

# Climatography of the United States

No. 20

1971-2000

Station: HEPPNER, OR

COOP ID: 353827

Climate Division: OR 6

NWS Call Sign:

Elevation: 1,885 Feet Lat: 45° 22N

Lon: 119° 34W

## 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	42.1	24.8	33.5	70	1968	20	41.3	1999	-18	1930	17	16.5	1979	978	0	.0	.0	9.3	6.2	22.2	1.0
Feb	46.9	28.5	37.7	75	1995	21	45.2	1991	-18+	1950	2	25.6	1989	765	0	.0	.0	12.3	2.7	17.3	.6
Mar	54.4	33.2	43.8	78	1960	26	47.2	1992	9	1955	5	39.7	1975	656	0	.0	.0	23.2	.1	13.8	.0
Apr	61.4	37.0	49.2	89	1939	29	53.8	1990	19	1936	1	43.8	1975	475	0	.0	.0	28.5	.0	7.5	.0
May	69.4	43.0	56.2	98	1986	31	60.9+	1993	25	1954	1	52.4	1977	280	6	.0	.6	31.0	.0	.8	.0
Jun	77.5	48.6	63.1	105	1961	17	68.7	1992	32	1966	1	59.2	1991	117	58	.1	2.9	30.0	.0	.0	.0
Jul	86.2	53.2	69.7	108	1928	25	75.3	1998	35	1993	12	63.1	1993	34	180	1.3	11.2	31.0	.0	.0	.0
Aug	85.9	53.0	69.5	108	1998	5	73.7	1971	36	1964	31	65.3	1985	30	168	.7	10.1	31.0	.0	.0	.0
Sep	76.9	46.1	61.5	99+	1955	7	66.5	1998	25	1970	13	55.8	1985	160	55	@	1.8	30.0	.0	.7	.0
Oct	64.9	38.2	51.6	92	1980	5	58.8	1988	10+	1935	31	47.1	1984	418	1	.0	@	29.8	.0	5.5	.0
Nov	50.2	31.4	40.8	79+	1999	14	46.9	1999	-9	1985	23	28.7	1985	725	0	.0	.0	16.3	1.6	14.5	.2
Dec	42.1	25.9	34.0	75	1939	5	40.3	1980	-15+	1990	21	22.0	1985	961	0	.0	.0	8.9	6.5	22.8	1.1
Ann	63.2	38.6	50.9	108+	Aug 1998	5	75.3	Jul 1998	-18+	Feb 1950	2	16.5	Jan 1979	5599	468	2.1	26.6	281.3	17.1	105.1	2.9

+ 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

055-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: HEPPNER, OR**

**COOP ID: 353827**

**Climate Division: OR 6**

**NWS Call Sign:**

**Elevation: 1,885 Feet Lat: 45°22N**

**Lon: 119°34W**

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	1.42	1.36	1.34	1981	31	2.90	1998	.36	1977	11.5	4.9	.3	@	.42	.56	.76	.93	1.10	1.28	1.47	1.70	1.99	2.46	2.89
Feb	1.23	1.15	.91	1942	9	2.69	2000	.08	1988	11.5	4.2	.2	.0	.34	.46	.64	.79	.94	1.10	1.27	1.48	1.75	2.17	2.56
Mar	1.60	1.45	1.03	1983	4	3.64	1984	.81	1992	12.8	5.5	.3	@	.77	.91	1.10	1.25	1.38	1.52	1.67	1.84	2.05	2.37	2.66
Apr	1.40	1.29	1.91	1988	22	4.65	1988	.07	1977	10.3	4.5	.5	.1	.22	.34	.54	.73	.93	1.15	1.40	1.71	2.12	2.78	3.42
May	1.67	1.46	1.78	1981	25	3.45	1994	.38	1997	9.3	5.0	.7	.1	.54	.70	.93	1.13	1.32	1.52	1.74	1.99	2.32	2.83	3.30
Jun	1.09	.94	1.69	1997	4	2.75+	1997	.20+	1974	7.7	3.3	.3	@	.18	.27	.43	.58	.73	.90	1.09	1.32	1.63	2.14	2.62
Jul	.35	.28	.91	1940	27	1.39	1992	.00+	1999	3.1	1.2	.1	.0	.00	.01	.05	.10	.15	.22	.31	.42	.59	.87	1.16
Aug	.54	.25	1.27	1978	22	2.91	1978	.00+	2000	3.6	1.8	.2	@	.00	.00	.02	.09	.17	.29	.43	.63	.92	1.43	1.96
Sep	.68	.53	1.19	1966	14	2.24	1973	.00+	1993	5.0	2.4	.2	.0	.00	.00	.05	.15	.26	.41	.59	.82	1.16	1.74	2.33
Oct	1.12	.97	2.05	1957	2	2.95	1982	.02+	1988	7.4	3.2	.5	.1	.09	.16	.30	.46	.63	.83	1.06	1.36	1.77	2.46	3.14
Nov	1.77	1.85	1.70	1996	19	3.94	1973	.24	1982	13.2	5.6	.4	.1	.44	.60	.86	1.09	1.32	1.56	1.83	2.14	2.56	3.22	3.84
Dec	1.33	1.10	.92	1978	4	3.53	1973	.32	1997	11.7	4.9	.2	.0	.34	.47	.66	.83	1.00	1.18	1.37	1.61	1.91	2.40	2.85
Ann	14.20	14.19	2.05	Oct 1957	2	4.65	Apr 1988	.00+	Aug 2000	107.1	46.5	3.9	.4	10.33	11.09	12.05	12.78	13.42	14.04	14.68	15.39	16.25	17.48	18.55

