U.S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
IN COOPERATION WITH THE WISCONSIN CROP REPORTING SERVICE
CLIMATOGRAPHY OF THE UNITED STATES NO. 20-47

LATITUDE 44° 49' N
LONGITUDE 91° 30' W
ELEV. (GROUND) 765 Feet

CLIMATOLOGICAL SUMMARY

MEANS AND EXTREMES FOR PERIOD -1930-1959

STATION:
EAU CLAIRE, WISCONSIN

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	32° and below	Min.: 32° and below	0° and below	Month
(a)	30	30	30	30		30		30	30	30		30	30		30		30	30	30	30	30	
Jan.	24.4	6.3	15.4	55	1944	-35	1951	1540	0.96	1.02	1946	8.4	24.0	1932	8.5	1947	3	0	22	30	11	Jan.
Feb.	28.3	8.7	18.5	61	1931	-33	1936	1300	1.03	1.50	1930	8.6	28.2	1936	11.0	1936	3	0	17	28	8	Feb.
Mar.	39.1	20.3	29.7	80	1946	-21	1948	1090	1.78	1.53	1949	9.7	36.9	1951	12.0	1951	5	0	8	28	2	Mar.
Apr.	56.6	34.5	45.6	92	1952	8	1954	580	2.77	2.20	1938	1.8	15.0	1945	7.5	1945	6	*	1	14	0	Apr.
May	70.7	47.0	58.9	107	1934	27	1945	250	3.65	3.10	1938	0.2	3.0	1935	2.0	1946	7	1	0	2	0	May
June	80.0	57.3	68.7	105	1934	33	1945	70	4.52	3.96	1931	0	0		0		8	5	0	0	0	June
July	85.7	62.2	74.0	111	1936	43	1941	0	3.34	4.09	1959	0	0		0		6	9	0	0	0	July
Aug.	83.2	59.9	71.6	104	1947	39	1942	20	3.93	3.33	1959	0	0		0		7	7	0	0	0	Aug.
Sept.	73.3	50.4	61.9	101	1931	25	1942	150	3.39	4.00	1939	0	0		0		6	2	0	1	0	Sept.
Oct.	60.9	39.2	50.1	89	1953	14	1936	460	2.03	2.79	1949	0.4	2.8	1932	2.0	1938+	4	0	*	7	0	Oct.
Nov.	41.5	25.0	33.3	79	1933	- 4	1950	950	1.77	1.47	1937	4.3	15.0	1957	10.0	1957	4	0	7	23	1	Nov.
Dec.	28.8	12.7	20.8	58	1951	-26	1932	1370	1.03	1.00	1945	7.5	22.8	1950	8.0	1950+	3	0	19	30	6	Dec.
Year	56.0	35.3	45.7	111	July 1936	-35	Jan. 1951	7780	30.20	4.09	July 1959	40.9	36.9	Mar. 1951	12.0	Mar. 1951	62	24	74	163	28	Year

(a) Average length of record, years.

T Trace, an amount too small to measure.

** Base 65°F. (H. C. S. Thom, Monthly Weather Review, January 1954.

+ Also on earlier dates, months, or years.

* Less than one half.

CLIMATE OF EAU CLAIRE, WISCONSIN

Eau Claire, county seat of Eau Claire County, is located in west-central Wisconsin on the Chippewa River at the mouth of the Eau Claire River. The city is surrounded by gently rolling farmlands with low hills rising from 75 to 200 feet above the river valley. The soils of the area are mostly sandy loams.

The climatological station is located one-half mile northwest of the post office near the Chippewa River. The thermometers are exposed in a shelter over cinders and temperatures are representative of city conditions. Temperatures from the airport have more closely approximated conditions in the country. Airport maximum temperatures have averaged 1 degree lower in January and 2 degrees colder in July; airport minimum temperatures have averaged 3 degrees colder in both January and July. On calm clear nights it is not unusual for airport temperatures to be 5 to 9 degrees colder than in the city.

The climate of Eau Claire is typically continental with warm summers and cold winters. The area is in the zone of frequent mid-latitude storms. Changes in weather can be expected every few days in winter and summer. Summer and winter are fully developed while spring and fall are often short and are usually periods of sharp temperature transitions.

