

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE
IN COOPERATION WITH HOOD RIVER COUNTY CHAMBER OF COMMERCE

CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 35

LATITUDE 45° 41' N
LONGITUDE 121° 31' W
ELEV. (GROUND) 500 Feet

CLIMATOLOGICAL SUMMARY

STATION Hood River, Oregon

Means: 1941-1970

MEANS AND EXTREMES FOR PERIOD Extremes: Temperature 1890-1971 : Precipitation 1884-1971

Month	Temperature (°F)								** Mean heating degree days	Precipitation Totals (Inches)						Mean number of days					Month		
	Means			Extremes						Mean	Greatest daily	Year	Snow, Ice Pellets			Precip. .10 inch or more	Temperatures						
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year	Mean					Maximum monthly	Year	Greatest daily		Year	90° and above	Max.			Min.	
																			32° and below	32° and below		0° and below	0° and below
(a)	30	30	30	81		81		30	30	88		30	88		88		30	30	30	30	30		
Jan.	39.1	27.1	33.1	65	1919	-20	1930	989	5.50	2.83	1907	18.1	93.8	1950	27.5	1950+	11	0	6	22	1	Jan.	
Feb.	46.8	31.4	39.1	69	1901	-21	1950	725	3.65	2.59	1961	4.6	54.0	1916	22.0	1916	9	0	1	16	*	Feb.	
Mar.	53.0	33.5	43.3	81	1930	4	1891	673	3.14	3.19	1931	2.7	29.0	1894	12.0	1894	8	0	*	13	0	Mar.	
Apr.	60.8	38.2	49.5	91	1926	23	1936+	465	1.53	3.57	1960	T	T	1955+	3.0	1935	5	*	0	5	0	Apr.	
May	68.4	43.9	56.2	96	1936	26	1954	273	1.17	1.40	1910	0.0	0.0		0.0		3	1	0	1	0	May	
June	73.9	49.6	61.8	104	1961	32	1966	117	0.74	1.42	1947	T	T	1954	T	1954	2	2	0	*	0	June	
July	80.7	52.9	66.8	106	1911	35	1917	28	0.17	0.95	1923	0.0	0.0		0.0		1	5	0	0	0	July	
Aug.	79.8	52.1	66.0	104	1920	35	1908	37	0.40	0.80	1956	0.0	0.0		0.0		1	4	0	0	0	Aug.	
Sep.	74.9	46.3	60.6	98	1938	24	1926	151	0.85	1.50	1911	0.0	0.0		0.0		2	2	0	*	0	Sep.	
Oct.	62.9	39.5	51.2	89	1908	17	1919	428	2.90	4.14	1893	0.0	5.0	1919	5.0	1919	7	0	0	5	0	Oct.	
Nov.	49.0	33.9	41.5	73	1901	-6	1896	705	5.11	4.10	1896	1.8	44.5	1896	21.5	1921	11	0	1	12	*	Nov.	
Dec.	41.9	30.8	36.4	66	1917	-27	1919	887	5.49	3.05	1964	7.7	51.0	1895	30.0	1895	12	0	3	19	*	Dec.	
Year	60.9	40.0	50.5	106	1911	-27	1919	5478	30.65	4.14	1893	34.9	93.8	1950	30.0	1895	72	14	11	93	1	Year	

(a) Average length of record, years.

+ Also on earlier dates, months, or years.

T Trace, an amount too small to measure.

* Less than one half.

** Base 65°F

CLIMATE OF HOOD RIVER, OREGON

The city of Hood River lies along the south bank of the Columbia River where its meandering westward course forms the north central border of Oregon. The Columbia Gorge area extends westward from this point through the heavily forested Cascade Mountains for another 50 miles. Much of that distance its walls are sheer cliffs or extremely steep wooded slopes whose elevation increases 2,000-3,000 feet in less than a mile and at the bases are only slightly more than the width of the river apart. Five miles east of Hood River the walls begin breaking up for long stretches into low gently rolling foothills, and some 35 miles eastward give way to the grass-covered plains area of the Columbia Basin. The Hood River Valley forms a gap four miles wide in the walls of the Columbia Gorge and gradually ascends southward through gently rolling foothills and bench lands devoted to crops and orchards for some 25 miles to the headwater areas on the north slopes of Mt. Hood.

