

## 05061000 BUFFALO RIVER NEAR HAWLEY, MN

LOCATION.--Lat 46°51'00", long 96°19'45", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec. 14, T.139 N., R.45 W., Clay County, Hydrologic Unit 09020106, near left downstream end of bridge on farm lane, 2 mi southwest of Hawley.

DRAINAGE AREA.--325 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: 1945-46(M), 1948(M).

GAGE.--Water-stage recorder. Datum of gage is 1,111.91 ft above sea level (NGVD of 1929). Prior to Jan. 29, 1953, nonrecording gage at bridge 1,800 ft upstream at datum 3.17 ft lower.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 11.3 ft, present datum, spring of 1921, from information by local resident.

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	47	45	e32	e33	e36	e34	94	64	62	227	40	19
2	48	54	e31	e33	e36	e34	92	62	67	181	39	19
3	46	54	e31	e33	e36	e34	83	60	65	152	38	18
4	56	51	e31	e33	e36	e34	55	60	59	134	38	18
5	58	47	e31	e33	e36	e34	77	72	58	116	41	18
6	60	47	e31	e34	e35	e34	82	92	57	101	41	17
7	59	49	e32	e34	e35	e34	71	102	59	92	38	17
8	60	50	e32	e35	e35	e34	65	102	60	88	35	17
9	57	51	e33	e35	e35	e34	63	122	59	94	33	17
10	56	52	e33	e35	e35	e34	62	186	65	93	32	18
11	54	54	e34	e35	e35	e34	64	208	77	90	30	18
12	52	50	e34	e35	e35	e35	61	198	88	84	29	19
13	51	42	e34	e35	e34	e36	60	175	95	79	28	21
14	50	e40	e33	e34	e34	e39	64	154	96	76	26	20
15	48	e39	e33	e34	e34	e49	66	130	85	80	25	20
16	50	e40	e33	e34	e34	e66	89	116	74	77	25	20
17	57	e41	e34	e33	e34	e86	106	105	66	69	24	20
18	60	42	e34	e33	e34	e113	104	100	61	61	23	30
19	64	42	e35	e33	e35	153	115	141	54	59	23	35
20	64	42	e35	e33	e35	209	123	164	48	57	23	30
21	65	42	e34	e33	e35	232	116	150	45	55	22	25
22	68	44	e33	e33	e34	182	110	135	78	53	22	25
23	71	43	e32	e33	e34	195	100	120	147	52	21	25
24	65	35	e32	e33	e33	187	91	107	181	50	21	25
25	63	e30	e31	e33	e33	163	82	97	343	49	22	23
26	59	e31	e32	e33	e33	142	77	88	424	49	23	23
27	59	e32	e33	e34	e34	139	74	83	404	49	22	23
28	59	e32	e34	e34	e34	126	70	81	382	47	22	23
29	58	e33	e34	e34	---	110	68	70	347	45	21	24
30	56	e32	e34	e35	---	96	66	67	282	43	19	24
31	48	---	e34	e35	---	95	---	63	---	42	20	---
TOTAL	1,768	1,286	1,019	1,047	969	2,827	2,450	3,474	3,988	2,544	866	651
MEAN	57.0	42.9	32.9	33.8	34.6	91.2	81.7	112	133	82.1	27.9	21.7
MAX	71	54	35	35	36	232	123	208	424	227	41	35
MIN	46	30	31	33	33	34	55	60	45	42	19	17
AC-FT	3,510	2,550	2,020	2,080	1,920	5,610	4,860	6,890	7,910	5,050	1,720	1,290
CFSM	0.18	0.13	0.10	0.10	0.11	0.28	0.25	0.34	0.41	0.25	0.09	0.07
IN.	0.20	0.15	0.12	0.12	0.11	0.32	0.28	0.40	0.46	0.29	0.10	0.07

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

MEAN	44.8	45.8	31.0	24.7	27.5	92.2	271	140	118	114	53.0	42.8
MAX	151	298	127	70.2	170	434	1,036	383	589	784	472	192
(WY)	(1974)	(2001)	(1999)	(2001)	(1998)	(1966)	(1997)	(1998)	(2000)	(1993)	(1955)	(1999)
MIN	11.6	12.2	10.6	9.94	9.88	15.0	33.3	21.5	12.7	10.1	5.87	8.52
(WY)	(1979)	(1977)	(1977)	(1962)	(1949)	(1969)	(1981)	(1977)	(1977)	(1976)	(1976)	(1976)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	34,370		22,889		84.4	
ANNUAL MEAN	94.2		62.7		188	
HIGHEST ANNUAL MEAN					1998	
LOWEST ANNUAL MEAN					16.7	
HIGHEST DAILY MEAN	921	Jul 11	424	Jun 26	a2,360	Apr 6, 1997
LOWEST DAILY MEAN	30	Nov 25	17	Sep 6-9	3.2	Aug 25, 1976
ANNUAL SEVEN-DAY MINIMUM	31	Nov 30	17	Sep 3	4.3	Aug 22, 1976
MAXIMUM PEAK FLOW			431	Jun 26	a2,360	Apr 6, 1997
MAXIMUM PEAK STAGE			6.46	Jun 26	10.86	Jun 22, 2000
INSTANTANEOUS LOW FLOW			15	Sep 6	2.8	Aug 26, 1977
ANNUAL RUNOFF (AC-FT)	68,170		45,400		61,170	
ANNUAL RUNOFF (CFSM)	0.29		0.19		0.26	
ANNUAL RUNOFF (INCHES)	3.93		2.62		3.53	
10 PERCENT EXCEEDS	170		116		193	
50 PERCENT EXCEEDS	55		43		35	
90 PERCENT EXCEEDS	35		24		14	

a Estimated daily discharge, backwater from ice.  
 e Estimated.