Although there are no wet or dry periods, nearly two-thirds of the annual precipitation falls in the five growing months of May through September. Soil moisture is usually adequate for the first part of the growing season. After June, crops depend on rain which falls mostly from thunderstorms and tends to be erratic and variable. Yearly snowfall varies from less than 12 to more than 75 inches. Snow covers the ground for a greater part of the winter. Precipitation intensities of about 1.25 inches in one hour, 2.20 inches in 6 hours, and 2.70 inches in 24 hours can be expected about once in two years. The greatest amount of rain to be recorded in 24 hours was the 4.62 inches that fell on May 26, 1899.

Thunderstorms occur on an average of 35 days a year. About two-thirds of them occur in June, July, and August. The number of days with thunderstorms in a year varies from 20 to 45. Days with hail average two a year with extreme years from none to eight.

Wind, sunshine, and humidity measurements are not available at Eau Claire, but records from Minneapolis closely approximate conditions at Eau Claire. Prevailing winds in winter blow from the northwest and average about 11 miles per hour. During the summer prevailing winds are from the south and southeast and average 9 miles per hour. April is the windiest month of the year with an average of nearly 13 miles per hour. Wind speeds in excess of 50 miles per hour have occurred and can be expected any month of the year. Only 40 per cent of possible sunshine occurs in November and December. From July through September the percentage rises to nearly 70 per cent.

Relative humidity ranges from an average of 70 per cent during the afternoon to 80 per cent at night in winter and from 55 per cent during the afternoon to a little over 80 per cent at night during the summer.

Flooding is not too great a problem at Eau Claire since the Chippewa River is fairly well regulated by upstream dams and reservoirs. The river flood stage at Eau Claire is 773.0 feet; the following are the heights above flood stage since 1936:

June 2, 1938 - 1.5 feet	Apr. 2, 1943 - 2.0 feet
Sept. 10, 1938 - 4.0 feet	June 17, 1943 - 3.0 feet
Nov. 7, 1938 - 2.7 feet	June 29, 1943 - 5.6 feet
Sept. 1, 1941 - 8.0 feet	Apr. 9, 1951 - 2.0 feet
Sept. 19, 1942 - 3.1 feet	May 3, 1954 - 5.5 feet

The date of the last 32-degree freeze in spring is May 5, and the first in the fall is October 4. The growing season, defined as the number of days between the last 32-degree freeze in spring and the first in fall, averages 151 days. The following table gives the likelihood of critical temperatures occurring:

Temperature	20%	40%	60%	80%
AFTER DATE IN SPRING				
32° or below	May 15	May 8	May 2	Apr. 25
28° or below	May 2	Apr. 25	Apr. 18	Apr. 11
24° or below	Apr. 19	Apr. 11	Apr. 5	Mar. 28
20° or below	Apr. 10	Apr. 3	Mar. 27	Mar. 19
16° or below	Apr. 2	Mar. 26	Mar. 20	Mar. 12
BEFORE DATE IN FALL				
32° or below	Sept. 24	Oct. 1	Oct. 7	Oct. 14
28° or below	Oct. 7	Oct. 15	Oct. 21	Oct. 29
24° or below	Oct. 20	Oct. 27	Nov. 3	Nov. 11
20° or below	Oct. 28	Nov. 4	Nov. 11	Nov. 18
16° or below	Nov. 3	Nov. 11	Nov. 18	Nov. 26

Marvin W. Burley
Weather Bureau State Climatologist
Weather Bureau Office
Madison, Wisconsin

