

RED RIVER OF THE NORTH BASIN--Continued

05061000 BUFFALO RIVER NEAR HAWLEY, MN

LOCATION.--Lat 46°51'00", long 96°19'45", in NW¹/₄SE¹/₄ 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 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: 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 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	109	79	e56	e45	e43	e71	92	54	212	129	173
2	38	126	e84	e55	e45	e43	e69	86	50	173	114	153
3	35	123	e84	e55	e44	e43	e68	80	52	151	104	134
4	36	119	84	e54	e44	e43	e67	76	51	132	94	118
5	36	103	84	e53	e43	e43	e66	73	48	116	83	103
6	34	91	e81	e53	e43	e43	e68	76	44	103	73	97
7	36	86	79	e53	e43	e43	e76	75	40	96	66	88
8	35	83	e78	e52	e43	e43	91	90	38	150	61	77
9	35	82	e76	e52	e44	e43	96	143	273	214	56	69
10	58	87	72	e53	e44	e43	114	180	483	545	54	65
11	73	87	e71	e55	e45	e43	170	166	310	921	50	60
12	80	80	70	e55	e44	e43	139	161	196	798	58	56
13	74	74	e69	e54	e43	e44	130	160	144	599	62	52
14	71	70	e68	e54	44	e44	142	149	121	415	54	48
15	69	70	66	e53	45	e45	151	138	104	293	50	45
16	66	73	76	e52	46	e47	153	132	83	224	50	43
17	74	71	80	e52	48	e49	170	116	65	194	57	41
18	70	70	78	e52	50	e52	172	112	55	178	58	54
19	66	77	e76	e51	53	e54	154	106	93	168	53	84
20	66	87	e73	e51	54	e58	139	99	215	156	49	83
21	64	88	e69	e51	51	e64	127	91	285	150	47	69
22	59	78	e65	e52	50	e58	118	85	271	139	47	60
23	57	72	e64	e52	e48	e53	111	86	282	126	47	63
24	64	72	e62	e52	e47	e49	110	84	392	124	45	65
25	71	73	e61	e52	e46	e47	103	78	469	320	42	62
26	53	74	e60	e51	e45	e47	93	75	531	627	53	57
27	43	70	e59	e50	e44	e49	89	71	537	494	67	52
28	81	e70	e59	e49	e43	e54	91	66	480	255	91	46
29	92	70	e58	e48	---	e60	99	60	385	199	142	44
30	93	76	e57	e47	---	e74	95	56	298	170	97	44
31	97	---	e57	e46	---	e73	---	56	---	144	108	---
TOTAL	1862	2511	2199	1615	1284	1537	3342	3118	6449	8586	2161	2205
MEAN	60.1	83.7	70.9	52.1	45.9	49.6	111	101	215	277	69.7	73.5
MAX	97	126	84	56	54	74	172	180	537	921	142	173
MIN	34	70	57	46	43	43	66	56	38	96	42	41
AC-FT	3690	4980	4360	3200	2550	3050	6630	6180	12790	17030	4290	4370
CFSM	0.18	0.26	0.22	0.16	0.14	0.15	0.34	0.31	0.66	0.85	0.21	0.23
IN.	0.21	0.29	0.25	0.18	0.15	0.18	0.38	0.36	0.74	0.98	0.25	0.25

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.6	45.9	30.9	24.5	27.3	92.3	274	141	118	115	53.5	43.2
MAX	151	298	127	70.2	170	434	1036	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

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1945 - 2002

ANNUAL TOTAL	58704	36869	
ANNUAL MEAN	161	101	84.8
HIGHEST ANNUAL MEAN			188 1998
LOWEST ANNUAL MEAN			16.7 1977
HIGHEST DAILY MEAN	1730	Apr 8	921 Jul 11 2360a Apr 6 1997
LOWEST DAILY MEAN	28	Aug 30	34 Oct 6 3.2 Aug 25 1976
ANNUAL SEVEN-DAY MINIMUM	30	Aug 26	35 Oct 3 4.3 Aug 22 1976
MAXIMUM PEAK FLOW			963 Jul 11 2360a Apr 6 1997
MAXIMUM PEAK STAGE			8.55 Jul 11 10.86 Jun 22 2000
INSTANTANEOUS LOW FLOW			33 Oct 6 2.8 Aug 26 1977
ANNUAL RUNOFF (AC-FT)	116400	73130	61470
ANNUAL RUNOFF (CFSM)	0.49	0.31	0.26
ANNUAL RUNOFF (INCHES)	6.72	4.22	3.55
10 PERCENT EXCEEDS	334	170	194
50 PERCENT EXCEEDS	70	70	35
90 PERCENT EXCEEDS	41	44	14

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