The Hood River area borders between two very different climatic zones, and is adjacent to the Columbia Gorge which affords a nearly sea level channel through an otherwise natural barrier between the two. Large continental air masses occur to the east which are relatively dry and subject to extreme radiational cooling in winter and heating in summer. Hood River is only 120 miles east of the Pacific Ocean, but the predominately marine air masses that cross this area are greatly modified during their inland passage over the Coastal and Cascade ranges. The seasonal characteristics are well defined and changes between seasons are gradual. The moderate precipitation is greatest in winter when it occurs on half of the days and only 15% of the moisture falls as light snow. Sunshine occurs 30-40% in winter and increases to 80% by midsummer when occasional hot spells are of short duration. Very light moisture from mid June to late September is supplemented by extensive sprinkler irrigation systems. Open fall weather allows usual completion of harvesting activities before increased cloudiness and moisture is established by late November.

Annual precipitation of Hood River County ranges from 25 inches at the northeast border up to 45 inches in the Upper Hood River Valley with over 100 inches of moisture on the upper slopes of Mt. Hood which remains snow capped year around mostly above 6,500 feet elevation. The city of Hood River receives 48% of its 31-inch annual total in winter, 19% in spring, 5% in summer, and 28% in fall. Individual years have ranged from 15.76 inches in 1944 up to 54.17 inches in 1893. At least 2 dry months occur in 1 year out of 7 while wet months with over 10 inches of moisture occur in 1 year out of 4. Wettest month of record was 16.55 inches in November 1896. Snowfall of 1 inch or more averages 9 days per season with at least 1 of the days providing 6 inches or more. Greatest 2-day

total was 40 inches and greatest 3-day storm provided 43 inches of snow in January 1950. Greatest snow depth was 49 inches in February 1916 when Parkdale also had a record depth of 62 inches. Most of the time snow cover does not exceed 4 or 5 inches and melts within a few days. During colder periods some snow cover may persist for as long as a month.

Moderate days and slightly cool nights are characteristic of the Hood River area. The annual cycle of temperature provides a 34-degree spread between the mean temperature of January and July. Winter and summer extremes are eased by a 24-hour range of temperature which averages from 11 degrees in December up to a 28-degree range in July. Annual temperature extremes (graphed on the reverse side) show that only 1 year out of 5 will be colder than -4° or warmer than 103°. The 169 day freeze-free season as observed at the Hood River Experiment Station is based on the average date of last 32° or lower in spring and that of the first occurrence in fall. Latest spring freezes have varied from March 3 in 1892 to June 1 in 1966. Early morning orchard heating is required to protect fruit blossoms during late spring in many years. First fall freezes have varied from September 12 in 1921 to November 20 in 1897.

Temp.	STATISTICAL LIKELIHOOD (IN PERCENT) THAT VARIOUS TEMPERATURES WILL OCCUR IN SPRING AFTER DATES INDICATED								
	90%	80%	70%	60%	50%	40%	30%	20%	10%
24°	1/27	2/5	2/12	2/18	2/23	3/1	3/6	3/13	3/22
28°	3/13	3/20	3/25	3/29	4/2	4/6	4/10	4/15	4/22
32°	4/10	4/16	4/21	4/25	4/28	5/1	5/5	5/10	5/16

Temp.	STATISTICAL LIKELIHOOD (IN PERCENT) THAT VARIOUS TEMPERATURES WILL OCCUR IN FALL BEFORE DATES INDICATED								
	10%	20%	30%	40%	50%	60%	70%	80%	90%
32°	9/25	10/2	10/7	10/11	10/15	10/19	10/23	10/27	11/3
28°	10/14	10/21	10/25	10/29	11/2	11/6	11/10	11/14	11/16
24°	11/2	11/10	11/16	11/21	11/26	12/1	12/6	12/12	12/20

Climatological interpolations provide these additional details for the Hood River area: Gorge winds prevail from the east from November through February and the westerlies dominate from March through October. Hourly wind speeds average from 5 m.p.h. in January to about 12 m.p.h. in July. Fastest 1-minute average winds of 55 m.p.h. have occurred in the Gorge and such winds of 90-95 m.p.h. have a 100-year recurrence interval. Average cloudiness of about 60% provides about 100 clear days per year and 75 partly cloudy days. Many of the remaining 175 cloudy days provide some sun- (Continued on reverse side)

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M-10 Multnomah Bldg., Portland, Oregon 97204

Revised
November 1972

Average Temperature (°F)

