

1998

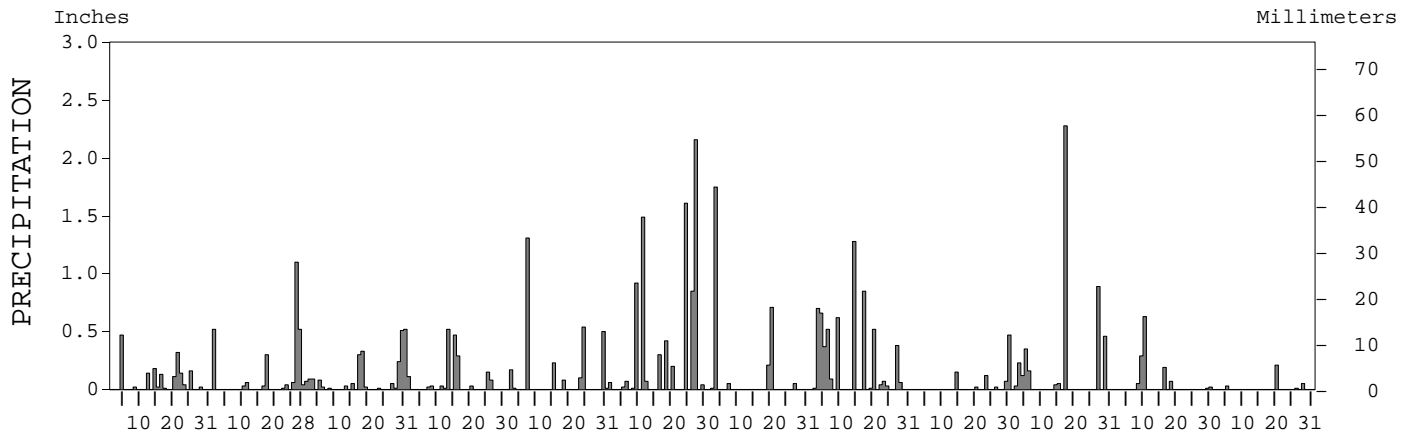
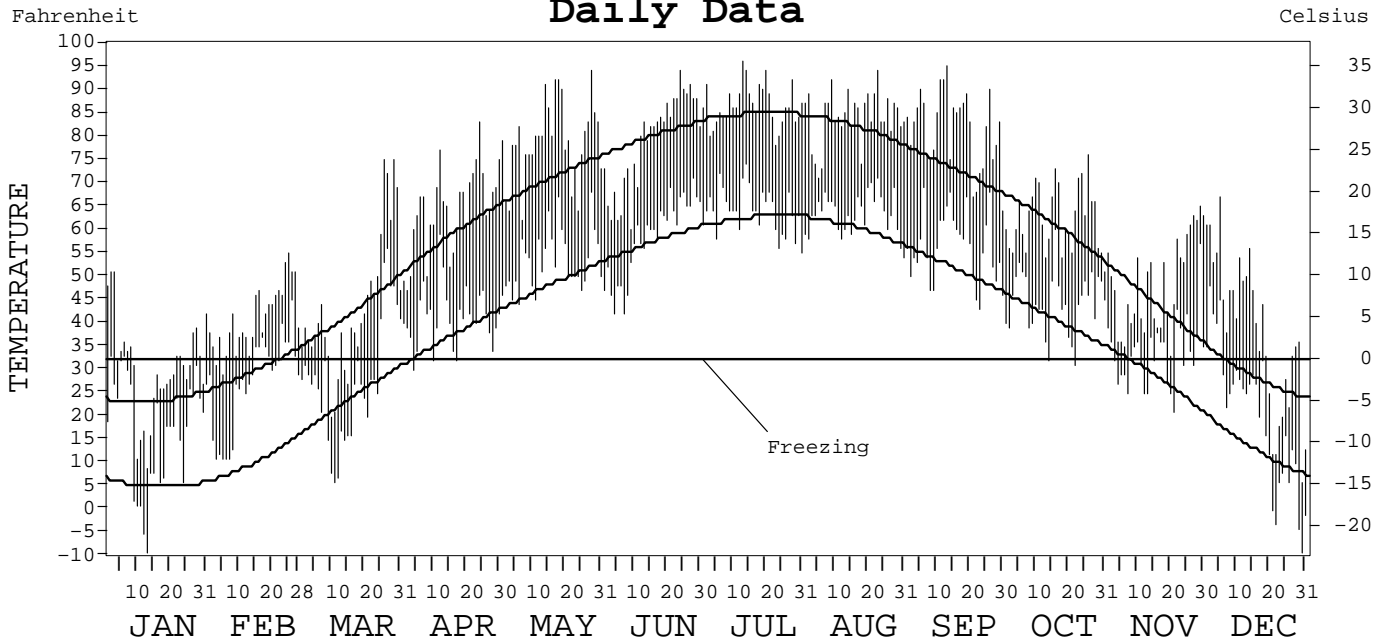
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-571X

LA CROSSE,
WISCONSIN (LSE)

Daily Data



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METEOROLOGICAL DATA FOR 1998

