

# Climatology of the United States

## No. 20

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

Station: MEDFORD AP, OR

1971-2000

COOP ID: 355429

Climate Division: OR 3

NWS Call Sign: MFR

Elevation: 1,300 Feet Lat: 42° 23N

Lon: 122° 52W

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	47.3	30.9	39.1	71+	1981	21	45.2	1995	-3	1930	11	34.2	1977	804	0	.0	.0	11.1	.3	17.8	.0
Feb	53.8	33.1	43.5	79+	1992	26	48.4	1992	6	1950	1	38.0	1989	610	0	.0	.0	19.9	.2	12.6	.0
Mar	58.3	35.9	47.1	86	1930	28	51.9	1992	16	1956	6	42.9	1976	550	0	.0	.0	26.9	.0	9.4	.0
Apr	64.3	39.0	51.6	93	1987	27	57.0	1990	21	1936	1	45.1	1975	402	2	.0	.1	29.0	.0	4.5	.0
May	72.2	44.0	58.1	103	1986	30	66.3	1992	28+	1996	4	53.3	1977	233	24	.1	2.0	31.0	.0	.6	.0
Jun	81.2	50.1	65.6	111	1992	22	70.3	1986	31	1952	12	61.0	1971	69	90	.6	7.2	30.0	.0	.0	.0
Jul	90.2	55.2	72.7	115	1946	20	76.7	1996	38+	1976	1	64.8	1993	10	253	4.9	17.5	31.0	.0	.0	.0
Aug	90.1	54.9	72.5	114	1981	8	77.2	1986	39	1962	27	67.6	1976	7	240	4.1	17.3	31.0	.0	.0	.0
Sep	83.5	48.3	65.9	110	1988	2	70.3	1991	29	1950	30	59.5	1978	69	95	1.2	9.4	30.0	.0	.1	.0
Oct	70.0	40.2	55.1	99	1980	2	61.7	1988	18	1971	29	50.8	1971	316	7	.0	1.1	30.5	.0	3.2	.0
Nov	52.8	35.0	43.9	80	1929	3	49.8	1999	10	1978	13	38.4	1985	632	0	.0	.0	19.6	@	10.9	.0
Dec	45.2	31.0	38.1	72	1962	14	43.6	1995	-6+	1972	10	31.2	1972	837	0	.0	.0	8.1	1.7	17.2	.2
Ann	67.4	41.5	54.4	115	Jul 1946	20	77.2	Aug 1986	-6+	Dec 1972	10	31.2	Dec 1972	4539	711	10.9	54.6	298.1	2.2	76.3	.2

+ 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](http://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: 1928-2001

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

085-A

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**NWS Call Sign: MFR**

**Elevation: 1,300 Feet Lat: 42°23N**

**Lon: 122°52W**

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	2.47	2.56	2.32	1958	28	5.44	1996	.19	1984	12.6	6.2	1.2	.4	.45	.67	1.03	1.36	1.71	2.08	2.50	3.01	3.69	4.78	5.83
Feb	2.10	1.76	1.87	1959	14	5.67	1983	.20	1988	12.0	5.6	1.0	.3	.39	.57	.88	1.16	1.45	1.77	2.12	2.56	3.13	4.05	4.93
Mar	1.85	1.51	1.57	1940	26	3.97	1975	.42	1992	12.4	5.3	.6	.1	.54	.72	.98	1.21	1.43	1.67	1.92	2.23	2.62	3.23	3.80
Apr	1.31	1.12	.98	1980	20	3.59	2000	.23	1986	10.2	4.2	.4	.0	.33	.46	.65	.82	.98	1.16	1.36	1.59	1.89	2.37	2.82
May	1.21	1.05	1.67	1956	18	4.26	1998	.00	1982	7.6	3.9	.5	.0	.11	.24	.44	.61	.80	.99	1.22	1.49	1.86	2.45	3.02
Jun	.68	.54	1.61	1932	10	2.62	1992	.00+	1999	4.6	2.2	.3	.0	.00	.05	.16	.26	.38	.50	.65	.84	1.10	1.53	1.95
Jul	.31	.14	1.07	1966	13	1.34	1987	.00+	1998	2.3	1.1	.1	.0	.00	.00	.00	.03	.08	.15	.24	.36	.54	.86	1.18
Aug	.52	.15	1.15	1999	10	2.83	1976	.00+	1998	2.6	1.4	.3	@	.00	.00	.00	.00	.05	.15	.30	.53	.89	1.55	2.25
Sep	.78	.52	2.80	1977	28	4.22	1977	.00+	1999	4.0	2.0	.3	.1	.00	.00	.04	.16	.31	.48	.68	.95	1.33	1.97	2.63
Oct	1.31	1.26	2.61	1950	28	3.98	1979	.00	1987	6.9	3.8	.7	.1	.05	.16	.35	.54	.75	.98	1.26	1.61	2.08	2.88	3.66
Nov	2.93	2.14	2.88	1953	22	7.67	1998	.43	1976	13.6	7.4	1.4	.4	.53	.79	1.22	1.62	2.03	2.47	2.97	3.58	4.38	5.68	6.92
Dec	2.90	2.44	3.30	1962	2	9.94	1996	.36	1976	13.4	6.9	1.6	.4	.33	.55	.96	1.36	1.80	2.28	2.84	3.55	4.50	6.07	7.61
Ann	18.37	18.24	3.30	Dec 1962	2	9.94	Dec 1996	.00+	Sep 1999	102.2	50.0	8.4	1.8	11.14	12.46	14.19	15.53	16.75	17.94	19.19	20.59	22.31	24.84	27.07

