31	83	167	185	81	2	6	0	557
60	0	0	0	0	9	35	89	105	39	0	0	0	277
65	0	0	0	0	0	3	15	23	6	0	0	0	47
70	0	0	0	0	0	0	0	0	0	0	0	0	0

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	89	112	182	279	456	563	690	705	550	341	165	92	89	201	383	662	1118	1681	2371	3076	3626	3967	4132	4224
45	30	36	65	136	301	413	535	550	401	191	71	34	30	66	131	267	568	981	1516	2066	2467	2658	2729	2763
50	0	0	8	43	152	263	380	395	253	76	16	2	0	0	8	51	203	466	846	1241	1494	1570	1586	1588
55	0	0	0	2	49	120	226	240	115	12	0	0	0	0	0	2	51	171	397	637	752	764	764	764
60	0	0	0	0	7	30	89	99	27	0	0	0	0	0	0	0	7	37	126	225	252	252	252	252
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	21	32	68	130	224	292	397	413	304	160	46	20	21	53	121	251	475	767	1164	1577	1881	2041	2087	2107

(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