LA CROSSE, WI (LSE)

LATITUDE: 43° 49' 11" N LONGITUDE: 91° 15' 42" W ELEVATION (FT): GRND: 650 BARO: 678 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 14920

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	30.5	41.0	43.4	64.2	78.8	78.8	86.5	84.0	81.4	62.4	48.4	38.1	61.5	
	HIGHEST DAILY MAXIMUM	51	55	75	83	94	94	96	94	95	76	65	67	96	
	DATE OF OCCURRENCE	03+	25	29+	24	28	24	13	23	13	26	29	05	JUL 13	
	MEAN DAILY MINIMUM	17.4	27.2	27.9	41.1	53.2	58.2	64.0	63.3	56.2	44.3	33.4	20.2	42.2	
	LOWEST DAILY MINIMUM	-9	11	6	30	44	42	55	54	43	31	21	-9	-9	
	DATE OF OCCURRENCE	13	07+	11	04	06	07+	31	31	23	22	21	30	DEC 30	
	AVERAGE DRY BULB	24.0	34.1	35.7	52.7	66.0	68.5	75.3	73.7	68.8	53.4	40.9	29.2	51.9	
	MEAN WET BULB														
	MEAN DEW POINT														
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	5	3	7	3	5	0	0	0	0	23
	MAXIMUM ≤ 32°	18	2	5	0	0	0	0	0	0	0	0	9	34	
MINIMUM ≤ 32°	29	18	24	3	0	0	0	0	0	2	14	26	116		
MINIMUM ≤ 0°	2	0	0	0	0	0	0	0	0	0	0	5	7		
H/C	HEATING DEGREE DAYS	1268	859	902	366	57	72	0	0	42	356	714	1104	5740	
	COOLING DEGREE DAYS	0	0	0	3	96	185	326	277	163	2	0	0	1052	
RH	MEAN (PERCENT)														
	HOUR 06 LST														
	HOUR 12 LST														
	HOUR 18 LST														
	HOUR 24 LST														
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	0	0	0	2	3	0	4	6	1	0	0	17	
	THUNDERSTORMS	0	0	2	1	6	10	2	7	5	4	0	0	37	
CLOUDINESS	AVG. SKY COVER (OKTAS)														
	SUNRISE - SUNSET														
	MIDNIGHT - MIDNIGHT														
	NUMBER OF DAYS WITH:														
	CLEAR														
	PARTLY CLOUDY														
	CLOUDY														
PR	MEAN STATION PRESS. (IN.)														
	MEAN SEA-LEVEL PRESS. (IN.)														
WINDS	RESULTANT SPEED (MPH)	1.3	0.8	2.6	2.3	1.8	2.4	1.3	1.5	2.2	2.2	1.8	3.1	0.9	
	RES. DIR. (TENS OF DEGS.)	34	15	35	11	17	20	25	17	17	18	23	24	20	
	MEAN SPEED (MPH)	8.7	8.4	10.4	10.0	8.7	8.6	7.6	7.5	8.7	9.6	10.3	10.1	9.1	
	PREVAIL. DIR. (TENS OF DEGS.)	18	33	36	18	12	12	18	12	18	13	18	18	18	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)														
	DIR. (TENS OF DEGS.)														
	DATE OF OCCURRENCE														
PEAK GUST:															
SPEED (MPH)															
DIR. (TENS OF DEGS.)															
DATE OF OCCURRENCE															
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.76	2.71	2.43	1.74	2.95	8.22	2.78	6.21	0.85	4.61	1.26	0.30	35.82	
	GREATEST 24-HOUR (IN.)	0.47	1.10	0.52	0.52	1.31	2.16	1.75	1.28	0.47	2.28	0.63	0.21	2.28	
	DATE OF OCCURRENCE	04	26	31	13	07	27	03	14	30	17	10	20	OCT 17	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	13	11	17	11	9	14	6	16	6	10	7	4	124	
PRECIPITATION ≥ 0.10	8	4	5	5	6	8	3	9	3	7	3	1	62		
PRECIPITATION ≥ 1.00	0	1	0	0	1	3	1	1	0	1	0	0	8		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	16.1	3.8	9.7	0.1	0.0	T	0.0	T	0.0	0.0	0.3	4.1	34.1	
	GREATEST 24-HOUR (IN.)	3.4	3.8	3.0	0.1	0.0	T	0.0	T	0.0	0.0	0.3	3.4	3.8	
	DATE OF OCCURRENCE	14	01	17	16	24	09	0	0	0	0	08	20	FEB 01	
	MAXIMUM SNOW DEPTH (IN.)	9	7	3	0	0	0	0	0	0	0	T	3	9	
	DATE OF OCCURRENCE	27+	03	19								08	21	JAN 27+	
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	7	1	3	0	0	0	0	0	0	0	0	1	12		

NORMALS, MEANS, AND EXTREMES

LA CROSSE, WI (LSE)

LATITUDE: 43° 49' 11" N LONGITUDE: 91° 15' 42" W ELEVATION (FT): GRND: 650 BARO: 678 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 14920

