U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH MCMINNVILLE CHAMBER OF COMMERCE
CLIMATOGRAPHY OF THE UNITED STATES NO. 20 — 35

LATITUDE 45° 13' N
LONGITUDE 123° 11' W
ELEV. (GROUND) 150 Ft.

CLIMATOLOGICAL SUMMARY

STATION : MCMINNVILLE, OREGON

MEANS AND EXTREMES FOR PERIOD# 1917-1955

Month	Temperature (°F) Means: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	** Mean degree days	Precipitation Totals (Inches): Mean	Greatest daily	Year	Snow, Sleet: Mean	Maximum monthly	Year	Greatest daily	Year	Mean number of days: Precip. .10 inch or more	Temperatures: Max. 90° and above	Max. 32° and below	Min. 32° and below	Min. 0° and below	Month
(a)	30	30	30	30		30		30	30	30		30	30		30		30	30	30	30	30	
Jan.	45.2	32.1	38.7	69	1952+	-15	1956	815	6.36	2.05	1920	5.2	47.0	1950	14.0	1930	14	0	2	15	*	Jan.
Feb.	50.4	34.4	42.4	69	1952+	12	1929+	633	5.63	2.79	1949	1.1	7.0	1949+	7.0	1937	12	0	*	11	0	Feb.
Mar.	56.2	36.2	46.2	87	1930+	19	1952	583	3.97	2.50	1951	0.9	23.6	1951	7.0	1951	10	0	0	9	0	Mar.
Apr.	63.1	38.9	51.0	99	1926	25	1952	420	2.21	1.54	1929	T	T	1955+	T	1955+	7	*	0	4	0	Apr.
May	70.2	42.8	56.5	100	1922	26	1952	267	1.65	1.24	1949	0.0	0.0		0.0		5	1	0	1	0	May
June	76.3	46.7	61.5	110	1925	33	1955+	126	1.15	1.71	1927	0.0	0.0		0.0		4	3	0	0	0	June
July	84.5	49.1	66.8	110	1926+	34	1955	25	0.35	1.16	1923	0.0	0.0		0.0		1	9	0	0	0	July
Aug.	83.2	48.9	66.1	108	1927	30	1955	34	0.46	0.59	1924	0.0	0.0		0.0		1	8	0	*	0	Aug.
Sep.	77.5	46.6	62.1	106	1922	31	1955	123	1.70	1.61	1945	0.0	0.0		0.0		4	4	0	*	0	Sep.
Oct.	65.4	41.9	53.7	90	1952+	20	1917	350	3.43	2.38	1955	T	T	1950	T	1950	8	*	0	3	0	Oct.
Nov.	53.3	37.2	45.3	80	1923	9	1955	591	6.62	3.30	1921	0.2	5.5	1955	4.5	1955	12	0	*	7	0	Nov.
Dec.	47.6	34.3	41.0	72	1917	-24	1919	744	7.36	3.67	1937	1.1	24.0	1919	14.0	1919	14	0	1	12	*	Dec.
Year	64.4	40.8	52.6	110	Jul. 1926+	-24	Dec. 1919	4711	40.89	3.67	Dec. 1937	8.5	47.0	Jan. 1950	14.0	Jan. 1930+	92	25	3	62	*	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F

+ Also on earlier dates, months, or years.

* Less than one half.

See Station History for missing or incomplete years.

CLIMATE OF MCMINNVILLE, OREGON

McMinnville lies in the lower end of the Yamhill Valley where it merges with the much larger valley of the Willamette River. Ranges of hills or low mountains surround the city to the north, south and west but to the east the broad, level Willamette Valley extends some sixty miles to the foothills that mark the beginning of the Cascade Range. The Yamhill River skirts the southeastern edge of the city as it follows a meandering, northeasterly course from the Coast Range to enter the Willamette about ten airline miles east of McMinnville. Directly south of the city some three miles is the northern end of the Eola Hills rising 800 to 1,000 feet above the valley floor. Between three and four miles to the west, foothills of the Coast Range begin their gradual ascent to their crest ridge largely between 2,000 and 3,000 feet above sea level. To the north, a range of low hills separates the Yamhill Valley from that of the Tualatin.

