

## RED RIVER OF THE NORTH BASIN--Continued

05061500 SOUTH BRANCH BUFFALO RIVER AT SABIN, MN

LOCATION--Lat 46°46'20", long 96°37'40", in SW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 9, T.138 N., R.47 W., Clay County, Hydrologic Unit 09020106, on left bank, on downstream side of County Road 67 bridge, 0.3 mi downstream from Stony Creek and 1 mi east of Sabin.

DRAINAGE AREA.--454 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1945 to current year. Water year 1981, annual maximum only. March 1982 to September 1985, no winter records.

REVISED RECORDS.--WSP 1308: 1949(M). WRIR 97-4249: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 902.39 ft above sea level (levels by Soil Conservation Service). Prior to April 17, 1948, nonrecording gage at site 1 mi downstream at different datum. Aug. 17, 1948 to Oct. 4, 1989, nonrecording gage at present site and datum.

REMARKS.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	86	210	e11	e13	e140	679	69	36	62	3.2	27
2	26	82	184	e10	e13	e151	574	62	41	55	3.1	31
3	25	75	165	e9.6	e13	e154	541	57	43	54	3.1	61
4	23	70	148	e9.1	e14	e149	624	55	41	58	2.6	120
5	28	64	133	e8.8	e14	e122	705	67	39	98	2.3	210
6	30	61	e122	e8.5	e14	e114	648	85	52	93	1.9	341
7	38	58	e110	e8.3	e14	e100	487	126	137	67	1.7	515
8	50	55	e99	e8.1	e14	e84	358	195	177	54	1.6	637
9	51	54	e89	e8.0	e14	e71	300	263	174	46	2.0	641
10	44	e56	e80	e7.9	e15	e62	261	334	144	46	3.0	572
11	40	e55	73	e7.9	e15	e59	226	483	126	44	10	448
12	39	e54	67	e7.8	e16	e58	200	663	110	38	29	329
13	39	e54	e61	e7.8	e16	e59	182	641	86	31	40	243
14	50	e58	e57	e7.9	e17	e64	167	535	65	26	64	204
15	51	e63	e55	e7.9	e17	e73	156	403	51	e21	75	182
16	57	e63	e52	e8.0	e18	e90	148	320	41	e17	71	162
17	176	e61	e46	e8.0	e18	e112	139	270	34	e15	56	138
18	294	e60	e42	e8.1	e19	e140	131	233	29	e13	42	112
19	326	e59	e37	e8.1	e20	e155	123	200	25	e12	33	93
20	328	e58	e33	e8.2	e21	e170	117	168	23	e10	26	76
21	305	e58	e28	e8.4	e21	e173	111	138	22	e9.0	21	63
22	255	e59	e25	e8.9	e22	e170	107	117	23	e8.3	16	53
23	195	e71	e24	e9.3	e23	e166	104	99	33	e7.5	14	46
24	153	e90	e22	e9.7	e24	e164	98	86	106	7.3	22	39
25	127	e113	e20	e10	e26	e162	93	76	161	11	41	36
26	111	149	e17	e10	e40	e165	88	68	168	15	41	36
27	100	198	e16	e11	e65	184	82	58	155	24	40	38
28	94	223	e16	e11	e115	356	78	50	117	17	35	42
29	88	229	e15	e12	---	785	79	44	88	10	33	44
30	84	232	e13	e12	---	1030	76	38	71	7.6	29	41
31	85	---	e11	e12	---	885	---	34	---	4.7	26	---
TOTAL	3340	2668	2070	283.3	651	6367	7682	6037	2418	981.4	788.5	5580
MEAN	108	88.9	66.8	9.14	23.2	205	256	195	80.6	31.7	25.4	186
MAX	328	232	210	12	115	1030	705	663	177	98	75	641
MIN	23	54	11	7.8	13	58	76	34	22	4.7	1.6	27
AC-FT	6620	5290	4110	562	1290	12630	15240	11970	4800	1950	1560	11070
CFSM	.24	.20	.15	.02	.05	.45	.56	.43	.18	.07	.06	.41
IN.	.27	.22	.17	.02	.05	.52	.63	.49	.20	.08	.06	.46

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	18.0	17.1	6.81	2.05	6.19	109	280	92.1	94.3	84.5	12.0	16.8
MAX	108	88.9	66.8	13.1	205	581	1683	580	1068	1112	152	186
(WY)	1999	1999	1999	1978	1998	1966	1997	1962	1962	1975	1993	1999
MIN	.023	2.05	.006	.000	.000	.000	27.9	8.28	1.30	.000	.000	.000
(WY)	1977	1977	1961	1946	1946	1951	1973	1980	1976	1988	1976	1976

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1945 - 1999
ANNUAL TOTAL	70982.3	38866.2	
ANNUAL MEAN	194	106	62.3 <sup>a</sup>
HIGHEST ANNUAL MEAN			198
LOWEST ANNUAL MEAN			12.2
HIGHEST DAILY MEAN	2880	May 17	1030
LOWEST DAILY MEAN	2.6	Aug 17	1.6
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 15	2.2
INSTANTANEOUS PEAK FLOW			1070
INSTANTANEOUS PEAK STAGE			12.88
INSTANTANEOUS LOW FLOW			1.3
ANNUAL RUNOFF (AC-FT)	140800	77090	45110
ANNUAL RUNOFF (CFSM)	.43	.23	.14
ANNUAL RUNOFF (INCHES)	5.82	3.18	1.86
10 PERCENT EXCEEDS	502	237	114
50 PERCENT EXCEEDS	63	57	7.9
90 PERCENT EXCEEDS	9.3	9.5	.04

a Median of annual mean discharges is 48.2 ft<sup>3</sup>/s.  
 b Many days, most years.