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	23.5	29.6	42.1	58.5	70.9	79.8	84.5	81.6	72.4	60.2	43.4	28.1	56.2
	MEAN DAILY MAXIMUM	50	24.0	30.1	41.1	57.8	70.6	79.8	83.9	81.6	72.4	60.7	42.8	29.4	56.2
	HIGHEST DAILY MAXIMUM	46	57	64	84	93	94	102	108	105	100	93	75	67	108
	YEAR OF OCCURRENCE		1981	1981	1986	1980	1998	1988	1995	1988	1978	1963	1978	1998	JUL 1995
	MEAN OF EXTREME MAXS.	50	43.2	48.1	65.1	80.0	87.8	93.2	95.0	94.0	89.0	79.9	63.1	49.1	74.0
	NORMAL DAILY MINIMUM	30	5.3	10.1	23.6	37.0	48.1	57.1	62.3	59.9	51.2	40.2	27.7	12.5	36.3
	MEAN DAILY MINIMUM	50	5.8	11.0	22.7	36.9	48.5	57.8	62.4	60.5	51.3	40.7	27.2	13.9	36.6
	LOWEST DAILY MINIMUM	47	-37	-36	-28	7	26	37	33	40	28	14	-9	-30	-37
	YEAR OF OCCURRENCE		1951	1971	1962	1982	1989	1978	1982	1965	1967	1988	1977	1983	JAN 1951
	MEAN OF EXTREME MINS.	50	-18.5	-14.0	1.1	21.0	33.4	44.2	50.4	48.0	35.8	24.7	9.1	-9.5	18.8
	NORMAL DRY BULB	30	14.4	19.9	32.8	47.7	59.5	68.5	73.5	70.8	61.8	50.2	35.6	20.3	46.2
	MEAN DRY BULB	50	14.9	20.6	31.9	47.3	59.5	68.7	73.1	71.1	61.8	50.7	35.1	21.8	46.4
	MEAN WET BULB	12	15.9	19.6	30.2	41.6	52.8	62.0	60.9	59.9	51.8	40.7	28.7	19.3	40.3
	MEAN DEW POINT	12	10.6	13.5	23.0	33.0	45.5	56.6	57.0	56.5	48.1	35.2	23.5	14.9	34.8
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.1	0.9	3.6	7.7	4.3	0.9	0.1	0.0	0.0	17.6	
MAXIMUM ≤ 32°	30	22.3	15.6	5.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	4.1	19.1	67.3	
MINIMUM ≤ 32°	30	30.7	27.0	24.7	10.0	0.9	0.0	0.0	0.0	0.4	6.7	20.6	29.4	150.4	
MINIMUM ≤ 0°	30	12.6	7.9	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	6.1	28.0	
H/C	NORMAL HEATING DEG. DAYS	30	1569	1263	998	519	220	36	7	16	131	464	882	1386	7491
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	50	141	270	196	35	0	0	0	692
RH	NORMAL (PERCENT)	30	73	72	71	64	65	70	72	75	77	71	75	77	72
	HOUR 06 LST	30	76	77	77	73	75	82	85	88	87	79	80	80	80
	HOUR 12 LST	30	77	79	81	79	80	85	88	91	92	84	83	82	83
	HOUR 18 LST	30	67	65	62	53	52	56	57	60	63	59	67	72	61
	HOUR 24 LST	30	70	67	63	53	52	56	58	61	66	64	72	75	63
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	46	1.2	1.3	1.8	0.7	0.6	1.2	1.7	3.5	3.5	1.9	1.2	1.1	19.7
	THUNDERSTORMS	46	0.1	0.3	1.2	2.9	5.3	7.8	7.4	6.9	4.6	2.1	0.6	0.2	39.4
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	17	5.4	5.0	5.4	5.4	5.2	5.0	4.2	4.3	4.4	4.3	5.3	5.3	4.9
	MIDNIGHT-MIDNIGHT (OKTAS)	4	3.8	3.3	4.0	4.4	3.8	3.8	2.9	3.1	3.5	3.0	4.1	3.8	3.6
	MEAN NO. DAYS WITH:														
	CLEAR	17	7.4	7.9	7.4	6.8	6.9	7.3	9.8	9.5	9.1	10.8	5.8	6.8	95.5
PARTLY CLOUDY	17	6.9	7.1	7.1	7.1	9.1	10.4	10.9	10.6	8.9	6.9	6.1	5.8	96.9	
CLOUDY	17	16.7	13.2	16.5	16.1	15.0	12.3	10.4	10.9	11.9	13.4	18.1	18.5	173.0	
PR	MEAN STATION PRESSURE (IN)	16	29.40	29.40	29.30	29.20	29.20	29.20	27.58	27.58	27.58	27.58	27.58	27.67	28.44
	MEAN SEA-LEVEL PRES. (IN)	7	25.78	25.84	25.77	25.67	25.68	25.68	25.71	25.71	25.74	25.07	25.03	25.10	25.56
WINDS	MEAN SPEED (MPH)	39	8.9	8.8	9.5	10.7	9.6	8.6	7.7	7.4	8.3	9.3	10.0	9.0	9.0
	PREVAIL. DIR (TENS OF DEGS)	25	32	32	32	18	18	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	19	45	37	40	53	58	63	52	63	40	39	46	43	63
	DIR. (TENS OF DEGS)		03	03	03	02	09	03	02	03	02	03	01	03	03
	YEAR OF OCCURRENCE		1962	1963	1960	1964	1952	1963	1961	1963	1961	1964	1958	1957	AUG 1963
PEAK GUST:															
SPEED (MPH)															
DIR. (TENS OF DEGS)															
YEAR OF OCCURRENCE															
PRECIPITATION	NORMAL (IN)	30	0.93	0.90	1.98	2.88	3.26	3.90	3.79	3.92	3.79	2.20	1.73	1.27	30.55
	MAXIMUM MONTHLY (IN)	46	3.03	2.71	3.82	7.31	8.83	10.79	9.35	9.84	10.52	5.09	6.23	2.91	10.79
	YEAR OF OCCURRENCE		1996	1998	1951	1973	1960	1993	1987	1980	1965	1984	1991	1990	JUN 1993
	MINIMUM MONTHLY (IN)	46	0.14	0.05	0.30	0.60	0.94	1.33	0.16	0.54	0.42	0.02	T	0.30	T
	YEAR OF OCCURRENCE		1981	1969	1978	1966	1988	1989	1967	1976	1952	1952	1976	1962	NOV 1976
	MAXIMUM IN 24 HOURS (IN)	32	1.31	1.10	1.64	3.84	2.72	3.94	5.24	3.92	2.85	2.28	2.80	1.42	5.24
	YEAR OF OCCURRENCE		1967	1998	1966	1954	1960	1967	1987	1962	1992	1998	1991	1990	JUL 1987
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	8.4	7.1	9.4	10.3	10.7	10.8	9.8	9.6	10.1	8.2	7.9	8.7	111.0	
PRECIPITATION ≥ 1.00	30	*	0.1	0.3	0.4	0.6	0.9	0.8	1.1	1.0	0.2	0.2	*	5.6	
SNOWFALL	NORMAL (IN)	30	10.9	7.9	8.2	1.6	T	0.0	0.0	0.0	T	0.*	2.9	10.2	41.7
	MAXIMUM MONTHLY (IN)	46	35.0	31.0	33.5	17.0	0.8	T	0.0	T	T	1.8	30.3	30.4	35.0
	YEAR OF OCCURRENCE		1996	1959	1959	1973	1960	1997		1995	1994	1992	1991	1990	JAN 1996
	MAXIMUM IN 24 HOURS (IN)	32	12.0	10.9	15.7	7.3	0.8	T	0.0	T	T	1.8	13.0	14.4	15.7
	YEAR OF OCCURRENCE		1996	1959	1959	1952	1960	1997		1995	1994	1992	1991	1990	MAR 1959
	MAXIMUM SNOW DEPTH (IN)	49	34	29	31	16	0	0	0	0	0	1	15	20	34
	YEAR OF OCCURRENCE		1979	1979	1959	1973						1992	1991	1968	JAN 1979
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	3.5	2.5	2.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	3.3	13.4	

