

05061500 SOUTH BRANCH BUFFALO RIVER AT SABIN, MN

LOCATION--Lat 46°46'20", long 96°37'40", in SW¹/₄ SW¹/₄ 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 mi².

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 (NGVD of 1929, 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 good except those for estimated daily discharges, which are poor.

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	13	e35	e17	e9.8	e6.6	e6.2	62	63	57	897	10	2.1
2	13	e37	e16	e9.7	e6.5	e6.1	66	59	52	749	11	1.5
3	14	e38	e15	e9.6	e6.5	e6.1	73	57	48	569	11	1.2
4	15	e37	e15	e9.5	e6.4	e6.1	70	59	43	428	9.8	0.95
5	17	e36	e14	e9.5	e6.4	e6.1	65	62	40	232	9.2	0.72
6	26	e34	e13	e9.5	e6.3	e6.0	66	73	38	122	9.4	0.63
7	35	e35	e13	e9.4	e6.3	e6.0	58	99	38	81	10	0.49
8	49	e35	e12	e9.4	e6.2	e6.0	49	133	38	60	9.3	0.25
9	51	e36	e12	e9.4	e6.2	e6.0	43	149	47	57	9.7	e0.10
10	48	e37	e12	e9.4	e6.2	e6.1	41	172	64	68	9.9	e0.09
11	45	e36	e12	e9.3	e6.2	e6.2	41	247	70	98	10	e0.10
12	43	e34	e12	e9.1	e6.1	e6.3	46	284	80	129	9.5	e0.13
13	46	e32	e13	e9.0	e6.1	e6.6	49	270	86	155	9.0	2.3
14	44	e31	e13	e8.8	e6.1	e7.5	50	232	90	147	9.1	2.6
15	39	e29	e13	e8.6	e6.2	e9.5	52	190	82	119	9.1	2.1
16	35	e28	e12	e8.5	e6.3	e18	59	163	67	89	9.0	2.0
17	34	e26	e12	e8.3	e6.4	e60	76	138	55	65	7.3	2.4
18	37	e26	e12	e8.1	e6.4	e130	116	122	45	50	6.7	2.3
19	42	e26	e12	e8.0	e6.4	e200	168	134	39	41	6.3	3.1
20	51	e26	e11	e7.9	e6.5	e228	199	140	36	33	7.3	5.3
21	54	e26	e11	e7.8	e6.4	e220	e210	195	30	26	6.1	5.4
22	55	e25	e11	e7.7	e6.4	e185	176	189	49	22	5.8	3.0
23	54	e24	e11	e7.5	e6.3	e170	148	163	99	19	5.0	2.1
24	49	e22	e10	e7.4	e6.2	e155	118	144	72	19	4.7	2.5
25	47	e20	e10	e7.3	e6.2	e130	97	129	203	15	4.9	0.70
26	45	e19	e10	e7.2	e6.2	103	83	126	351	13	4.5	1.4
27	45	e18	e10	e7.1	e6.2	92	75	e117	581	12	3.8	2.0
28	46	e18	e10	e7.0	e6.2	91	70	e94	869	11	3.7	2.0
29	49	e18	e10	e6.9	---	74	68	82	1,030	11	3.6	1.8
30	e44	e17	e10	e6.8	---	60	66	72	993	10	3.1	2.9
31	e39	---	e9.9	e6.7	---	61	---	61	---	11	2.6	---
TOTAL	1,224	861	373.9	260.2	176.4	2,073.8	2,560	4,218	5,392	4,358	230.4	54.16
MEAN	39.5	28.7	12.1	8.39	6.30	66.9	85.3	136	180	141	7.43	1.81
MAX	55	38	17	9.8	6.6	228	210	284	1,030	897	11	5.4
MIN	13	17	9.9	6.7	6.1	6.0	41	57	30	10	2.6	0.09
AC-FT	2,430	1,710	742	516	350	4,110	5,080	8,370	10,700	8,640	457	107
CFSM	0.09	0.06	0.03	0.02	0.01	0.15	0.19	0.30	0.40	0.31	0.02	0.00
IN.	0.10	0.07	0.03	0.02	0.01	0.17	0.21	0.35	0.44	0.36	0.02	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

MEAN	19.8	21.7	8.19	2.94	6.90	109	288	94.0	102	86.7	11.9	17.0
MAX	108	194	66.8	18.5	205	581	1,683	580	1,068	1,112	152	186
(WY)	(1999)	(2001)	(1999)	(2001)	(1998)	(1966)	(1997)	(1962)	(1962)	(1975)	(1993)	(1999)
MIN	0.023	2.05	0.006	0.000	0.000	0.000	27.9	8.28	1.30	0.000	0.000	0.000
(WY)	(1977)	(1977)	(1961)	(1946)	(1946)	(1951)	(1973)	(1980)	(1976)	(1988)	(1976)	(1976)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	25,111.3		21,781.86			
ANNUAL MEAN	68.8		59.7		a64.8	
HIGHEST ANNUAL MEAN					198	1962
LOWEST ANNUAL MEAN					12.2	1977
HIGHEST DAILY MEAN	893	Jul 14	1,030	Jun 29	8,200	Jul 1, 1975
LOWEST DAILY MEAN	6.9	Sep 17	0.09	Sep 10	b0.00	Dec 13, 1945
ANNUAL SEVEN-DAY MINIMUM	10	Aug 21	0.26	Sep 6	0.00	Dec 13, 1945
MAXIMUM PEAK FLOW			1,040	Jun 29	8,500	Jul 2, 1975
MAXIMUM PEAK STAGE			12.95	Jun 29	19.90	Jul 2, 1975
INSTANTANEOUS LOW FLOW			c0.09	Sep 10	b0.00	Dec 13, 1945
ANNUAL RUNOFF (AC-FT)	49,810		43,200		46,930	
ANNUAL RUNOFF (CFSM)	0.15		0.13		0.14	
ANNUAL RUNOFF (INCHES)	2.06		1.78		1.94	
10 PERCENT EXCEEDS	143		142		117	
50 PERCENT EXCEEDS	31		18		8.6	
90 PERCENT EXCEEDS	12		5.0		0.10	

- a Median of annual mean discharges is 52 ft³/s.
- b Many days, several years.
- c Estimated, daily-minimum.
- e Estimated.