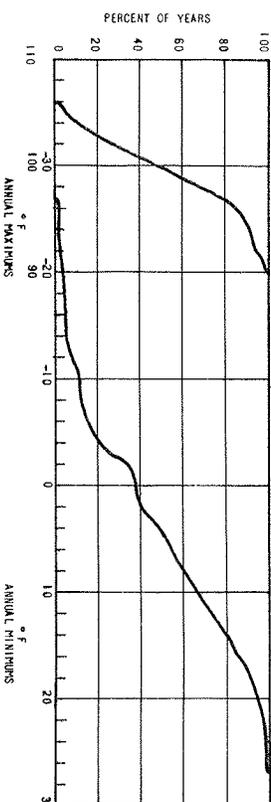
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1942	26.7	39.0	44.2	51.4	54.8	60.4	67.8	68.2	61.6	53.0	39.4	37.4	50.3
1943	27.2	37.6	42.3	52.2	53.8	59.4	66.6	63.8	51.0	41.2	35.0	49.4	50.4
1944	33.0	38.6	45.4	49.2	56.1	60.4	67.4	65.2	54.8	40.3	33.2	50.4	50.4
1945	38.6	40.1	41.7	48.6	56.6	60.3	68.3	66.6	58.6	39.6	34.0	50.4	50.4
1946	37.4	39.2	45.8	49.4	57.6	59.4	66.2	63.8	59.4	47.8	38.9	50.3	50.3
1947	32.8	42.0	47.4	52.4	61.2	60.5	66.2	64.6	61.6	51.8	43.8	38.5	51.9
1948	35.6	35.4	41.3	47.7	55.7	66.0	64.8	64.8	58.2	51.0	32.5	49.5	49.5
1949	20.9	35.0	43.8	51.9	58.8	61.7	65.5	65.5	61.5	45.6	38.1	49.6	49.6
1950	19.9	32.6	41.8	47.6	54.8	61.9	67.9	68.2	61.3	50.5	42.3	49.1	49.1
1951	34.1	38.0	40.4	51.4	56.2	63.6	67.2	65.5	61.3	50.6	40.5	33.2	50.1
1952	29.0	37.6	42.9	51.0	56.5	59.4	69.0	67.8	63.4	56.7	36.0	35.9	50.4
1953	44.3	42.0	44.8	49.1	53.7	57.4	64.4	66.1	61.8	53.3	44.1	41.2	51.9
1954	33.2	38.3	41.8	49.4	57.9	59.0	62.8	62.8	59.0	49.0	46.3	36.2	49.8
1955	56.4	39.0	39.6	44.5	53.8	61.9	62.3	65.3	59.8	51.1	35.4	33.6	48.6
1956	32.4	31.2	41.5	51.1	59.3	59.3	68.1	66.0	60.6	49.7	39.9	37.0	49.7
1957	21.2	36.4	42.5	51.0	59.1	62.3	63.9	63.4	63.6	50.1	41.2	39.4	49.5
1958	38.6	44.6	42.8	48.9	52.4	66.0	71.1	69.7	60.9	52.4	40.9	39.7	53.2
1959	35.9	38.1	44.0	50.8	53.5	62.6	68.1	66.3	59.3	52.8	39.1	36.9	50.6
1960	29.8	39.2	42.8	49.4	53.1	63.4	69.2	64.3	59.9	52.9	42.1	33.8	50.0
1961	37.3	43.2	45.0	48.8	55.2	66.3	68.1	69.8	56.7	57.7	37.7	31.3	51.3
1962	35.3	38.7	41.0	52.6	51.6	61.0	64.8	64.6	59.7	51.6	44.5	39.4	50.4
1963	31.6	41.4	44.2	46.8	56.1	60.9	65.1	64.5	64.5	52.5	43.4	33.5	50.2
1964	38.5	41.0	42.5	47.6	53.1	59.0	65.0	62.8	57.6	57.6	38.8	31.5	48.9
1965	35.7	41.5	43.5	50.8	53.5	61.0	67.9	67.2	57.7	53.8	45.1	35.2	51.1
1966	35.6	39.4	43.0	50.8	56.9	60.2	64.9	65.6	62.3	50.6	44.1	39.1	51.0
1967	41.0	41.7	42.1	45.7	56.2	65.5	69.0	71.2	65.4	52.4	42.9	37.3	52.5
1968	35.8	42.2	47.5	47.6	55.8	61.9	67.9	64.4	61.0	48.6	42.9	34.2	50.8
1969	25.5	36.1	44.8	49.4	58.9	66.1	65.9	64.7	61.3	43.2	36.6	50.1	50.1
1970	33.9	42.5	44.0	46.5	55.6	66.5	67.3	67.3	56.6	48.7	41.5	34.9	50.4
1971	37.3	41.0	39.6	47.2	56.9	58.2	68.1	69.2	56.5	49.3	41.4	36.8	50.1

CLIMATE OF HOOD RIVER, OREGON (Continued)

shine through thin overcast. Early morning relative humidity averages from 70-75% in summer and near 85% in winter while mid-afternoon values vary from 40-45% in summer and near 75% in January. Lake evaporation averages 29 inches annually for the county with 78% of this loss occurring from May through October. The rolling foothills and bench lands of the area are largely devoted to orchards of apples, pears, cherries and other fruits. Timber harvested from the surrounding Cascades is milled locally. There are 36 manufacturing firms in the area which include 8 food pro-

BELOW IS SHOWN GRAPHICALLY THE PERCENT OF YEARS MAXIMUM AND MINIMUM TEMPERATURES HAVE BEEN REACHED AT HOOD RIVER DURING THE PERIOD 1952 - 1971.