While McMinnville is only thirty-five airline miles from the Pacific Ocean, shielding afforded by the Coast Range protects it from a maritime climate. To the east, the Cascade Mountains serve equally well as a buffer against the strong continental effects. Airflow across this area is predominately from the west, and the Pacific does greatly moderate both the colder temperatures of winter and heat of summer. The more extreme temperatures that do occasionally occur are linked with the invasion of an easterly airflow through the Columbia Gorge and other east-west passes through the Cascade Mountains. The winter months are comparatively cloudy, the sun shining only about 25% to 35% of the time possible, but the very mild temperatures that usually prevail permit outdoor activities in comfort most any time of the year. Late spring, summer and early fall months are generally sunny with warm but not hot days and cool nights. During the period from the establishment of the station in 1887 through 1955, extreme temperatures have ranged from 110° above zero to 24° below. However, in 75% of the years sufficiently complete to permit determination of an annual maximum and minimum the highest temperature recorded has not gone above 103°, or the lowest dropped below 9° above zero. Even these extremes persist for only a day or two at a time--there is, on the average, less than three days a year with temperatures of 100° or higher and only in about one year in twenty have temperatures gone as low as 0°. The result is a mild climate with only about 28° difference between the mean temperature of January, the coldest month, and July, the warmest. Annual extremes have been shown graphically on the reverse. The average dates of the last occurrence in spring and first in fall of temperatures of 32° or less, based on a 30-year record, are respectively April 30th and October 17th giving this area an average growing season of 170 days.

The McMinnville area, in common with all the Willamette Valley, has a very definite winter rainfall climate. Of the annual precipitation 73% falls during the five months November through March, and only 5% in the three summer months. Annual totals for the 62 years for which complete yearly amounts are available have ranged from a high of 64.92 inches to a low of 27.70. On an average, less than 2% of this precipitation falls in the form of snow. While seasonal totals have been as high as 48.5 inches, there have been a number of years with no measurable snowfall. Only rarely do falls of more than 3 or 4 inches occur, and this usually melts in a matter of hours, or at most within two or three days. The November maximums of both daily and monthly amounts shown in the table on the reverse as occurring in 1955 are approximations. November figures for snowfall that year were incomplete, but from data available it is reasonably certain that amounts of at least this much occurred. Since they greatly exceeded any previous November record, they were used.

In turning to the more violent phases of weather in this area thunderstorms occur on an average of six to eight times a year and are occasionally accompanied by hail, though seldom is either severe enough to cause any significant damage. In the entire history of the Willamette Valley less than a dozen true tornadoes have been recorded, and not one of them was more than a few yards in width or touched the ground at a distance of more than four or five hundred feet. Their combined damage was also insignificant. On an average of perhaps two or three times a year fairly strong winds, usually from a southerly direction, move through the valley. The more violent of these may reach velocities of 60-70 miles per hour in gusts, and cause fairly widespread power and telephone service interruptions. Occasionally some standing timber is blown down, and scattered damage is caused other property. Once in every four or five years on the average fairly severe ice storms occur. Generally these do no more than make driving hazardous for two or three days, though one of them occasionally becomes heavy enough to snarl power and communication lines.

The Willamette Valley is some 160 miles long, and from 30 to 60 miles in width. It, together with the lower reaches of its major tributaries, which include the Yamhill, compromise some of the richest farm land in Oregon. Its climate and soil are suitable to a widely diversified and highly intensified farm program. Yamhill County, of which McMinnville is the county seat, has an annual farm income of between $15,000,000 and $20,000,000. This agriculture includes the largest acreage of walnuts of any county in the state, a wide variety of vegetables grown for both the fresh and processing markets, a considerable acreage of small grains, and a number of seed crops including specialty grasses, clover, Australian peas, and vetch. Also grown on firm commercial basis are both grass and alfalfa hay, cane and strawberries, filberts, cherries, prunes, grapes, pears, and many other field and orchard crops. Poultry does well here and the raising of chickens and turkeys for both eggs and meat contributes well over a million dollars annually to the county's agricultural income.

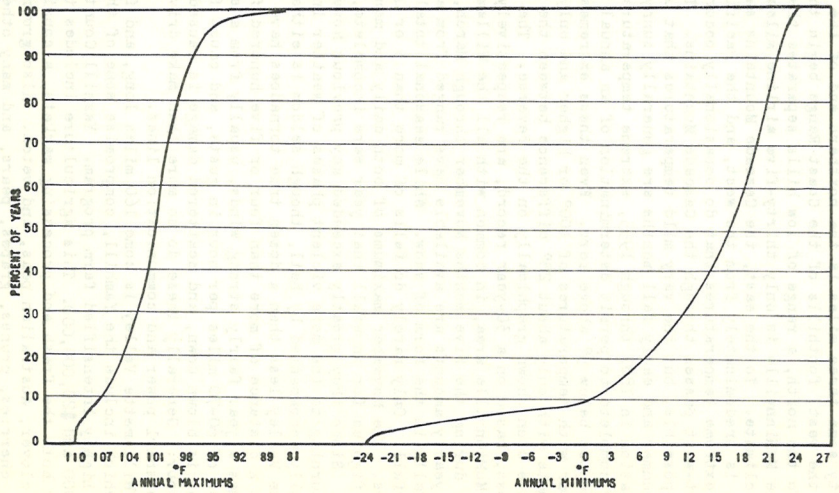
Gilbert L. Sternes, State Climatologist
Weather Bureau Office, Portland, Oregon