PRECIPITATION (inches) 1998 LA CROSSE, WI (LSE)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	1.95	0.05	0.78	1.83	2.55	6.39	3.00	2.16	2.32	3.73	0.58	1.69	27.03
1970	0.56	0.33	2.17	2.58	5.82	2.46	4.48	1.02	5.30	3.43	2.60	0.97	31.72
1971	1.52	2.06	1.11	1.74	4.89	4.33	4.06	2.22	2.43	1.09	2.20	2.55	30.20
1972	0.62	0.50	1.68	2.38	1.80	2.81	6.03	5.97	6.72	4.01	1.45	2.46	36.43
1973	0.85	1.38	3.69	7.31	6.21	4.47	2.53	8.63	3.68	2.06	1.93	1.37	44.11
1974	0.40	1.65	2.13	1.83	3.50	5.30	1.76	4.20	1.40	1.91	1.11	1.39	26.58
1975	1.50	1.71	2.14	6.07	2.52	2.88	1.42	2.79	1.28	0.36	3.07	0.70	26.44
1976	0.69	0.64	2.82	4.37	2.95	1.82	2.15	0.54	0.54	0.28	T	0.67	17.47
1977	0.88	0.83	2.64	3.62	3.04	3.51	4.32	2.92	4.12	1.87	1.42	1.40	30.57
1978	0.76	0.68	0.30	4.01	3.97	7.02	9.17	1.20	5.12	0.80	2.35	0.93	36.31
1979	2.41	0.65	2.02	1.79	5.68	1.58	3.52	7.55	0.53	4.41	2.44	0.67	33.25
1980	1.61	0.35	0.65	1.74	2.66	3.57	2.26	9.84	8.51	2.36	0.14	0.61	34.30
1981	0.14	2.10	0.60	4.37	1.88	2.60	7.66	9.56	1.77	1.89	1.08	0.86	34.51
1982	1.34	0.17	1.65	4.71	1.65	1.35	1.89	2.91	2.67	2.83	3.64	2.03	30.57
1983	0.89	2.27	1.60	2.37	4.50	1.67	3.16	3.06	4.94	3.35	3.72	0.68	32.21
1984	0.28	0.92	1.94	3.65	2.18	7.43	3.00	2.11	2.87	5.09	1.36	2.42	33.25
1985	0.88	1.27	2.66	2.85	1.08	2.82	2.39	3.21	5.63				
1986		0.77	1.91	3.42	1.49	4.04	4.79	2.38	8.10	3.68	0.95	0.38	
1987	1.17	0.30	2.23	2.35	4.58	2.55	9.35	3.71	2.10	0.56	2.67	1.82	33.39
1988	1.09	0.19	1.89	2.01	0.94	3.25	2.39	4.60	5.21	0.64	3.48	0.78	26.47
1989	0.41	0.40	2.36	1.78	3.02	1.33	2.59	4.60	1.95	2.71	1.47	0.49	23.11
1990	0.79	0.68	3.23	2.61	3.74	8.07	4.03	8.02	1.82	1.43	0.74	2.91	38.07
1991	0.93	0.46	2.23	5.96	6.85	1.72	7.67	2.91	3.90	1.76	6.23	1.67	42.29
1992	0.87	0.81	3.64	4.38	1.49	2.32	4.02	2.67	7.01	0.62	3.64	1.58	33.05
1993	1.18	1.10	2.51	5.78	5.41	10.79	3.78	5.31	1.80	0.94	1.38	0.75	40.73
1994	2.24	1.65	0.37	6.51	1.49	2.74	6.29	4.84	6.51	1.99	2.05	0.71	37.39
1995	0.73	0.38	2.78	3.99	3.76	2.71	3.84	4.20	2.23	3.36	1.45	0.82	30.25
1996	3.03	0.41	2.05	1.94	1.50	5.98	2.32	2.16	1.64	2.98	4.45	1.42	29.88
1997	1.81	1.16	3.05	1.89	2.38	3.12	5.46	5.55	2.43	2.42	0.24	0.64	30.15
1998	1.76	2.71	2.43	1.74	2.95	8.22	2.78	6.21	0.85	4.61	1.26	0.30	35.82
POR= 124 YRS	1.14	1.04	1.88	2.71	3.57	4.25	3.79	3.63	3.75	2.23	1.71	1.19	30.89

