

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: HOOD RIVER EXP STN, OR

1971-2000

COOP ID: 354003

Climate Division: OR 6

NWS Call Sign:

Elevation: 500 Feet

Lat: 45°41N

Lon: 121°31W

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	40.8	27.9	34.4	63	1994	14	40.4	1994	-20	1930	21	20.5	1979	950	0	.0	.0	4.9	4.7	20.0	.4
Feb	46.2	30.0	38.1	68	1932	26	43.9	1991	-21	1950	3	28.6	1989	753	0	.0	.0	9.9	1.8	15.9	.4
Mar	54.4	34.0	44.2	81	1930	28	49.0	1992	9	1955	5	39.5	1971	644	0	.0	.0	22.9	.1	11.2	.0
Apr	61.2	38.4	49.8	90	1947	14	53.8	1990	23	1936	1	45.1	1975	455	0	.0	.0	28.4	.0	4.3	.0
May	68.7	44.3	56.5	102	1986	31	61.1	1992	26	1954	1	52.4	1977	268	6	@	.6	30.9	.0	.6	.0
Jun	74.6	49.7	62.2	105	1992	23	67.3	1992	32+	1976	3	58.7	1976	123	37	.1	1.9	30.0	.0	@	.0
Jul	81.6	53.3	67.5	105+	1941	16	71.5	1985	37+	1971	7	62.4	1993	38	115	.9	6.0	31.0	.0	.0	.0
Aug	82.3	52.1	67.2	108	1977	18	71.9	1977	36	1980	29	63.5	1995	43	111	.8	6.3	31.0	.0	.0	.0
Sep	76.1	44.3	60.2	100	1998	1	64.5	1998	26	1985	29	55.3	1985	173	29	@	1.8	30.0	.0	.8	.0
Oct	64.5	36.7	50.6	89	2001	2	55.9	1988	19	1971	29	47.3	1984	447	0	.0	.0	29.8	.0	6.7	.0
Nov	49.3	33.3	41.3	69	1999	14	45.9	1999	-5	1985	24	31.1	1985	711	0	.0	.0	15.2	.8	11.5	@
Dec	41.2	29.0	35.1	66	1982	4	40.8	1999	-10	1972	8	23.9	1985	928	0	.0	.0	4.7	3.8	19.5	.2
Ann	61.7	39.4	50.6	108	Aug 1977	18	71.9	Aug 1977	-21	Feb 1950	3	20.5	Jan 1979	5533	298	1.8	16.6	268.7	11.2	90.5	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: 1928-2001

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

058-A

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Elevation: 500 Feet Lat: 45°41N

Lon: 121°31W

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	5.39	5.97	2.48	1948	6	9.60	1998	.27	1985	17.9	11.0	3.8	1.1	1.30	1.81	2.59	3.29	3.99	4.73	5.55	6.53	7.82	9.85	11.76
Feb	4.36	4.38	3.36	1996	7	9.91	1996	.74	1973	15.6	9.4	2.7	.9	1.20	1.62	2.24	2.79	3.33	3.89	4.51	5.25	6.20	7.70	9.10
Mar	2.88	2.74	3.19	1931	31	5.96+	1997	.78	1978	15.2	8.3	1.4	.2	.96	1.24	1.64	1.97	2.30	2.64	3.00	3.43	3.98	4.84	5.63
Apr	1.81	1.74	1.20	1962	27	3.54	1996	.14	1977	12.7	5.8	.7	@	.40	.56	.83	1.07	1.31	1.57	1.86	2.20	2.66	3.38	4.07
May	1.08	.95	1.24	1949	1	3.27	1998	.06	1992	9.0	3.6	.2	.0	.21	.31	.47	.61	.76	.92	1.10	1.32	1.60	2.06	2.50
Jun	.79	.60	1.74	1981	8	2.72	1981	.06	1979	6.3	2.3	.3	.1	.09	.15	.26	.37	.49	.62	.77	.96	1.22	1.65	2.06
Jul	.31	.16	.87	1974	9	1.17	1987	.00+	2000	2.8	.9	.1	.0	.00	.01	.04	.08	.13	.19	.27	.37	.51	.75	1.00
Aug	.49	.29	1.27	1977	26	1.98	1977	.00+	2000	3.5	1.4	.2	@	.00	.00	.01	.07	.16	.26	.40	.58	.84	1.29	1.76
Sep	1.15	.88	2.63	1998	19	3.69	1982	.00+	1993	5.7	2.6	.6	.1	.00	.00	.11	.29	.50	.74	1.03	1.41	1.95	2.85	3.76
Oct	2.21	1.86	3.05	1994	27	7.45	1994	.01	1988	10.1	5.3	1.1	.3	.15	.28	.56	.86	1.20	1.59	2.07	2.67	3.51	4.94	6.35
Nov	5.35	4.95	3.00	1960	24	12.66	1984	.92	1976	19.4	12.1	3.4	.9	1.31	1.81	2.59	3.29	3.97	4.70	5.51	6.47	7.73	9.73	11.60
Dec	5.93	5.59	3.05	1964	22	15.64	1996	1.26	1976	17.7	10.8	3.7	1.3	1.57	2.13	2.99	3.75	4.49	5.27	6.13	7.16	8.49	10.59	12.56
Ann	31.75	32.31	3.36	Feb 1996	7	15.64	Dec 1996	.00+	Aug 2000	135.9	73.5	18.2	4.9	20.81	22.86	25.52	27.56	29.40	31.18	33.04	35.11	37.63	41.33	44.55

