Water-Data Report 2013

05061500 SOUTH BRANCH BUFFALO RIVER AT SABIN, MN

Upper Red Basin
Buffalo Subbasin

LOCATION.--Lat 46°46′32″, long 96°37′40″ referenced to North American Datum of 1927, in SW ¼ SW ¼ sec.9, T.138 N., R.47 W., Clay County, MN, Hydrologic Unit 09020106, gage shelter near left downstream end of County Road 67 bridge, 0.3 mile (0.5 km) downstream from Stony Creek and 1 mile (1.6 km) east of Sabin. A dam is located 7 miles downstream of gage.

DRAINAGE AREA.--454 mi^2.

SURFACE-WATER RECORDS

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, non-recording gage at site one mile downstream at different datum. Aug. 17, 1948 to Oct. 4, 1989, non-recording gage at present site and datum.

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

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DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2012 TO SEPTEMBER 2013
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	8.1	23	e33	e19	e8.4	e7.5	e10	1,180	189	536	27	e20
2	9.4	23	e34	e19	e8.3	e7.6	e11	945	180	313	25	e20
3	9.1	29	e35	e20	e8.3	e7.8	e11	783	162	193	23	e19
4	11	24	e36	e20	e8.3	e8.0	e11	634	145	152	22	e18
5	17	22	e36	e20	e8.4	e8.0	e12	506	154	120	20	e17
6	16	23	e36	e20	e8.7	e8.1	e12	406	154	101	21	e17
7	17	26	e33	e20	e8.9	e8.2	e12	350	159	96	e18	e17
8	17	28	e29	e20	e8.9	e8.0	e13	315	148	86	e16	e17
9	17	29	e26	e20	e8.9	e8.0	e14	285	134	78	e15	e22
10	16	31	e22	e19	e8.9	e8.0	e14	249	129	74	e14	e32
11	17	31	e19	e19	e8.9	e8.3	e15	218	128	74	e13	e35
12	17	32	e21	e19	e8.9	e8.6	e16	190	123	68	e12	31
13	16	29	e22	e18	e8.8	e8.8	e17	165	132	60	e11	25
14	18	29	e23	e18	e8.6	e8.9	e19	147	137	58	e11	35
15	18	34	e23	e17	e8.4	e8.9	e22	144	120	69	e10	63
16	26	33	e23	e16	e8.3	e8.9	e33	141	103	69	e9.6	102
17	17	31	e23	e15	e8.3	e8.9	e53	133	91	76	e9.1	79
18	20	35	e23	e15	e8.3	e9.0	e71	137	79	71	e8.8	75
19	34	36	e23	e14	e8.3	e9.1	e107	183	68	62	e8.2	64
20	39	37	e22	e13	e8.3	e9.2	e165	283	63	56	e7.8	56
21	41	39	e20	e12	e8.1	e9.2	e246	423	245	52	e7.6	59
22	35	39	e19	e12	e8.0	e9.1	e359	636	421	47	e7.3	48
23	29	41	e19	e11	e7.8	e8.9	e595	868	636	44	e6.9	44
24	25	33	e18	e10	e7.6	e8.9	e1,070	779	1,060	41	e9.0	88
25	25	33	e18	e10	e7.5	e8.6	e1,550	615	1,480	38	e11	54
26	23	36	e18	e10	e7.5	e8.4	e2,320	429	2,500	36	e14	28
27	22	33	e17	e10	e7.5	e8.5	e2,790	286	3,070	32	e18	27
28	23	31	e17	e10	e7.5	e9.0	e2,600	214	2,300	31	e24	44
29	22	e32	e18	e9.9	---	e9.5	2,050	180	1,340	30	e23	76
30	22	e32	e18	e9.3	---	e9.7	1,590	181	828	30	e21	82
31	23	---	e18	e8.8	---	e10	---	192	---	29	e21	---
Total	649.6	934	742	474.0	232.6	267.6	15,808	12,197	16,478	2,822	464.3	1,314
Mean	21.0	31.1	23.9	15.3	8.31	8.63	527	393	549	91.0	15.0	43.8
Max	41	41	36	20	8.9	10	2,790	1,180	3,070	536	27	102
Min	8.1	22	17	8.8	7.5	7.5	10	133	63	29	6.9	17
Ac-ft	1,290	1,850	1,470	940	461	531	31,360	24,190	32,680	5,600	921	2,610
Cfsm	0.05	0.07	0.05	0.03	0.02	0.02	1.16	0.87	1.21	0.20	0.03	0.10
In.	0.05	0.08	0.06	0.04	0.02	0.02	1.30	1.00	1.35	0.23	0.04	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2013, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	41.0	41.0	11.8	6.10	9.47	150	312	111	134	90.9	24.8	27.5
Max	761	414	66.8	55.5	205	1,471	1,683	580	1,068	1,112	210	266
(WY)	(2009)	(2010)	(1999)	(2006)	(1998)	(2009)	(1997)	(1962)	(1962)	(1975)	(2011)	(2004)
Min	0.02	2.05	0.01	0.00	0.00	0.00	27.9	8.28	1.30	0.00	0.00	0.00
(WY)	(1977)	(1977)	(1961)	(1946)	(1946)	(1951)	(1973)	(1980)	(1976)	(1988)	(1976)	(1976)