WBAN : 14920

AVERAGE TEMPERATURE (°F) 1998 LA CROSSE, WI (LSE)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	12.3	20.7	26.0	49.9	60.6	61.4	72.5	73.9	62.8	47.8	35.2	22.3	45.5
1970	8.7	20.7	30.8	49.1	60.6	70.6	73.4	70.4	61.4	51.8	35.4	19.4	46.0
1971	7.4	17.0	28.1	47.1	55.3	72.1	68.5	68.1	64.3	55.7	36.4	24.5	45.4
1972	11.1	16.1	28.0	43.0	63.4	66.5	70.3	71.1	61.3	45.9	34.4	15.7	43.9
1973	20.1	24.8	41.3	44.5	55.2	70.3	73.9	72.2	62.6	57.1	36.7	18.9	48.1
1974	18.0	19.1	32.1	48.7	55.0	65.0	75.9	68.4	56.9	50.4	37.4	26.6	46.1
1975	18.1	18.7	24.5	41.4	62.3	68.9	74.0	71.7	57.4	53.0	40.0	23.7	46.1
1976	13.1	29.0	33.7	49.7	56.8	70.0	74.4	71.6	61.0	45.0	27.9	12.8	45.4
1977	2.9	22.0	39.9	54.6	67.4	68.0	75.2	66.8	61.7	49.0	33.6	17.0	46.5
1978	6.7	10.8	29.1	45.9	60.0	67.4	70.6	73.5	68.3	51.0	35.8	19.9	44.9
1979	6.0	12.6	32.8	45.7	58.0	67.3	72.1	68.8	62.8	47.7	34.9	28.3	44.8
1980	18.5	17.9	29.7	49.4	62.8	70.3	78.3	74.1	63.7	45.2	36.5	20.8	47.3
1981	19.5	25.3	37.7	51.2	58.4	69.1	73.6	71.4	60.8	47.6	38.0	19.6	47.7
1982	4.3	17.2	44.2	62.8	63.5	74.2	70.3	60.9	50.8	34.1	27.2		
1983	19.9	25.2	33.8	42.6	54.3	69.0	76.7	75.3	62.9	49.6	35.9	6.4	46.0
1984	14.1	30.3	27.3	48.2	55.9	69.6	71.1	72.9	59.0	52.4	35.0	21.5	46.4
1985	10.9	16.5	37.2	52.5	62.0	64.5	72.1	68.4	62.2				
1986		18.4	36.4	52.1	61.9	69.1	75.0	67.5	62.5	50.9	30.2	25.1	
1987	21.7	31.2	39.0	52.9	63.7	72.8	77.1	70.2	63.0	45.3	40.3	27.6	50.4
1988	13.4	15.8	35.0	48.0	65.2	73.4	76.6	76.0	64.6	44.6	36.6	21.8	47.6
1989	24.2	12.8	29.2	46.0	58.9	67.7	75.4	71.4	61.1	51.7	31.5	12.1	45.2
1990	28.1	25.4	38.4	49.3	56.6	69.5	73.2	72.1	65.5	49.6	41.4	19.0	49.0
1991				51.0	63.9	74.3	73.2	72.7	60.5	49.0	27.3	23.8	
1992	23.9	30.3	33.9	45.6	61.2	66.9	68.0	66.6		48.9	33.1	23.6	
1993	16.9	18.6	30.7	44.1	59.0	66.3	71.5	71.9	56.5	48.7	33.8	25.2	45.3
1994	6.0	14.9	35.7	47.7	60.7	71.8	70.8	67.5	66.0	55.2	41.6	29.0	47.2
1995	19.6	22.3	37.0	43.7	58.9	73.5	76.0	77.8	61.4	51.1	28.9	21.0	47.6
1996	11.9	19.9	28.5	44.8	57.1	69.4	71.5	72.4	64.1	51.7	29.2	19.9	45.0
1997	14.7	24.8	34.0	46.4	55.0	71.2	73.0	69.2	64.0	52.9	32.8	28.9	47.2
1998	24.0	34.1	35.7	52.7	66.0	68.5	75.3	73.7	68.8	53.4	40.9	29.2	51.9
POR= 125 YRS	15.6	20.0	32.0	47.4	59.4	68.4	73.1	70.7	62.2	50.6	35.2	22.3	46.4