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1917	39.0	40.2	41.2	47.6	53.4	59.8	68.0	68.8	61.6	54.4	47.4	46.3	52.3
1918	44.7	41.4	45.8	50.6	53.4	64.6	67.6	65.0	65.4	56.0	46.7	42.2	53.6
1919	40.2	41.8	47.1	51.2	55.2	58.5	66.3	66.6	61.4	49.4	44.8	32.6	51.3
1922	37.0	39.9	42.5	47.4	56.8	66.2	69.8	68.0	65.8	54.6	44.0	39.0	52.6
1923	42.8	38.2	47.0	52.8	57.0	62.7	69.4	68.6	63.6	55.6	49.8	42.2	54.1
1924	38.4	47.4	46.6	53.5	60.4	64.5	69.3	68.1	64.0	54.6	44.7	36.6	54.0
1925	44.6	46.0	47.2	53.2	60.0	64.2	71.0	66.2	62.4	54.7	45.0	45.6	55.0
1926	41.8	47.6	53.3	58.6	56.5	65.8	69.6	67.0	61.8	57.2	47.2	40.2	55.6
1927	39.6	44.8	46.0	50.6	52.6	62.6	67.2	67.3	62.3	54.4	48.8	37.3	52.8
1928	38.6	43.0	50.4	49.8	59.6	60.9	68.4	66.4	61.6	53.9	45.0	38.6	53.0
1929	35.1	37.0	47.0	48.6	56.6	61.6	67.4	66.9	64.8	57.4	41.9	43.5	52.3
1930	28.8	44.8	49.0	54.5	52.9	60.1	65.5	69.3	62.0	52.1	44.6	38.9	51.9
1931	42.6	44.0	47.0	53.6	62.2	63.2	70.8	69.4	61.8	53.6	42.7	39.1	54.2
1937	29.3	40.0	48.4	47.3	56.5	62.4	67.0	64.0	61.6	56.6	48.2	42.3	52.0
1938	39.4	42.0	44.0	51.8	56.8	64.0	69.2	63.4	65.0	54.4	43.3	41.8	52.9
1939	41.6	39.6	47.4	53.3	56.8	59.8	66.5	66.3	62.7	54.8	45.8	44.0	53.2
1940	40.7	45.6	48.8	52.0	59.0	63.0	65.6	66.8	62.6	56.3	43.4	42.6	53.9
1941	42.7	46.4	51.9	52.1	56.2	60.4	69.3	66.1	59.0	52.7	45.6	41.8	53.7
1942	36.2	42.1	45.0	50.6	54.7	59.0	66.6	68.6	61.0	54.0	44.0	42.6	52.0
1945	42.5	44.2	43.9	49.0	57.8	60.4	66.0	65.7	59.6	52.8	44.8	41.2	52.3
1946	39.2	42.0	45.7	50.0	58.4	59.0	65.8	65.2	59.7	49.0	43.2	41.8	51.6
1947	36.5	45.4	49.8	53.3	59.8	59.8	63.4	63.2	62.3	53.2	46.2	41.0	52.8
1948	38.9	40.2	44.4	47.8	55.4	64.2	64.4	64.2	60.0	51.2	42.9	37.0	50.9
1949	29.3	39.4	46.4	52.8	59.1	61.5	64.4	64.8	63.2	48.1	47.8	40.6	51.4
1950	29.1	40.5	44.9	49.1	54.2	61.9	65.6	67.4	60.1	50.8	45.5	46.9	51.3
1951	38.5	42.5	40.9	51.7	55.4	62.7	65.7	64.0	62.7	52.7	44.7	37.4	51.6
1952	36.3	39.1	43.8	51.3	54.6	58.4	67.1	65.6	63.4	56.8	39.9	41.3	51.5
1953	46.6	42.9	45.0	49.8	54.5	57.9	63.3	64.4	61.5	53.3	47.4	43.0	52.5
1954	40.5	43.6	44.0	49.7	56.1	56.6	62.0	62.2	58.9	51.9	48.8	40.8	51.3
1955	38.4	40.6	41.7	46.3	52.5	59.2	62.3	61.4	59.3	53.6	43.5	40.9	50.0

BELOW IS SHOWN GRAPHICALLY THE PERCENT OF YEARS MAXIMUM AND MINIMUM TEMPERATURES WITHIN RANGES OF THREE DEGREES HAVE BEEN REACHED DURING THE PERIOD 1889-1955.

