

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 fair to 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 (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar 25	1400	e644	(daily)	Jun 11	2200	627	2.60
Apr 21	0200	644	2.64	Jul 11	1300	*1,390	*4.03
May 16	0600	1,000	3.32				

Minimum discharge, 78 ft³/s, Mar. 9, estimated daily.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	288	e230	e167	e95	e81	320	496	612	1,110	649	155
2	212	288	e223	e166	e97	e80	327	490	588	1,090	620	151
3	211	296	e216	e166	e100	e80	320	480	561	1,050	593	144
4	228	288	e214	e165	e101	e79	306	478	539	1,050	567	133
5	255	295	e213	e165	e99	e79	274	481	520	1,030	546	128
6	296	297	e210	e165	e97	e79	277	502	518	1,040	527	124
7	322	294	e207	e164	e94	e79	278	508	532	1,030	510	119
8	336	294	e203	e164	e91	e79	273	515	551	1,020	490	113
9	335	294	e200	e162	e89	e78	264	547	553	1,040	471	107
10	341	297	e197	e158	e87	e78	257	621	553	1,140	449	130
11	337	294	e197	e149	e86	e78	257	694	583	1,360	441	185
12	334	291	e199	e139	e85	e78	256	759	593	1,310	407	196
13	320	287	e201	e132	e85	e79	257	782	540	1,230	384	202
14	310	289	e202	e126	e85	e81	257	845	503	1,180	356	182
15	305	274	e202	e121	e84	e86	258	924	472	1,140	331	161
16	295	286	e201	e116	e84	e97	270	988	434	1,110	310	150
17	288	252	e201	e113	e84	e111	342	944	408	1,060	294	143
18	288	289	e202	e109	e83	e126	461	904	399	1,030	279	146
19	290	286	e202	e106	e82	e145	530	895	365	998	269	140
20	294	276	e198	e103	e82	e167	598	942	334	972	254	132
21	298	269	e195	e99	e82	e193	639	947	306	956	238	130
22	315	267	e191	e97	e82	e227	629	924	293	930	225	129
23	322	261	e187	e95	e84	e278	622	900	290	903	216	124
24	323	245	e184	e93	e84	e342	607	875	410	879	209	119
25	317	e216	e180	e91	e83	e644	582	849	723	849	202	113
26	312	e211	e177	e90	e81	e678	551	820	986	820	194	107
27	306	e270	e175	e89	e81	e546	529	788	1,080	797	187	108
28	303	e283	e173	e89	e81	e423	514	754	1,060	769	179	102
29	304	e266	e171	e89	---	e336	501	715	1,070	740	177	95
30	307	e243	e169	e92	---	e328	501	673	1,100	709	164	93
31	302	---	e168	e94	---	316	---	647	---	679	160	---
TOTAL	9,223	8,286	6,088	3,874	2,448	6,151	12,057	22,687	17,476	31,021	10,898	4,061
MEAN	298	276	196	125	87.4	198	402	732	583	1,001	352	135
MAX	341	297	230	167	101	678	639	988	1,100	1,360	649	202
MIN	211	211	168	89	81	78	256	478	290	679	160	93
AC-FT	18,290	16,440	12,080	7,680	4,860	12,200	23,920	45,000	34,660	61,530	21,620	8,050
CFSM	0.16	0.15	0.10	0.07	0.05	0.11	0.21	0.39	0.31	0.53	0.19	0.07
IN.	0.18	0.16	0.12	0.08	0.05	0.12	0.24	0.45	0.35	0.61	0.22	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

	236	202	128	75.6	79.2	401	1,123	709	598	488	282	221
MEAN	236	202	128	75.6	79.2	401	1,123	709	598	488	282	221
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)	(1998)	(1985)	(1997)	(1986)	(1984)	(1995)	(1993)	(1986)
MIN	5.51	8.67	4.77	0.094	0.000	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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1938 - 2003	
ANNUAL TOTAL	152,969		134,270			
ANNUAL MEAN	419		368		a379	
HIGHEST ANNUAL MEAN					1,307	1986
LOWEST ANNUAL MEAN					45.4	1940
HIGHEST DAILY MEAN	1,430	Jun 23	1,360	Jul 11	13,400	Apr 6, 1997
LOWEST DAILY MEAN	150	Feb 4	78	Mar 9-12	b0.00	Jan 4, 1940
ANNUAL SEVEN-DAY MINIMUM	151	Feb 1	78	Mar 6	0.00	Jan 4, 1940
MAXIMUM PEAK FLOW			c1,390	Jul 11	14,400	Apr 6, 1997
MAXIMUM PEAK STAGE			d4.37	Mar 25	f18.03	Apr 6, 1997
INSTANTANEOUS LOW FLOW			g78	Mar 9	0.00	Jan 4, 1940
ANNUAL RUNOFF (AC-FT)	303,400		266,300		274,700	
ANNUAL RUNOFF (CFSM)	0.22		0.20		0.20	
ANNUAL RUNOFF (INCHES)	3.03		2.66		2.74	
10 PERCENT EXCEEDS	898		897		993	
50 PERCENT EXCEEDS	304		277		151	
90 PERCENT EXCEEDS	164		89		17	

- a Median of annual mean discharges is 330 ft³/s.
- b Many days in 1940.
- c Gage height, 4.03 ft.
- d Backwater from ice.
- e Estimated.
- f From highwater mark.
- g Estimated daily minimum.