EAU CLAIRE, WISCONSIN

Average Temperature (°F)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1930	8.4	26.7	33.4	49.6	59.4	68.4	74.0	72.8	61.4	45.6	37.0	20.7	46.5
1931	24.8	33.3	33.0	50.0	57.0	73.6	76.4	70.2	68.5	54.6	42.1	31.2	51.2
1932	21.6	21.0	23.8	46.1	59.8	71.8	74.9	72.6	60.6	47.9	31.8	18.4	45.9
1933	24.7	14.2	31.9	45.6	59.6	77.2	76.2	69.6	67.4	47.6	32.6	20.0	47.2
1934	23.9	19.4	29.9	46.1	68.4	73.2	75.8	70.1	60.0	54.0	39.6	17.5	48.2
1935	12.5	24.4	34.1	45.2	54.7	64.0	78.6	72.0	62.8	49.3	30.2	18.6	45.5
1936	6.6	1.1	29.9	38.8	64.0	66.0	80.4	74.4	65.6	45.0	30.0	21.5	43.6
1937	7.2	13.7	27.2	43.8	60.4	67.4	75.9	77.0	63.0	45.5	30.6	17.1	44.1
1938	12.8	22.8	35.6	45.2	58.8	67.2	73.4	73.4	61.6	54.0	32.8	20.4	46.5
1939	21.2	13.1	30.4	43.0	65.1	69.2	74.8	71.0	63.6	47.5	35.0	27.2	46.8
1940	6.8	19.8	23.2	42.2	55.4	67.4	74.7	68.2	64.2	52.2	29.0	22.0	43.8
1941	17.2	15.3	26.2	52.4	62.6	68.9	73.8	71.6	63.0	49.8	36.0	26.8	47.0
1942	18.8	18.4	34.5	51.6	55.6	66.4	70.6	69.6	57.3	49.0	32.4	15.4	45.0
1943	9.2	17.6	22.7	42.9	55.5	70.6	74.6	72.2	58.2	49.0	29.2	23.4	43.8
1944	26.0	21.4	26.6	42.4	62.6	70.4	71.6	73.4	62.4	50.2	39.1	18.9	47.1
1945	12.4	17.4	39.6	43.9	52.8	62.4	70.2	70.4	59.8	47.4	32.0	14.2	43.5
1946	16.6	17.0	41.9	50.0	55.7	67.0	73.2	68.9	60.0	52.2	34.2	21.2	46.5
1947	20.4	15.5	28.7	42.0	53.2	64.8	72.6	78.2	63.5	59.2	28.1	18.7	45.4
1948	9.3	16.1	28.1	49.9	58.3	68.2	74.7	73.4	68.1	50.3	37.0	20.9	46.2
1949	17.6	15.8	30.1	46.7	61.5	73.0	76.4	74.4	58.4	52.6	36.6	21.3	47.0
1950	9.7	16.6	24.5	37.0	56.8	68.1	70.2	66.9	62.0	54.6	29.7	13.5	42.5
1951	11.1	18.2	23.3	42.2	62.2	64.9	72.0	67.6	57.0	48.5	25.4	17.9	42.5
1952	15.5	23.5	26.5	48.6	57.2	69.1	73.3	68.5	62.2	43.2	36.0	24.7	45.7
1953	19.3	18.2	30.8	40.9	58.7	70.8	71.8	72.3	61.5	55.6	38.7	23.0	46.8
1954	12.2	30.4	28.7	47.1	52.4	71.1	73.2	69.4	60.4	47.6	37.1	23.5	46.1
1955	15.0	16.0	26.6	52.4	62.3	67.9	78.0	75.2	63.0	51.0	28.2	14.8	45.9
1956	16.1	17.4	25.9	41.7	56.9	71.4	69.2	70.4	58.2	54.8	33.8	23.4	44.9
1957	9.5	20.9	30.8	46.6	57.1	67.3	75.1	69.3	58.3	47.2	33.1	23.8	44.9
1958	21.1	15.3	32.9	47.2	58.7	62.9	70.2	70.5	62.2	52.7	35.9	14.5	45.3
1959	9.2	15.8	31.2	46.8	61.6	69.0	71.9	73.3	61.6	44.0	24.9	29.0	44.9

