Water-Data Report 2008

05062000 BUFFALO RIVER NEAR DILWORTH, MN

Upper Red Basin
Buffalo Subbasin

LOCATION.--Lat 46°57′40″, long 96°39′40″ referenced to North American Datum of 1927, in SW ¼ SE ¼ sec.6, T.140 N., R.47 W., Clay County, MN, Hydrologic Unit 09020106, on left bank, at County Road 94 bridge, 4.5 mi southeast of Kragnes, 6.5 miles northeast of Dilworth, and 9 mi downstream from South Branch.

DRAINAGE AREA.--975 mi^2, (revised in 1998 Annual Report).

SURFACE-WATER RECORDS

PERIOD OF RECORD.--March 1931 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1308: 1931(M).

GAGE.--Water-stage recorder. Datum of gage is 878.31 ft above sea level (NGVD of 1929, levels by U.S. Army Corps of Engineers). Prior to April 5, 1937, nonrecording gage at same 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 2007 TO SEPTEMBER 2008
DAILY MEAN VALUES
[e, estimated]

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	60	65	e55	e55	e38	e35	e263	589	264	345	111	46
2	55	66	e56	e52	e39	e35	e335	692	276	310	92	65
3	53	63	e56	e52	e39	e35	e426	809	275	279	84	168
4	54	66	e57	e53	e39	e34	e577	879	297	248	80	291
5	51	66	e57	e55	e38	e34	e745	936	326	224	77	291
6	49	64	e56	e56	e38	e34	e875	1,010	572	200	72	238
7	50	64	e56	e55	e39	e33	e946	1,080	1,050	184	69	186
8	52	63	e55	e54	e38	e33	e966	1,090	1,160	176	68	145
9	51	60	e54	e54	e38	e32	e900	953	1,360	167	68	112
10	54	67	e55	e53	e37	e33	e751	779	1,720	166	64	87
11	58	74	e55	e52	e37	e33	e671	650	1,990	178	64	134
12	65	77	e55	e52	e38	e33	e712	571	2,130	176	112	323
13	62	74	e54	e51	e39	e34	711	519	2,000	189	353	381
14	55	69	e54	e50	e39	e34	652	485	1,800	199	512	409
15	51	62	e56	e49	e38	e34	650	453	1,670	180	586	399
16	51	58	e57	e48	e37	e35	690	418	1,560	166	709	356
17	50	56	e60	e47	e36	e35	713	384	1,430	154	830	305
18	53	55	e59	e45	e36	e35	749	354	1,230	141	887	256
19	68	55	e58	e44	e35	e35	754	331	964	133	851	207
20	96	57	e58	e43	e35	e35	689	313	719	148	746	149
21	136	57	e60	e44	e35	e36	601	307	558	176	593	111
22	156	e50	e59	e45	e35	e38	532	299	458	209	393	91
23	142	e54	e58	e43	e35	e40	485	284	384	219	227	79
24	126	e56	e57	e41	e35	e43	453	271	332	189	136	73
25	114	e56	e56	e41	e35	e46	422	265	299	153	100	70
26	99	e55	e56	e42	e35	e48	410	267	274	129	81	72
27	86	e53	e57	e42	e35	e52	403	253	331	112	70	75
28	79	e45	e56	e42	e35	e60	349	244	408	97	63	87
29	72	e40	e55	e41	e35	e97	359	234	410	89	56	96
30	67	e53	e56	e39	---	e151	466	233	383	97	53	85
31	66	---	e56	e39	---	e201	---	243	---	123	49	---
Total	2,281	1,800	1,749	1,479	1,068	1,493	18,255	16,195	26,630	5,556	8,256	5,387
Mean	73.6	60.0	56.4	47.7	36.8	48.2	608	522	888	179	266	180
Max	156	77	60	56	39	201	966	1,090	2,130	345	887	409
Min	49	40	54	39	35	32	263	233	264	89	49	46
Ac-ft	4,520	3,570	3,470	2,930	2,120	2,960	36,210	32,120	52,820	11,020	16,380	10,690
Cfsm	0.08	0.06	0.06	0.05	0.04	0.05	0.62	0.54	0.91	0.18	0.27	0.18
In.	0.09	0.07	0.07	0.06	0.04	0.06	0.70	0.62	1.02	0.21	0.31	0.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2008, BY WATER YEAR (WY)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Mean	69.6	74.7	42.0	27.5	30.1	203	623	265	261	214	78.4	71.9
Max	348	666	240	148	285	1,308	3,412	1,144	2,138	2,814	910	517
(WY)	(2005)	(2005)	(1999)	(2006)	(1998)	(1966)	(1997)	(1998)	(1962)	(1975)	(1993)	(1944)
Min	5.48	8.74	4.75	0.87	0.76	2.26	33.5	27.2	15.1	2.23	0.00	0.79
(WY)	(1940)	(1937)	(1938)	(1940)	(1940)	(1940)	(1931)	(1931)	(1934)	(1936)	(1936)	(1936)