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

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**Climate Division: OR 6**

**NWS Call Sign:**

**Elevation: 1,885 Feet**

**Lat: 45° 22N**

**Lon: 119° 34W**

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	4.4	3.0	1	#	7.5	1980	8	15.0	1979	10+	1993	17	5	1993	3.3	1.8	.4	.1	.0	6.5	2.9	1.1	.2
Feb	2.7	2.3	1	#	11.0	1995	13	11.0	1995	11	1995	13	3	1985	1.9	1.0	.3	@	@	2.4	.9	.3	@
Mar	.5	.0	#	#	2.0	1980	5	3.1	1991	3	1989	2	#+	1999	.6	.2	.0	.0	.0	.3	.0	.0	.0
Apr	.2	.0	#	0	2.0	1972	12	2.0+	1997	2	1997	4	#+	1998	.1	.1	.0	.0	.0	@	.0	.0	.0
May	#	.0	#	0	#	1983	8	#	1983	#	1983	8	#	1983	.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	.1	.0	#	0	3.5	1991	29	3.5	1991	1	1971	30	#+	1991	.1	.1	@	.0	.0	@	.0	.0	.0
Nov	2.3	.5	#	#	9.0	1977	22	15.0	1977	11	1977	22	2	1985	1.2	.7	.3	.1	.0	2.1	1.1	.3	@
Dec	3.8	3.3	1	#	4.0	1986	6	15.0	1983	7	1983	28	3	1985	2.9	1.7	.2	.0	.0	6.2	2.4	.4	.0
Ann	14.0	9.1	N/A	N/A	11.0	Feb 1995	13	15.0+	Dec 1983	11+	Feb 1995	13	5	Jan 1993	10.1	5.6	1.2	.2	@	17.5	7.3	2.1	.2

+ 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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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	6/15	6/08	6/04	5/31	5/27	5/24	5/20	5/15	5/09
32	5/17	5/12	5/08	5/05	5/02	4/29	4/26	4/22	4/17
28	5/03	4/26	4/20	4/16	4/12	4/08	4/03	3/29	3/22
24	4/20	4/07	3/30	3/22	3/15	3/08	3/01	2/20	2/08
20	3/25	3/12	3/02	2/22	2/15	2/07	1/30	1/20	1/04
16	3/03	2/19	2/11	2/03	1/27	1/20	1/13	1/04	12/20
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	9/11	9/16	9/20	9/23	9/26	9/29	10/02	10/05	10/10
32	9/23	9/29	10/02	10/06	10/09	10/12	10/15	10/19	10/24
28	10/06	10/11	10/16	10/19	10/23	10/26	10/30	11/03	11/09
24	10/24	10/31	11/06	11/11	11/15	11/19	11/24	11/30	12/07
20	11/04	11/13	11/19	11/25	11/30	12/05	12/11	12/17	12/28
16	11/05	11/16	11/24	12/01	12/08	12/14	12/22	12/30	1/13
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	146	137	131	126	121	116	110	104	95
32	185	176	170	164	159	154	148	141	132
28	222	212	205	199	193	187	181	174	164
24	288	273	262	253	244	235	226	215	200
20	351	324	310	298	288	278	268	256	240
16	>365	345	331	320	311	303	294	283	269

\* 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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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	978	765	656	475	280	117	34	30	160	418	725	961	5599
60	823	625	501	330	152	45	9	6	78	267	575	806	4217
57	737	541	408	248	94	20	2	2	43	187	492	713	3487
55	679	488	346	198	64	11	0	1	27	140	437	652	3043
50	536	357	200	98	18	1	0	0	7	55	306	508	2086
32	158	52	1	0	0	0	0	0	0	0	38	119	368

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	202	211	368	515	750	931	1169	1160	885	606	303	181	7281
55	11	3	0	23	101	252	456	448	222	33	11	1	1561
57	6	0	0	13	69	201	396	387	178	18	7	0	1275
60	0	0	0	5	34	136	310	298	123	5	0	0	911
65	0	0	0	0	6	58	180	168	55	1	0	0	468
70	0	0	0	0	0	17	87	75	18	0	0	0	197

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	59	79	160	286	504	690	918	910	649	367	124	56	59	138	298	584	1088	1778	2696	3606	4255	4622	4746	4802
45	21	29	63	156	351	540	763	755	499	227	56	18	21	50	113	269	620	1160	1923	2678	3177	3404	3460	3478
50	3	4	18	76	214	391	608	600	352	115	16	0	3	7	25	101	315	706	1314	1914	2266	2381	2397	2397
55	0	0	0	23	113	248	453	447	215	48	2	0	0	0	0	23	136	384	837	1284	1499	1547	1549	1549
60	0	0	0	4	47	137	310	296	112	15	0	0	0	0	0	4	51	188	498	794	906	921	921	921
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	31	44	93	177	312	429	574	575	407	234	65	26	31	75	168	345	657	1086	1660	2235	2642	2876	2941	2967

(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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## 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)