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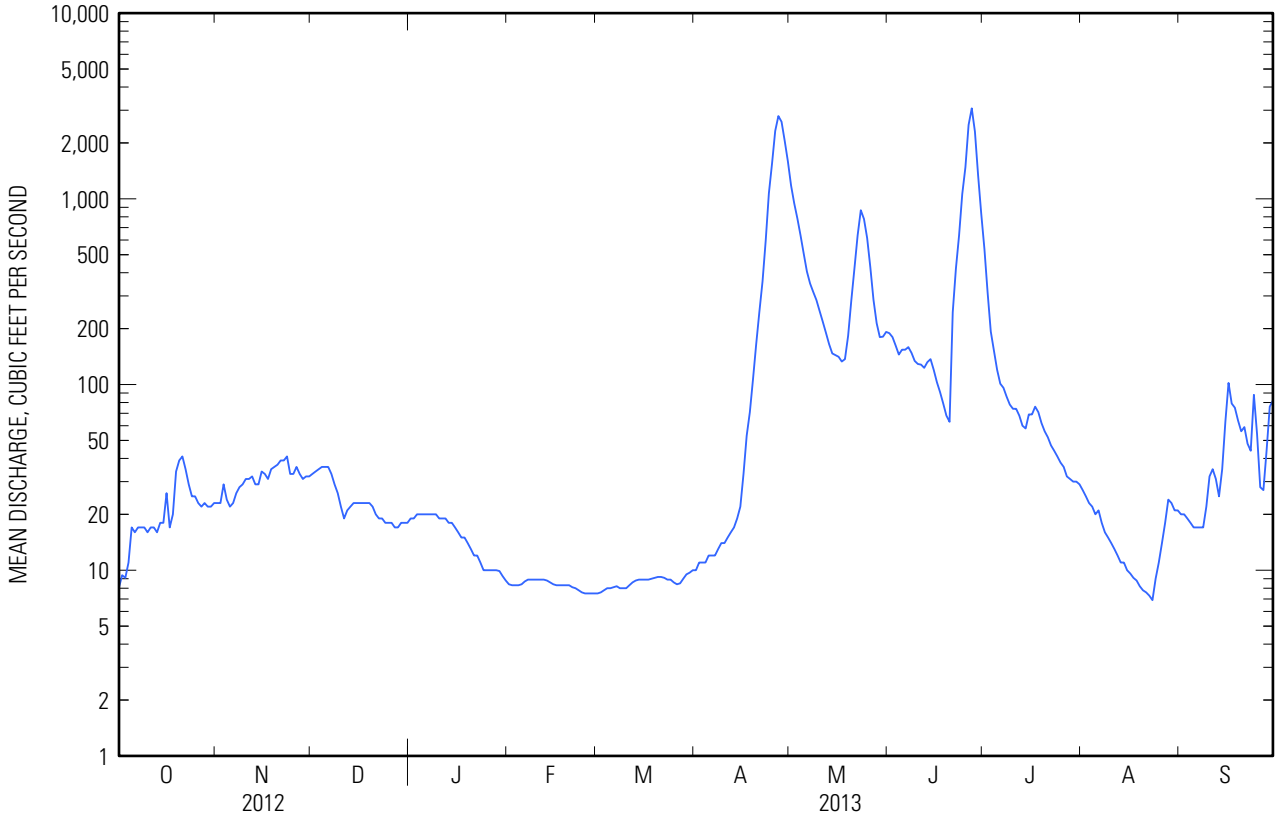
SUMMARY STATISTICS

	Calendar Year 2012		Water Year 2013		Water Years 1945 - 2013	
Annual total	24,325.1		52,383.1			
Annual mean	66.5		144		[a]81.7	
Highest annual mean					372	2009
Lowest annual mean					12.2	1977
Highest daily mean	958	May 31	3,070	Jun 27	8,200	Jul 1, 1975
Lowest daily mean	1.8	Sep 18	6.9	Aug 23	[b]0.00	Dec 13, 1945
Annual seven-day minimum	2.7	Sep 14	7.5	Feb 24	0.00	Dec 13, 1945
Maximum peak flow			3,170	Jun 27	8,500	Jul 2, 1975
Maximum peak stage			15.75	Jun 27	19.90	Jul 2, 1975
Instantaneous low flow			[c]6.5	Oct 1	[b]0.00	Dec 13, 1945
Annual runoff (ac-ft)	48,250		103,900		59,180	
Annual runoff (cfsm)	0.146		0.316		0.180	
Annual runoff (inches)	1.99		4.29		2.44	
10 percent exceeds	152		284		160	
50 percent exceeds	24		23		12	
90 percent exceeds	6.7		8.4		0.26	

[a] Median of annual mean discharges is 60 ft³/s.
[b] Many days, several years.
[c] Rising stage.