(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
1921	8.00	6.61	4.73	0.97	0.85	0.76	0.00	0.10	3.78	2.86	10.99	4.08	43.73
1922	3.03	3.83	5.25	1.42	1.07	0.24	0.00	0.77	1.88	4.89	2.61	9.31	34.30
1923	11.02	2.23	1.75	1.21	1.19	0.87	1.42	0.23	1.24	1.58	3.97	6.75	33.46
1924	3.44	4.23	2.10	0.67	0.58	0.33	0.00	0.81	1.90	6.16	8.38	6.13	34.73
1925	7.15	7.92	1.22	1.43	1.12	0.84	0.00	1.22	1.01	0.00	6.11	6.67	34.69
1926	4.04	9.92	0.57	0.91	2.60	0.09	0.00	1.54	1.71	4.12	10.20	5.48	41.18
1927	9.69	7.67	2.67	1.62	2.53	1.65	0.02	0.32	3.66	3.14	9.12	3.19	45.28
1928	6.48	1.60	9.26	4.59	1.49	0.40	0.38	0.00	1.04	1.39	6.22	7.65	40.50
1929	3.16	0.75	2.32	4.28	0.94	1.87	T	0.19	0.17	0.98	0.64	9.22	24.52
1930	3.30	5.99	1.77	2.35	2.07	0.73	0.10	0.00	2.29	1.42	3.52	3.10	26.64
1931	6.51	2.78	7.45	2.39	1.32	2.56	0.00	0.00	2.35	4.88	7.48	9.55	47.27
1936	11.08	5.24	3.08	0.56	3.22	1.72	0.67	0.03	0.97	0.22	0.42	6.97	34.18
1937	4.61	6.89	3.12	7.07	0.87	2.93	0.14	0.61	1.43	2.79	11.57	15.73	57.76
1938	5.60	8.34	8.34	1.49	0.34	0.04	0.27	0.05	1.02	2.63	4.64	4.34	37.10
1939	4.47	5.73	2.15	0.33	0.75	0.99	0.24	0.84	0.35	2.81	1.39	9.25	29.30
1940	4.00	12.49	4.96	2.65	2.08	0.04	0.29	T	2.43	4.15	5.23	5.67	43.99
1941	5.90	1.56	1.41	1.91	2.91	0.79	T	0.89	2.80	2.68	6.08	10.19	37.12
1942	5.81	4.40	1.51	1.75	3.76	1.68	0.84	0.08	0.05	3.11	15.94	12.25	51.18
1944	5.10	3.26	2.70	3.81	0.63	0.79	0.36	0.08	1.58	2.23	4.61	2.55	27.70
1945	4.86	7.10	6.01	2.78	3.43	0.23	0.27	0.06	2.89	1.01	12.99	7.69	49.32
1946	8.07	6.06	5.75	1.03	1.13	1.56	0.94	0.10	1.64	4.66	8.56	6.53	46.03
1947	4.76	3.47	4.37	1.69	0.11	3.65	1.26	0.59	1.20	9.32	3.70	4.75	38.87
1948	6.88	7.89	4.98	3.55	4.63	0.56	0.53	0.57	3.26	2.33	7.94	10.24	53.36
1949	1.39	13.34	2.77	0.94	2.61	0.47	0.48	0.13	1.12	3.08	6.84	7.38	40.55
1950	10.62	6.48	6.51	1.38	0.70	1.33	0.52	1.08	1.34	9.33	9.61	6.76	55.66
1951	10.08	5.27	7.29	1.13	1.83	T	0.17	0.44	2.54	7.24	7.63	9.22	52.84
1952	6.09	4.34	2.91	1.73	0.49	1.66	0.00	0.30	0.34	0.78	1.75	7.40	27.79
1953	12.58	4.08	4.62	2.50	2.37	2.19	0.02	2.25	0.97	2.36	6.73	8.50	49.17
1954	9.82	6.01	2.97	3.30	1.22	2.53	0.70	0.45	1.12	3.55	5.78	6.60	44.05
1955	3.29	3.40	4.65	4.77	0.69	1.14	0.75	0.00	2.96	7.25	7.88	7.79	44.57