+ 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: 1928-2001

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

Complete documentation available from:  
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NWS Call Sign: MFR

Elevation: 1,300 Feet

Lat: 42° 23N

Lon: 122° 52W

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	.3	#	0	6.8	1971	13	10.5	1971	6	1971	14	#	1989	1.3	.5	.2	.1	.0	.4	.1	.1	.0
Feb	.7	.0	#	0	4.3	1974	28	5.2	1974	1+	1993	21	#	1993	1.3	.2	@	.0	.0	.1	.0	.0	.0
Mar	.6	.0	#	0	5.0	1971	16	5.0	1971	1+	1989	2	#	1989	.6	.2	@	@	.0	.1	.0	.0	.0
Apr	.0	#	0	0	.2	1975	5	.4	1975	#	1975	4	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
May	#	.0	#	0	#	1991	16	#+	1991	0	0	0	#	1996	.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	#	1984	17	#+	1984	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.4	.0	#	0	6.5	1977	21	8.5	1977	7	1977	21	#	1994	.4	.1	@	@	.0	.1	.1	@	.0
Dec	1.7	.6	#	0	3.7	1972	3	12.2	1972	6+	1972	14	2	1972	1.9	.6	.1	.0	.0	1.0	.5	.1	.0
Ann	5.0	.9	N/A	N/A	6.8	Jan 1971	13	12.2	Dec 1972	7	Nov 1977	21	2	Dec 1972	5.6	1.6	.3	.1	.0	1.7	.7	.2	.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

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**Lat: 42° 23N**

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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	6/01	5/27	5/23	5/19	5/16	5/13	5/09	5/05	4/30
32	5/17	5/10	5/05	5/01	4/27	4/23	4/19	4/14	4/08
28	4/21	4/12	4/06	3/31	3/26	3/21	3/15	3/08	2/27
24	3/20	3/10	3/03	2/25	2/19	2/13	2/07	1/31	1/21
20	2/12	2/01	1/24	1/17	1/10	1/03	12/26	12/13	0/00
16	1/30	1/12	12/26	11/30	0/00	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	9/20	9/25	9/28	10/01	10/04	10/06	10/09	10/13	10/17
32	10/03	10/09	10/13	10/16	10/20	10/23	10/26	10/30	11/05
28	10/20	10/28	11/02	11/07	11/11	11/16	11/20	11/26	12/03
24	11/05	11/14	11/21	11/26	12/01	12/07	12/12	12/19	12/28
20	11/13	11/24	12/03	12/10	12/17	12/25	1/03	1/21	0/00
16	12/03	12/25	1/13	2/13	0/00	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	159	153	148	144	140	136	132	127	121
32	203	193	186	180	175	169	163	156	147
28	261	250	243	236	230	223	217	209	198
24	328	313	303	293	285	276	267	256	241
20	>365	>365	>365	>365	347	332	319	306	290
16	>365	>365	>365	>365	>365	>365	>365	>365	333

\* 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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**Elevation: 1,300 Feet    Lat: 42° 23N    Lon: 122° 52W**

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	804	610	550	402	233	69	10	7	69	316	632	837	4539
60	648	463	401	268	129	22	1	1	31	190	483	680	3317
57	555	379	313	196	81	9	0	0	14	128	395	587	2657
55	493	325	257	156	56	4	0	0	8	94	338	525	2256
50	343	197	137	75	17	0	0	0	1	36	209	378	1393
32	17	2	0	0	0	0	0	0	0	0	6	33	58

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	228	324	471	593	815	1014	1266	1257	1016	714	356	207	8261
55	0	1	5	41	143	327	553	544	330	85	3	0	2032
57	0	0	2	25	108	271	491	482	275	58	2	0	1714
60	0	0	1	11	65	192	399	389	198	29	0	0	1284
65	0	0	0	2	24	90	253	240	95	7	0	0	711
70	0	0	0	0	6	34	130	117	31	1	0	0	319

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	65	138	234	360	577	784	1025	1017	784	475	151	56	65	203	437	797	1374	2158	3183	4200	4984	5459	5610	5666
45	21	51	114	222	422	634	870	862	634	325	62	16	21	72	186	408	830	1464	2334	3196	3830	4155	4217	4233
50	0	10	37	112	272	484	715	707	485	194	15	1	0	10	47	159	431	915	1630	2337	2822	3016	3031	3032
55	0	1	3	45	151	336	560	552	339	87	1	0	0	1	4	49	200	536	1096	1648	1987	2074	2075	2075
60	0	0	0	10	70	198	406	397	209	30	0	0	0	0	0	10	80	278	684	1081	1290	1320	1320	1320
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	30	83	148	231	357	479	628	620	485	314	70	25	30	113	261	492	849	1328	1956	2576	3061	3375	3445	3470

(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](http://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](http://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](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)