FIGURES ACROSS THE BOTTOM OF THE GRAPH INDICATE THE RANGE OF VALUES INTO WHICH THE HIGHEST AND LOWEST ANNUAL TEMPERATURES HAVE BEEN GROUPED. THE VERTICAL VALUES INDICATE THE PERCENT OF YEARS TEMPERATURES AT LEAST THAT HIGH OR THAT LOW HAVE BEEN REACHED.



Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1942	1.74	4.38	1.15	1.06	2.01	0.78	0.13	0.21	0.00	1.65	12.55	10.68	36.32
1943	5.20	4.31	4.24	2.29	0.58	0.75	0.01	0.33	0.00	5.26	27.07	1.55	27.07
1944	2.12	2.38	0.78	1.55	0.98	1.11	0.00	T	1.61	0.58	3.70	0.97	15.76
1945	3.26	3.73	3.75	1.62	2.90	0.08	0.02	T	0.76	1.32	7.95	6.66	32.05
1946	5.65	4.26	3.12	0.94	0.58	1.52	0.66	0.20	0.32	3.64	4.95	4.01	50.43
1947	4.31	2.17	2.93	1.68	0.03	2.64	0.68	0.19	1.74	7.63	2.63	3.61	29.64
1948	7.94	4.77	2.53	1.89	2.30	1.70	0.74	0.54	2.20	1.58	7.72	9.01	42.92
1949	1.06	3.91	2.08	0.60	1.65	0.52	0.16	0.09	1.16	1.82	5.49	3.36	28.48
1950	9.16	5.21	5.21	1.34	0.29	0.29	0.16	0.17	0.81	6.69	7.02	4.36	38.91
1951	7.44	2.94	3.91	0.60	1.14	0.79	0.01	0.49	0.98	5.19	5.50	5.71	34.50
1952	3.18	1.94	1.67	0.20	0.80	1.38	0.00	0.00	0.35	0.01	6.20	16.68	14.67
1953	11.75	2.67	2.74	1.45	1.20	0.42	T	0.62	0.35	0.68	5.36	7.33	34.57
1954	10.76	4.17	1.84	1.70	1.48	1.51	0.26	0.27	0.47	2.46	2.73	3.28	50.95
1955	5.45	2.01	4.30	3.12	0.66	0.21	0.72	0.00	1.84	6.19	6.12	7.73	34.65
1956	9.43	2.16	3.34	0.18	0.95	0.61	0.00	0.00	0.66	2.88	1.33	3.20	26.05
1957	1.53	4.57	6.81	1.42	0.90	0.47	0.18	0.36	0.56	2.93	2.41	9.45	31.59
1958	7.41	6.47	1.88	3.38	0.71	1.58	0.06	0.55	1.51	8.56	3.90	36.01	36.01
1959	5.12	2.83	4.33	0.96	0.89	0.54	0.04	0.03	2.43	3.78	1.56	23.96	23.96
1960	3.42	4.18	6.56	3.57	2.85	0.38	0.00	0.69	0.21	1.97	10.26	2.62	36.71
1961	3.69	9.96	5.62	1.88	0.98	0.18	0.16	0.23	1.36	2.62	4.40	6.68	37.36
1962	0.66	2.55	5.60	2.80	2.62	0.11	0.00	1.09	1.67	4.10	6.27	3.29	30.76
1963	1.13	4.09	4.39	2.54	1.22	0.20	0.16	0.07	0.76	1.49	6.28	3.55	25.88
1964	8.07	0.70	3.15	1.02	0.54	1.52	0.20	0.33	0.15	1.48	14.94	14.17	37.83
1965	6.19	1.55	1.13	1.95	1.08	0.36	0.14	1.20	0.04	1.15	5.25	4.17	24.19
1966	7.58	1.41	3.24	0.30	0.47	0.62	0.47	0.03	0.62	2.91	4.21	5.45	27.31
1967	5.99	1.77	2.59	1.45	0.11	0.26	0.01	0.61	5.25	2.72	3.57	24.33	24.33
1968	3.78	6.91	1.62	0.84	1.23	0.15	0.09	2.64	0.80	4.14	6.94	7.09	36.23
1969	7.95	2.45	1.47	1.07	1.05	0.92	0.03	0.07	0.86	2.19	7.13	26.45	26.45
1970	12.94	3.52	1.45	1.93	0.51	0.33	0.06	0.00	0.53	2.43	6.36	6.42	36.48
1971	5.89	2.60	5.96	1.20	0.97	1.70	0.03	0.09	1.92	2.39	4.57	5.28	32.60