HEATING DEGREE DAYS (base 65°F) 1998 LA CROSSE, WI (LSE)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	5	1	135	540	886	1315	1746	1236	1052	499	207	30	7652
1970-71	10	5	173	406	883	1406	1781	1340	1137	533	297	18	7989
1971-72	15	22	140	301	850	1244	1668	1414	1140	655	154	62	7665
1972-73	21	32	147	586	913	1523	1389	1119	727	608	299	8	7372
1973-74	1	7	123	267	844	1424	1453	1279	1011	490	316	69	7284
1974-75	0	24	261	445	822	1182	1446	1292	1248	702	162	56	7640
1975-76	20	2	236	384	741	1274	1600	1039	964	460	254	11	6985
1976-77	3	14	176	624	1104	1613	1923	1200	770	344	66	36	7873
1977-78	1	40	122	488	936	1483	1804	1515	1106	565	209	36	8305
1978-79	6	0	78	427	871	1388	1828	1466	992	569	239	29	7893
1979-80	1	37	116	535	894	1133	1438	1358	1085	480	155	15	7247
1980-81	0	3	112	607	849	1362	1402	1107	840	408	214	11	6915
1981-82	5	7	157	535	802	1402	1878	1333	619	112	77	77	7873
1982-83	0	41	177	433	919	1164	1391	1109	960	666	325	46	7231
1983-84	6	0	160	480	867	1814	1572	1002	1159	501	285	5	7851
1984-85	9	6	219	384	893	1344	1673	1355	854	409	129	92	7367
1985-86	0	24	203	431	1039	1230	1336	1298	880	394	141	25	6452
1986-87	1	35	120	431	733	1230	1336	942	798	372	137	11	7154
1987-88	0	28	102	602	733	1151	1595	1421	924	503	85	10	7539
1988-89	0	10	78	627	844	1332	1257	1458	1100	563	218	52	7086
1989-90	1	4	159	417	1000	1638	1138	1102	818	504	267	38	7148
1990-91	3	2	112	474	700	1421	1268	1001	958	438	176	2	7783
1991-92	5	3	217	490	1123	1275	1268	1001	958	576	173	59	7148
1992-93	22	46	498	952	1274	1486	1295	1057	620	213	55	55	7783
1993-94	1	10	265	507	929	1227	1829	1399	899	519	175	23	6531
1994-95	7	39	76	304	694	1110	1400	1189	862	632	194	24	8031
1995-96	5	0	171	436	1076	1360	1641	1304	1125	601	277	35	7481
1996-97	2	0	121	410	1068	1393	1552	1120	951	553	304	7	6110
1997-98	11	13	80	414	960	1108	1268	859	902	366	57	72	6110
1998-	0	0	42	356	714	1104							