+ 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

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1971-2000

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COOP ID: 354003

Climate Division: OR 6

NWS Call Sign:

Elevation: 500 Feet

Lat: 45° 41N

Lon: 121° 31W

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	9.0	6.5	2	1	18.0	1980	10	39.3	1998	47	1980	9	10	1980	4.7	2.6	1.2	.6	.1	8.8	6.0	3.0	1.0
Feb	7.1	3.0	1	#	14.0	1990	15	37.5	1990	22	1990	16	5	1985	3.1	1.8	.9	.4	.1	5.0	3.0	1.8	.4
Mar	.9	.0	#	0	3.8	1989	2	5.8	1989	5	1993	3	1	1993	.7	.4	.1	.0	.0	.8	.3	@	.0
Apr	#	.0	#	0	#	1983	10	#+	1983	#	1975	3	#	1975	.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	.1	.0	#	0	2.0	1991	29	2.0	1991	2	1991	29	#	1991	@	@	.0	.0	.0	@	.0	.0	.0
Nov	3.5	.0	#	#	12.0	1973	4	32.0	1973	15	1985	22	3	1985	1.6	.8	.4	.3	@	1.7	1.1	.6	.2
Dec	7.4	4.5	1	#	10.3	1973	27	36.3	1983	16	1985	3	9	1985	4.1	2.4	.9	.4	@	4.9	2.1	1.3	.4
Ann	28.0	14.0	N/A	N/A	18.0	Jan 1980	10	39.3	Jan 1998	47	Jan 1980	9	10	Jan 1980	14.2	8.0	3.5	1.7	.2	21.2	12.5	6.7	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

Complete documentation available from:

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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	6/07	6/01	5/28	5/24	5/21	5/17	5/14	5/09	5/03
32	5/18	5/11	5/05	5/01	4/26	4/22	4/17	4/12	4/05
28	4/17	4/09	4/04	3/30	3/26	3/21	3/17	3/11	3/03
24	3/15	3/04	2/25	2/19	2/13	2/06	1/31	1/23	1/10
20	2/24	2/16	2/10	2/04	1/30	1/25	1/19	1/10	0/00
16	2/19	2/10	2/03	1/28	1/22	1/16	1/08	12/24	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	9/10	9/15	9/18	9/21	9/24	9/27	9/30	10/03	10/08
32	9/24	9/29	10/03	10/06	10/09	10/13	10/16	10/20	10/25
28	10/03	10/10	10/14	10/19	10/23	10/27	10/31	11/05	11/12
24	10/30	11/09	11/17	11/24	11/30	12/06	12/13	12/22	1/04
20	11/10	11/23	12/02	12/11	12/19	12/27	1/05	1/18	0/00
16	11/28	12/12	12/23	1/01	1/10	1/21	2/03	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	147	140	134	130	126	121	117	111	104
32	193	184	177	171	165	160	154	147	137
28	241	231	223	216	210	204	197	190	179
24	351	325	311	300	290	281	271	259	243
20	>365	>365	>365	344	327	313	301	288	270
16	>365	>365	>365	>365	>365	344	329	316	300

* 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	950	753	644	455	268	123	38	43	173	447	711	928	5533
60	795	613	489	308	140	45	7	9	78	293	561	773	4111
57	702	529	396	226	84	18	1	2	41	205	474	680	3358
55	640	473	336	176	54	9	0	1	23	153	418	618	2901
50	498	340	195	78	13	0	0	0	4	56	283	472	1939
32	112	31	1	0	0	0	0	0	0	0	23	84	251

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	185	201	380	535	760	904	1099	1091	847	576	301	179	7058
55	0	0	1	20	102	223	386	378	180	17	6	0	1313
57	0	0	0	11	69	172	325	318	137	7	2	0	1041
60	0	0	0	3	33	109	238	231	85	1	0	0	700
65	0	0	0	0	6	37	115	111	29	0	0	0	298
70	0	0	0	0	0	7	37	35	6	0	0	0	85

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	34	59	161	302	515	663	857	853	621	347	111	34	34	93	254	556	1071	1734	2591	3444	4065	4412	4523	4557
45	3	14	59	170	360	513	702	698	471	205	37	3	3	17	76	246	606	1119	1821	2519	2990	3195	3232	3235
50	0	0	12	74	217	364	547	543	324	94	6	0	0	0	12	86	303	667	1214	1757	2081	2175	2181	2181
55	0	0	0	27	110	223	393	388	188	31	0	0	0	0	0	27	137	360	753	1141	1329	1360	1360	1360
60	0	0	0	3	48	112	246	240	88	6	0	0	0	0	0	3	51	163	409	649	737	743	743	743
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	5	25	87	172	293	391	527	532	391	225	44	3	5	30	117	289	582	973	1500	2032	2423	2648	2692	2695

(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