ducers, 6 lumber and wood products companies and other diverse light manufacturing. Hood River is the gateway to 3 major ski and winter sport areas on Mt. Hood, affords many other outdoor recreational opportunities such as: hiking, climbing, hunting, sport fishing, boating, golf, and outstanding scenic viewing. Additional relaxation from picknicking and camping can be enjoyed at 6 nearby State parks and 7 forest camps.

STATION HISTORY

DR. F. G. GARRETT, HOOD RIVER'S FIRST OBSERVER, MAINTAINED WEATHER RECORDS FOR A NUMBER OF YEARS ON AN IRREGULAR BASIS AT HIS RANCH HOME APPROXIMATELY 3 MILES SOUTHWEST OF HOOD RIVER AND AT ELEVATION 300 FEET. THE RECORDS WERE VERY INCOMPLETE AND THE STATION WAS RELOCATED ON MARCH 11, 1910, WITH JOSEPH HENST AS THE OBSERVER. HE CARRIED THIS WORK UNTIL MAY 2, 1914, WHEN HE MOVED TO HOOD RIVER RECORDS ARE LISTED BELOW TOGETHER WITH THEIR PERIOD OF SERVICE AND, WHERE KNOWN, THE LOCATION OF THE STATION.

MR. F. E. FRENKEL, MAY 9, 1914, TO JUNE 30, 1917, THE ONLY INFORMATION AS TO LOCATION IS "ONE MILE SOUTH OF THE COLUMBIA RIVER AT 200 FEET ELEVATION."

MR. H. L. HASBROUCK, JULY 1, 1917, TO AUGUST 31, 1912, 3.5 MILES SOUTHWEST OF HOOD RIVER AT AN ELEVATION OF 300 FEET.

MR. EDWARD W. BIRGE, SEPTEMBER 1, 1912, TO JUNE 30, 1919, AT HIS RANCH 3 MILES SOUTH OF HOOD RIVER WITH 350 FEET ELEVATION.

MR. LEROY ORLUS, JULY 1, 1919, TO MAY 12, 1923, AT HIS RANCH WHERE HE WAS ALSO THE OFFICE OF THE HOOD RIVER EXPERIMENT STATION.

MR. LEROY ORLUS, MAY 12, 1923, TO FEBRUARY 1, 1926, AT HIS RANCH APPROXIMATELY 1.5 TO 2.0 MILES WEST SOUTHWEST OF ITS PRESENT LOCATION AND ONLY A FEW HUNDRED FEET FROM THE LOCATION WHEN MR. H. L. HASBROUCK WAS THE OBSERVER. ITS ELEVATION WAS APPROXIMATELY 275 FEET.

HOOD RIVER EXPERIMENT STATION WAS OFFICIALLY DESIGNATED THE OBSERVER ON DECEMBER 1, 1926, AND CONTINUES AS SUCH TODAY AT ELEVATION 300 FEET AND 3 MILES SOUTH OF THE STATION. THE STATION WAS RELOCATED TO THE HOOD RIVER EXPERIMENT STATION ON DECEMBER 1, 1926 UNTIL FEBRUARY 29, 1949, WITH MR. W. L. MEYER AS OBSERVER. SINCE JULY 1, 1952, MR. WALTER M. MCLENTIN, SUPERINTENDENT, AND HIS STAFF HAVE CONTINUED THE HIGH QUALITY RECORDS.

TEMPERATURE AND PRECIPITATION HAVE BEEN TAKEN THROUGHOUT THE ENTIRE PERIOD. ON AUGUST 5, 1941, A METEORING RAIN GAGE WAS RELOCATED AT THAT TIME 2.2 MILES SOUTHWEST OF THE HOOD RIVER-TODDEN BRIDGE AT ELEVATION 383 FEET WHERE IT REMAINS TODAY AND IS OPERATED BY BRUCE O'PAK. ALL RECORDS OF THE PRESENT STATION HAVE BEEN KEPT AT THE HOOD RIVER EXPERIMENT STATION. ELEVATIONS AND WINDS BUT FOR THE PERIOD FROM DECEMBER 1926, TO PRESENT THAT TOO HAS BEEN UNCHANGED, OR PRACTICALLY SO.