WBAN : 14920

COOLING DEGREE DAYS (base 65°F) 1998 LA CROSSE, WI (LSE)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	0	66	35	245	284	74	13	0	0	717
1970	0	0	0	29	75	208	279	178	71	5	0	0	845
1971	0	0	0	1	3	237	129	128	126	19	0	0	643
1972	0	0	0	0	113	112	191	230	39	0	0	0	685
1973	0	0	0	0	4	174	283	239	59	28	0	0	787
1974	0	0	0	10	15	74	343	137	23	0	0	0	602
1975	0	0	0	0	85	177	306	215	16	15	0	0	814
1976	0	0	0	5	7	167	304	228	60	10	0	0	781
1977	0	0	0	41	145	132	325	100	33	0	0	0	776
1978	0	0	0	0	61	116	187	272	183	1	0	0	820
1979	0	0	0	0	30	104	226	161	60	3	0	0	584
1980	0	0	0	20	96	180	416	293	79	0	0	0	1084
1981	0	0	0	0	19	139	277	211	37	0	0	0	683
1982	0	0	0	0	54	38	292	212	60	0	0	0	988
1983	0	0	0	1	0	172	375	324	104	12	0	0	670
1984	0	0	0	2	8	149	206	257	48	0	0	0	670
1985	0	0	0	41	42	84	229	136	126	0	0	0	995
1986	0	0	1	13	54	156	319	118	53	0	0	0	1168
1987	0	0	0	16	103	249	383	196	48	0	0	0	779
1988	0	0	0	0	101	269	365	360	73	0	0	0	863
1989	0	0	1	0	38	138	331	212	48	11	0	0	779
1990	0	0	0	39	13	181	264	230	134	2	0	0	863
1991	0	0	0	24	148	286	267	251	84	0	0	0	600
1992	0	0	0	0	59	124	121	102	5	0	0	0	724
1993	0	0	0	0	35	100	209	232	14	10	0	0	1139
1994	0	0	0	9	50	232	193	124	111	5	0	0	764
1995	0	0	0	0	13	286	353	405	71	11	0	0	722
1996	0	0	0	0	38	174	210	236	101	5	0	0	1052
1997	0	0	0	1	2	202	268	147	54	48	0	0	722
1998	0	0	0	3	96	185	326	277	163	2	0	0	1052

SNOWFALL (inches) 1998 LA CROSSE, WI (LSE)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0.0	0.0	0.0	0.0	T	19.8	7.7	3.2	6.1	T	T	0.0	36.8
1970-71	0.0	0.0	0.0	T	1.1	13.5	26.5	20.4	5.6	0.5	0.0	0.0	67.6
1971-72	0.0	0.0	0.0	0.0	3.8	12.0	10.2	8.0	11.9	3.0	0.0	0.0	48.9
1972-73	0.0	0.0	0.0	T	0.8	18.6	7.3	9.0	T	17.0	0.0	0.0	52.7
1973-74	0.0	0.0	0.0	0.0	T	9.8	2.0	14.9	7.6	0.7	0.0	0.0	35.0
1974-75	0.0	0.0	T	0.0	2.2	10.1	18.8	20.1	18.1	3.9	0.0	0.0	73.2
1975-76	0.0	0.0	0.0	0.0	1.7	1.0	8.0	2.7	6.0	0.0	T	0.0	19.4
1976-77	0.0	0.0	0.0	0.2	T	6.8	10.1	2.9	6.6	0.5	0.0	0.0	27.1
1977-78	0.0	0.0	0.0	0.0	12.0	18.8	10.4	8.0	3.4	T	0.0	0.0	52.6
1978-79	0.0	0.0	0.0	0.0	6.6	12.0	29.7	7.3	3.0	1.0	0.0	0.0	59.6
1979-80	0.0	0.0	0.0	T	3.2	T	10.7	4.1	10.1	3.9	0.0	0.0	32.0
1980-81	0.0	0.0	0.0	T	0.4	4.6	1.9	13.9	1.0	T	0.0	0.0	21.8
1981-82	0.0	0.0	0.0	0.5	3.6	11.6	14.3	2.2		0.0	0.0	0.0	
1982-83	0.0	0.0	0.0	0.0	T	0.0	9.8	18.5	4.2	2.1	0.0	0.0	34.6
1983-84	0.0	0.0	0.0	0.0	4.0	9.2	3.5	1.7	11.0	T	0.0	0.0	29.4
1984-85	0.0	0.0	0.0	T	2.9	13.3	9.4	5.3	14.5	T	0.0	0.0	45.4
1985-86	0.0	0.0	T					8.2	T	T	0.0	0.0	
1986-87	0.0	0.0	0.0	T	8.7	2.6	12.6	2.3	12.5	T	0.0	0.0	38.7
1987-88	0.0	0.0	0.0	T	T	13.3	19.1	4.2	1.2	T	0.0	0.0	37.8
1988-89	0.0	0.0	0.0	T	7.6	5.2	3.8	7.9	19.3	T	T	0.0	43.8
1989-90	0.0	0.0	0.0	T	8.7	5.9	10.0	7.0	T	T	0.0	0.0	31.6
1990-91	0.0	0.0	0.0	T	0.8	30.4	12.6	2.6	0.3	2.5	0.0	0.0	49.2
1991-92	0.0	0.0	0.0	1.2	30.3	8.7	5.3	7.5	11.1	T	0.0	0.0	64.1
1992-93	0.0	0.0	0.0	1.8	3.8	10.6	10.4	12.6	10.0	8.9	0.0	0.0	58.1
1993-94	0.0	0.0	0.0	0.2	4.5	2.3	21.4	18.7	0.8	1.9	0.0	0.0	49.8
1994-95	0.0	0.0	T	0.0	3.2	5.7	5.9	2.2	9.6	3.8	T	0.0	30.4
1995-96	0.0	T	0.0	0.5	6.1	8.8	35.0	1.2	5.8	3.3	0.0	0.0	60.7
1996-97	0.0	0.0	0.0	0.0	12.2	11.3	11.1	10.9	20.5	3.2	0.0	T	69.2
1997-98	0.0	0.0	0.0	0.0	1.8	6.0	16.1	3.8	9.7	0.1	0.0	T	37.5
1998-	0.0	T	0.0	0.0	0.3	4.1							
POR= 46 YRS	0.0	T	T	0.1	4.2	8.9	10.5	7.7	9.0	1.8	0.3	0.0	42.5