Total Precipitation (Inches)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1930	1.45	2.71	1.24	3.39	3.48	5.46	2.04	1.51	4.96	2.55	1.58	0.36	30.73
1931	0.15	0.43	1.16	1.76	1.18	6.03	3.05	1.72	5.38	3.53	4.53	0.84	29.76
1932	2.34	1.31	1.37	1.53	2.88	3.42	2.46	5.01	1.00	0.86	2.07	1.55	25.80
1933	1.58	1.65	1.14	2.54	3.50	2.51	2.60	2.91	2.32	1.76	0.55	0.41	23.47
1934	0.74	0.05	1.35	2.73	0.84	5.29	1.48	2.30	7.93	2.49	3.40	1.11	29.71
1935	2.24	0.37	0.95	3.66	3.42	4.80	6.32	4.89	2.83	2.88	0.96	0.54	33.86
1936	0.69	2.03	2.30	2.77	1.78	2.21	0.12	5.45	2.14	0.94	0.79	1.77	22.99
1937	1.57	1.17	0.69	3.31	3.01	2.08	2.57	3.20	2.67	2.09	2.26	0.87	25.49
1938	1.24	1.48	3.49	5.47	10.54	7.71	4.78	5.07	6.90	1.96	3.76	0.87	53.27
1939	1.20	1.49	0.66	3.13	2.01	7.58	1.17	4.85	4.69	1.28	0.32	0.95	29.33
1940	0.27	0.95	1.73	2.06	2.63	7.61	1.92	4.77	0.66	2.29	3.29	1.40	29.58
1941	0.77	0.37	1.41	2.32	5.17	2.91	2.47	2.30	4.11	7.82	1.12	1.25	32.02
1942	0.25	0.34	3.23	3.00	8.34	4.18	3.06	2.08	9.82	1.41	0.77	1.72	38.20
1943	1.52	0.25	2.05	1.29	5.95	4.71	3.99	5.55	1.46	1.86	2.19	T	30.82
1944	0.75	0.92	2.15	2.72	2.93	5.26	1.88	2.72	3.56	0.44	1.44	0.45	25.22
1945	0.70	2.24	2.45	4.03	4.98	4.34	5.12	5.94	2.84	0.60	2.99	2.06	38.29
1946	1.60	1.73	0.99	0.78	4.09	7.73	2.12	1.42	6.92	4.00	1.65	1.16	34.19
1947	1.05	0.14	1.04	3.59	3.43	2.47	3.49	3.68	2.40	1.69	1.57	1.07	25.62
1948	0.23	2.31	0.70	1.66	1.34	2.69	3.60	3.10	1.00	0.64	3.73	1.25	22.25
1949	1.80	0.21	4.82	1.67	1.44	5.18	3.94	2.18	2.28	4.40	0.57	1.01	29.50
1950	2.01	0.58	2.47	3.06	2.61	2.11	5.64	3.17	1.66	0.71	0.76	1.81	26.59
1951	0.51	2.27	4.04	3.05	2.72	5.82	3.77	3.91	3.91	2.37	1.83	1.31	35.51
1952	1.55	0.92	2.15	1.87	3.89	5.04	1.88	4.53	0.52	0.08	1.20	0.59	24.22
1953	0.83	2.14	1.77	3.85	2.29	5.30	4.86	3.11	1.13	0.11	2.05	1.42	28.86
1954	0.27	0.44	1.80	6.11	3.03	6.22	4.24	3.31	6.24	2.41	0.91	0.25	35.23
1955	0.40	0.71	1.65	3.93	4.04	2.13	6.73	5.38	1.49	2.84	0.83	0.81	30.94
1956	0.42	0.37	2.51	1.54	3.75	5.16	3.11	4.94	1.39	1.65	1.45	0.32	26.61
1957	0.39	0.59	0.86	0.89	4.01	3.18	2.75	5.49	1.83	1.36	2.50	0.91	24.76
1958	0.20	0.02	0.42	3.75	5.81	2.74	3.95	3.59	3.11	1.83	1.15	0.31	26.88
1959	0.10	0.64	0.89	1.52	4.28	3.82	5.04	9.90	4.46	2.03	0.92	2.55	36.15

STATION HISTORY

The first climatological station at Eau Claire was established November 1, 1886. Allen and Son took observations for the Signal Corps until the station was closed April 30, 1887.

The Weather Bureau opened a climatological station February 1, 1891. The Reverend W. N. Sloan was the observer until May 31, 1894; C. W. Lockwood was observer from October 1, 1894 until July 31, 1897; Joseph Swearingen was the observer from October 1, 1897 until May 31, 1901. The station was moved to 914 Fifth Avenue

STATION HISTORY (Continued)

with R. D. Whitford the observer from June 1, 1907 until December 10, 1930. The Northern States Power Company has managed the station since January 8, 1931.

From January 8, 1931 until October 31, 1935 the instruments were located over ground at the office of the Power Company. The instruments were moved 0.1 mile northwest on November 1, 1935 for better exposure. The instruments are now located over ground, 60 feet from the Chippewa River.