

05304500 CHIPPEWA RIVER NEAR MILAN, MN

LOCATION.--Lat 45°06'30", long 95°47'55", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T.119 N., R.41 W., Chippewa County, Hydrologic Unit 07020005, on right bank 20 ft downstream from bridge on State Highway 40, 2.0 mi upstream from small tributary, and 5.5 mi east of Milan.

DRAINAGE AREA.--1,880 mi².

PERIOD OF RECORD.--March 1937 to current year.

REVISED RECORDS.--WSP 1145: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 959.69 ft above sea level (NGVD of 1929). Prior to June 15, 1942, nonrecording gage on bridge 800 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow may be influenced by regulation from several small lakes upstream from gage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft³/s and maximum (*):

	Time	Discharge (ft ³ /s)	Gage height (ft)	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct 30	2100	700	2.76	0200	1,050	3.44
Apr 13	1000	1,990	5.01	0100	1,860	4.81
May 27	0800	1,100	3.53	1700	887	3.14
Jun 15	0400	*2,950	*6.38			

Minimum discharge, 108 ft³/s, Dec. 13, (result of freezeup, daily value ice-effected).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	352	623	e307	e137	e143	e167	719	920	884	1,040	463	1,280
2	350	593	e310	e138	e143	e169	709	886	840	990	437	1,160
3	377	561	e319	e134	e144	e167	674	856	807	965	418	1,050
4	390	534	e329	e136	e144	e177	655	827	785	942	408	961
5	386	513	e332	e133	e147	e187	641	805	798	914	386	865
6	369	495	e326	e133	e163	e190	687	785	900	889	367	776
7	356	479	e332	e131	e155	e206	710	772	1,360	862	353	702
8	346	456	e326	e131	e159	e209	661	790	2,450	847	338	678
9	338	438	e324	e129	e154	e216	647	815	2,750	825	328	644
10	328	432	e303	e129	e155	e219	649	816	2,520	797	315	615
11	323	413	e283	e127	e156	e232	741	806	2,240	773	306	583
12	316	406	e275	e127	e159	e225	1,470	795	2,310	945	298	578
13	311	393	e165	e127	e162	e232	1,950	846	2,390	1,030	292	736
14	306	379	e138	e129	e173	e229	1,720	912	2,880	983	281	867
15	301	372	e242	e128	e178	e225	1,560	912	2,900	924	272	847
16	294	371	e272	e126	e172	e219	1,490	884	2,620	836	263	778
17	288	370	e260	e126	e168	e222	1,460	872	2,300	763	255	728
18	290	368	e233	e129	e170	e216	1,450	874	2,050	715	281	692
19	297	369	e202	e126	e169	e222	1,420	949	1,840	679	290	675
20	296	383	e191	e127	e173	e213	1,430	972	1,680	646	283	668
21	288	404	e178	e127	e169	e219	1,420	937	1,740	627	272	662
22	291	408	e169	e129	e171	e235	1,370	913	1,700	602	259	643
23	294	409	e161	e134	e172	e245	1,300	877	1,580	578	248	618
24	306	399	e158	e133	e170	e271	1,240	825	1,480	580	237	595
25	312	393	e153	e136	e169	e307	1,180	819	1,380	582	227	587
26	316	363	e150	e139	e169	e357	1,130	988	1,300	569	538	595
27	311	366	e142	e140	e169	e425	1,080	1,090	1,230	565	1,700	607
28	352	370	e137	e141	e169	e510	1,040	1,050	1,160	554	1,800	603
29	467	e302	e137	e142	---	e608	992	1,010	1,110	535	1,600	588
30	668	e301	e137	e144	---	e701	957	967	1,070	515	1,460	571
31	672	---	e137	e144	---	728	---	930	---	495	1,380	---
TOTAL	10,891	12,663	7,128	4,112	4,545	8,748	33,152	27,500	51,054	23,567	16,355	21,952
MEAN	351	422	230	133	162	282	1,105	887	1,702	760	528	732
MAX	672	623	332	144	178	728	1,950	1,090	2,900	1,040	1,800	1,280
MIN	288	301	137	126	143	167	641	772	785	495	227	571
AC-FT	21,600	25,120	14,140	8,160	9,020	17,350	65,760	54,550	101,300	46,750	32,440	43,540
CFSM	0.19	0.22	0.12	0.07	0.09	0.15	0.59	0.47	0.91	0.40	0.28	0.39
IN.	0.22	0.25	0.14	0.08	0.09	0.17	0.66	0.54	1.01	0.47	0.32	0.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2005, BY WATER YEAR (WY)

	236	204	129	76.1	79.9	396	1,110	706	621	491	284	229
MEAN	236	204	129	76.1	79.9	396	1,110	706	621	491	284	229
MAX	1,996	1,318	655	425	432	2,141	6,606	2,462	2,248	2,507	2,183	2,273
(WY)	(1985)	(1985)	(1985)	(1987)	(1988)	(1985)	(1997)	(1986)	(1984)	(1995)	(1993)	(1986)
MIN	5.51	8.67	4.77	0.09	0.00	2.92	90.9	81.6	36.8	15.1	6.19	3.50
(WY)	(1977)	(1977)	(1977)	(1940)	(1940)	(1965)	(1959)	(1939)	(1940)	(1940)	(1976)	(1976)

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SUMMARY STATISTICS	FOR 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1938 - 2005	
ANNUAL TOTAL	115,727		221,667		a381	
ANNUAL MEAN	316		607		1,307	
HIGHEST ANNUAL MEAN					45.4 1940	
LOWEST ANNUAL MEAN					13,400 Apr 6, 1997	
HIGHEST DAILY MEAN	2,100	Jun 10	2,900	Jun 15	b0.00 Jan 4, 1940	
LOWEST DAILY MEAN	40	Jan 31	126	Jan 16,17,19	0.00 Jan 4, 1940	
ANNUAL SEVEN-DAY MINIMUM	41	Jan 30	127	Jan 15	14,400 Apr 6, 1997	
MAXIMUM PEAK FLOW			2,950	Jun 15	c18.03 Apr 6, 1997	
MAXIMUM PEAK STAGE			6.38	Jun 15	d108 Dec 13	
INSTANTANEOUS LOW FLOW			d108	Dec 13	b0.00 Jan 4, 1940	
ANNUAL RUNOFF (AC-FT)	229,500		439,700		275,800	
ANNUAL RUNOFF (CFSM)	0.168		0.323		0.203	
ANNUAL RUNOFF (INCHES)	2.29		4.39		2.75	
10 PERCENT EXCEEDS	568		1,300		992	
50 PERCENT EXCEEDS	272		408		155	
90 PERCENT EXCEEDS	53		143		18	

- a Median of annual mean discharges is 330 ft³/s.
- b Many days in 1940.
- c From highwater mark.
- d Result of freeze-up. May have been lower due to backwater from ice.
- e Estimated.

