

# MINNESOTA RIVER BASIN

## 05320000 BLUE EARTH RIVER NEAR RAPIDAN, MN

LOCATION.--Lat 4405'44", long 9406'33", in SE 1 / 4 SE 1 / 4 sec. 6, T.107 N., R.27 W., Blue Earth County, Hydrologic Unit 07020009, on left bank 0.2 mi downstream from power plant (reactivated in 1984) operated by Rapidan Redevelopment Limited Partnership, 2 mi west of Rapidan, 3.5 mi downstream from Watonwan River, and 7.8 mi upstream from Le Sueur River.

DRAINAGE AREA.--2,410 mi<sup>2</sup> (revised).

PERIOD OF RECORD.--July 1909 to November 1910 (published as "at Rapidan Mills," no winter records), October 1939 to September 1945, July 1949 to current year.

REVISED RECORDS.-- WSP 1508: 1910.

GAGE.--Water-stage recorder. Datum of gage is 807.83 ft above mean sea level. July 20, 1909 to Apr. 28, 1910, nonrecording gage at site 0.2 mi upstream at different datum. Apr. 29 to Nov. 12, 1910, nonrecording gage at site 800 ft upstream at different datum. Oct. 4 to Nov. 14, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated periods, which are fair. Affected by regulation from dam 0.2 mi upstream. DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

### DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	265	233	159	107	1510	6760	1830	1710	4140	285	1050
2	136	235	262	158	103	1310	6780	1600	1660	3590	342	833
3	119	246	285	181	e100	1400	6580	1860	1500	3220	343	701
4	116	266	259	164	101	1230	6260	1590	1470	2870	295	650
5	114	243	170	e149	99	1190	5740	1290	1420	2730	295	558
6	115	240	160	e139	98	1180	5090	1520	1280	2570	295	572
7	148	238	170	e139	98	1150	4550	1370	1300	2390	299	417
8	144	235	182	e139	98	1100	4150	1400	1220	2110	305	388
9	130	245	222	e138	96	1040	3930	1330	1120	1950	310	396
10	127	258	250	e137	95	545	3790	1410	1120	1680	313	319
11	121	251	231	e132	97	447	3660	1180	1090	1560	311	276
12	141	213	213	e129	113	479	3230	1270	1140	1400	314	216

13	176	213	205	e120	138	801	3350	1180	1150	1250	308	170
14	192	210	203	100	116	906	2650	1220	1090	1110	279	215
15	230	245	207	101	99	792	2680	1060	1170	1110	245	212
16	257	243	241	97	129	777	2650	1630	1060	1120	216	167
17	352	162	197	95	202	733	2760	2500	1060	1060	227	155
18	322	146	214	95	239	684	3320	3320	1090	989	201	184
19	259	199	211	95	207	755	3520	2860	1040	947	168	171
20	271	242	215	92	1060	699	3030	2660	1160	888	198	141
21	244	242	187	89	1280	674	2730	2140	2340	829	171	133
22	226	247	164	87	1360	710	2690	1930	3090	735	195	150
23	213	188	208	87	1570	834	2190	1810	2910	725	226	168
24	213	195	213	87	2100	882	2290	1680	2700	729	406	144
25	240	192	201	89	2020	803	2130	1660	2660	581	375	134
26	218	217	189	92	2390	792	2120	2320	2710	545	322	144
27	230	222	170	93	1700	1050	2090	2850	3190	517	319	136
28	232	216	165	95	1680	2430	2070	2670	3580	460	331	128
29	188	226	161	95	---	e4500	1970	2280	4280	430	568	154
30	193	221	166	103	---	e6600	1850	2040	4300	380	1350	135
31	234	---	167	108	---	7960	---	1900	---	314	1310	---
TOTAL	6041	6761	6321	3584	17495	45963	106610	57360	56610	44929	11122	9217
MEAN	195	225	204	116	625	1483	3554	1850	1887	1449	359	307
MAX	352	266	285	181	2390	7960	6780	3320	4300	4140	1350	1050
MIN	114	146	160	87	95	447	1850	1060	1040	314	168	128
AC-FT	11980	13410	12540	7110	34700	91170	211500	113800	112300	89120	22060	18280
CFSM	.08	.09	.08	.05	.26	.61	1.46	.76	.78	.60	.15	.13
IN.	.09	.10	.10	.05	.27	.70	1.63	.88	.87	.69	.17	.14

e Estimated

# STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	555	550	353	207	261	1448	2660	1716	2106	1340	691	531
MAX	5121	2878	1724	1093	1793	6277	13230	5775	11700	8540	5541	4313
(WY)	1969	1993	1992	1992	1983	1983	1965	1991	1993	1993	1979	1993
MIN	22.5	26.7	16.0	14.8	14.3	92.4	142	53.4	110	30.9	37.7	22.1
(WY)	1940	1940	1956	1977	1959	1968	1977	1940	1976	1940	1976	1976

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR		FOR 1998 WATER YEAR		WATER YEARS 1909 - 1998		
ANNUAL TOTAL	535792			372013			
ANNUAL MEAN	1468			1019		1052	
HIGHEST ANNUAL MEAN						4518	1993
LOWEST ANNUAL MEAN						105	1940
HIGHEST DAILY MEAN	8390	Mar 23	7960	Mar 31	42500	Apr 9	1965
LOWEST DAILY MEAN	114	Oct 5	87	Jan 22	7.4	Oct 28	1955
ANNUAL SEVEN-DAY MINIMUM	127	Oct 3	89	Jan 20	8.1	Oct 24	1955
INSTANTANEOUS PEAK FLOW			8780	Mar 31	43100	Apr 9	1965
INSTANTANEOUS PEAK STAGE			8.31	Mar 31	21.36a	Apr 9	1965
INSTANTANEOUS LOW FLOW			46b	Nov 30	6.9	Oct 12	1955
ANNUAL RUNOFF (AC-FT)	1063000			737900		762400	
ANNUAL RUNOFF (CFSM)	.60			.42		.43	
ANNUAL RUNOFF (INCHES)	8.20			5.70		5.88	
10 PERCENT EXCEEDS	3790			2700		2760	

50 PERCENT EXCEEDS	582		319		356		
90 PERCENT EXCEEDS	189		120		42		

a = From floodmark.

b = Due in part to regulation.