WBAN : 14920

REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1998
LA CROSSE,
WISCONSIN (LSE)

The city of La Crosse is situated on the east bank of the Mississippi River at the confluence of the Mississippi, Black, and La Crosse Rivers. The official records are taken at the La Crosse Municipal Airport which is 6 1/2 miles north of the main Post Office, on the north end of French Island. This island is about 6 miles long from north to south and 2 to 4 miles wide with the Mississippi River to the west and the old channel of the Black River to the east. A rather level sandy plain exists on each side of the river extending between the Wisconsin and Minnesota bluffs which rise 450 to 500 feet above the valley floor. The distance from bluff to bluff averages about 5 miles. The Mississippi River bends to the northwest and continues directly southward from the city.

The prevailing winds in the area are from the northwest from January through April and southerly during the remainder of the year. The situation of the city and airport in a natural bowl between the hills results in somewhat colder temperatures at night due to the settling of cooler air. Valley fogs often persist to mid-forenoon. Steepsided hills with narrow valleys are characteristic of most of the surrounding area.

The flow of the Mississippi River is regulated by dams built for the purpose of navigation, but the reservoirs have limited storage capacity. La Crosse is in the area of Pool No. 8 with a mean sea level elevation of 631 feet. When the river reaches an elevation of 639 feet, with open gate operation, there is considerable flooding of land near the river and some industrial sections of the city.

The invigorating continental-type climate results in wide and frequent variations in temperature. General storms moving eastward or northeastward into our area bring warmer weather and supply most of our moisture. These are usually followed by cooler air from Canada. The winters are cold and humid. The summers are warm with moderate humidities, while periods of hot and humid weather occur occasionally, usually lasting from a few days to a week at a time.

Sixty percent of the precipitation falls during the main growing season, extending from May through September. Most of the summer rainfall occurs during scattered thunderstorms. Some damage from heavy rains, high winds, and hail occurs each year, but tornadoes are infrequent and cover very small areas. Snow is frequent and is the predominant form of precipitation in winter. Heavy snow sometimes falls with larger amounts over the ridges. Glaze storms are not numerous since La Crosse is north of the main path of freezing rain.

Farming is diversified with dairying the leading activity. The more important field crops are corn, oats, and hay. Some of the more specialized crops are soybeans, tobacco, small fruits, and cranberries. Commercial apple orchards are numerous across the Mississippi River in Minnesota.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 13 and the average last occurrence in the spring is April 29.

STATION LOCATION

LA CROSSE, WISCONSIN

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE											AUCI M T S W	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL	GROUND												
							G	W	E	P	S	T	R	W	8	H			
<u>CITY</u>																			
Mons Andersen Building Corner 2nd & Main Sts.	10/15/72	5/12/81	NA	43° 49'	91° 15'	653	70	37	37										
Opera House Bldg., SW Corner 4th & Main Sts.	5/12/81	2/1/87	600 ft. E	43° 49'	91° 15'	672	81	40	40										
MacMillan Bldg. NE Corner 4th & Main Sts.	2/1/87	5/2/90	95 ft. NE	43° 49'	91° 15'	672	80	79	79										
U. S. Court House Bldg. NW Corner 4th & State Sts.	5/2/90	3/1/02	500 ft. N	43° 49'	91° 15'	675	81	73	73										
Federal Building, NE Corner 4th & State Sts.	3/1/02	11/23/07	250 ft. E	43° 49'	91° 15'	678	87	71	71										
Observatory Building 424 Cass Street	11/23/07	9/9/52	1700 ft. S	43° 49'	91° 15'	673	49	11	11				5	3					Tops of trees equal or slightly above wind instrument exposure. WBO moved to airport.
<u>AIRPORT</u>																			
Brice Prairie Airport Midway, Wisconsin	12/17/39	12/14/50	NA	43° 56'	91° 17'	664	29	5	5				3	5	4				Wind instruments transferred from WBO 2/7/43.
Municipal Airport La Crosse, Wisconsin	12/14/50	8/25/52	3.5 mi. SSE	43° 52'	91° 15'	653	51	5	5				3	5	4				Office in Fanta-Reed Hangar.
Administration Building Municipal Airport	8/25/52	Present	0.1 mi. NW	43° 52'	91° 15'	652 b651	39 b21	6 d	6	NA	NA		5 c	4	a4	NA			a - Commissioned 2100' N of thermometer site 11/19/64. b - Effective 11/19/64. FAA operation effective 10/1/68. c - Removed 10/29/69. d - Removed 9/1979. Hours of operation reduced 10/13/85 to 1/11/86. Unpublished period is 10/85 through 1/86.

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