STATION HISTORY

THE WEATHER BUREAU DID NOT MAKE GENERAL USE OF A STANDARD FORM TO OFFICIALLY RECORD LOCATION DATA FOR ITS SUBSTATIONS UNTIL SOMETIME AFTER 1900. AS A RESULT, LITTLE IS KNOWN ABOUT THE EARLY LOCATION OF THE MC MINNVILLE WEATHER STATION. FRAGMENTARY RECORDS INDICATE THAT SOME WEATHER OBSERVING WAS BEGUN IN 1888, BUT DEPENDABLE, REGULAR DAILY RECORDS AVAILABLE AT THE STATE CLIMATOLOGIST'S OFFICE IN PORTLAND BEGIN WITH SEPTEMBER 1, 1890 WITH WYATT HARRIS THE OBSERVER. MR. HARRIS CONTINUED UNTIL DECEMBER 31, 1897. SUCCEEDING OBSERVERS; THEIR PERIOD OF SERVICE; AND, WHERE KNOWN, THE LOCATION OF THEIR EQUIPMENT IS SHOWN IN THE TABLE BELOW:

NAME	PERIOD OF SERVICE	LOCATION OF EQUIPMENT
A. M. BRUMBACK	JANUARY 1, 1898-JULY 31, 1902	PROBABLY ON LINFIELD COLLEGE CAMPUS
W. F. FARGO	AUGUST 1, 1902-JUNE 30, 1906	SAME
F. G. BOUGHTON	JULY 1, 1906-AUGUST 31, 1906	SAME
C. S. TINGLEY	SEPTEMBER 1, 1906-MAY 31, 1908	SAME
C. J. MC KEE	JUNE 1, 1908-JULY 12, 1909	SAME
J. H. PRUETT	JULY 12, 1909-SEPTEMBER 15, 1911	429 I STREET
M. E. PETTIT	SEPTEMBER 15, 1911-SEPTEMBER 30, 1914	835 ST. JOHN STREET
*LINFIELD COLLEGE	OCTOBER 1, 1914-FEBRUARY 28, 1921	ON LINFIELD COLLEGE CAMPUS
JOHN S. FLETCHER	MARCH 1, 1921-FEBRUARY 28, 1932	AT WEST END OF DAYTON BRIDGE
HARLEY P. STOWELL	MARCH 1, 1932-APRIL 30, 1932	ONE MILE SOUTH OF CENTER OF CITY
SAMUEL MAYFIELD	NOVEMBER 25, 1935-JULY 31, 1936	LINFIELD COLLEGE CAMPUS
ARTHUR H. FAIRHILL	AUGUST 31, 1936-MAY 31, 1941	SAME
*DOROTHY M. FENDER	JUNE 1, 1941-FEBRUARY 28, 1944	SAME
ARTHUR H. FAIRHILL	MARCH 1, 1944-MAY 31, 1950	704 RUMMEL STREET
RADIO STATION KMCM	JUNE 1, 1950- TO DATE	1.7 MILES NORTHEAST OF POST OFFICE

*OBSERVATIONS WERE TAKEN BY SEVERAL DIFFERENT STUDENTS AND EMPLOYEES OF THE COLLEGE DURING THESE PERIODS.

DURING MUCH OF THIS TIME, AS IS EVIDENT FROM THE ABOVE, THE OBSERVATIONS WERE TAKEN ON THE LINFIELD COLLEGE CAMPUS WITH VARIOUS STUDENTS OFTEN DOING THE WORK. WHILE THE RECORDS ARE USUALLY GOOD WHEN TAKEN THERE ARE A NUMBER OF MISSING PERIODS DUE NO DOUBT TO VACATIONS OR OTHER CAUSES. RULES REGARDING THE PREPARATION OF THESE SUMMARIES REQUIRE THAT IF A MONTH OR MORE OF RECORD IS MISSING IN ANY YEAR THAT NO PART OF THAT YEAR BE USED IN COMPUTING PERIOD AVERAGES (THOUGH IT MAY BE USED IN DETERMINING THE EXTREME VALUES SUCH AS HIGHEST OR LOWEST OF RECORD). FOR THAT REASON THE YEARS 1920, 1921, 1932, 1933, 1934, 1935, 1936, 1943 AND 1944 COULD NOT BE INCLUDED IN THIRTY YEARS USED FOR DETERMINING PERIOD TEMPERATURE AVERAGES. SIMILARLY, THE YEARS 1932, 1933, 1934 AND 1935 WERE NOT USABLE IN COMPUTING SNOWFALL AND PRECIPITATION AVERAGES.

THE RECORDS OBTAINED DURING THE LATTER PERIOD OF MR. FAIRHILL'S SERVICE AND DURING THAT OF RADIO STATION KMCM HAVE BEEN VERY GOOD WITH VERY FEW OMISSIONS OF ANY SIGNIFICANCE.