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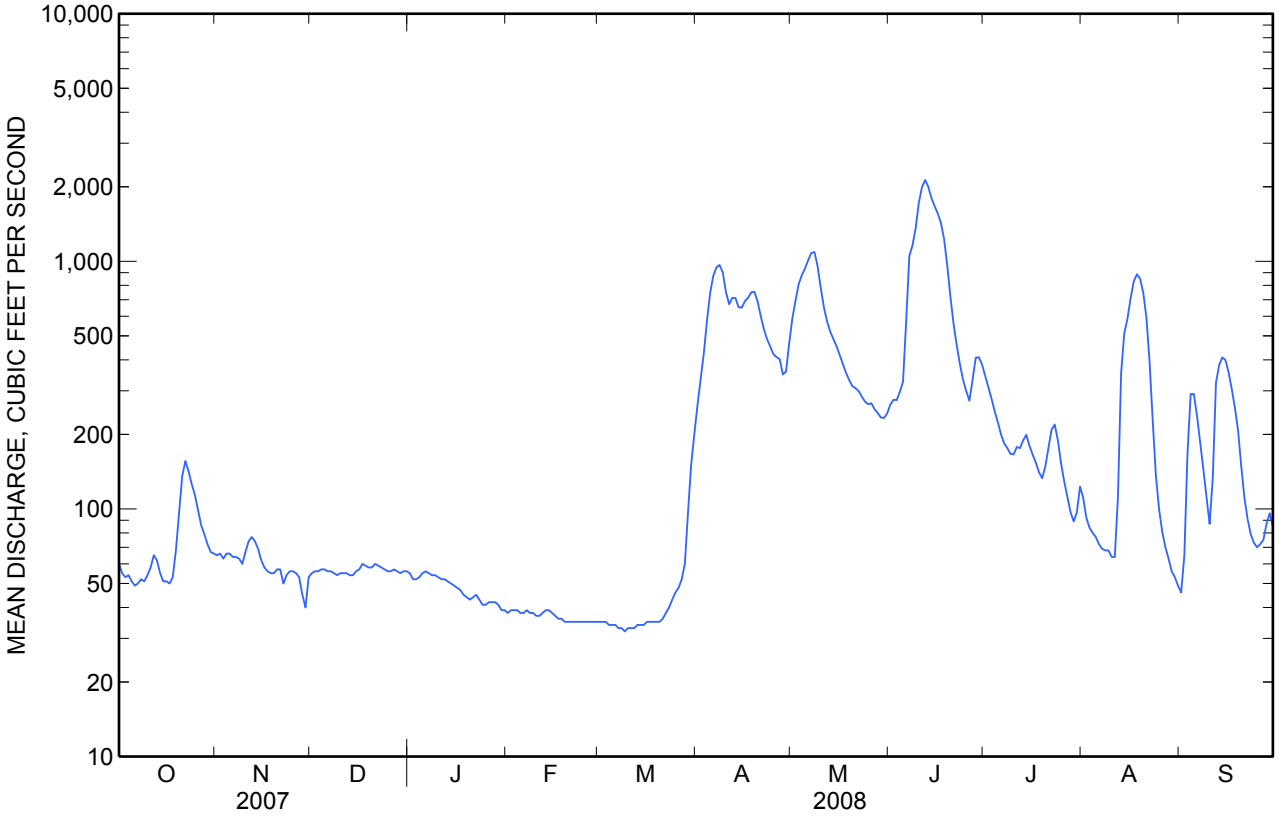
SUMMARY STATISTICS

	Calendar Year 2007		Water Year 2008		Water Years 1931 - 2008	
Annual total	99,360		90,149			
Annual mean	272		246		165	
Highest annual mean					477	1998
Lowest annual mean					25.6	1934
Highest daily mean	2,080	Jun 20	2,130	Jun 12	13,500	Jul 2, 1975
Lowest daily mean	18	Feb 6	32	Mar 9	[a]0.00	Jul 22, 1936
Annual seven-day minimum	19	Feb 5	33	Mar 6	0.00	Jul 28, 1936
Maximum peak flow			2,150	Jun 12	13,600	Jul 2, 1975
Maximum peak stage			17.05	Jun 12	27.10	Jul 2, 1975
Instantaneous low flow			[b]32	Mar 9	[a]0.00	Jul 22, 1936
Annual runoff (ac-ft)	197,100		178,800		119,400	
Annual runoff (cfsm)	0.279		0.253		0.169	
Annual runoff (inches)	3.79		3.44		2.30	
10 percent exceeds	912		711		366	
50 percent exceeds	59		72		46	
90 percent exceeds	33		37		10	

[a] Occurred many days in 1936.

[b] Estimated daily-mean discharge, backwater from ice.