

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, WY 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 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	90	e69	e48	e42	e170	191	138	113	760	80	145
2	79	87	e70	e48	e42	e220	182	134	111	680	78	135
3	77	86	e70	e47	e42	e210	184	122	109	615	74	211
4	78	86	e68	e47	e42	e200	191	119	111	558	72	231
5	78	85	e62	e46	e42	193	185	120	111	516	70	225
6	77	84	e65	e46	e43	192	182	115	109	463	68	192
7	81	83	e67	e46	e43	189	187	108	107	462	66	156
8	96	86	e68	e46	e43	197	178	111	98	479	63	134
9	101	86	e68	e46	e43	250	164	128	90	426	61	115
10	97	83	e68	e45	e43	167	156	133	83	367	59	99
11	93	81	e68	e45	e43	208	152	133	78	329	57	88
12	94	81	e68	e45	e44	181	151	131	72	304	56	79
13	95	80	e68	e44	e44	167	151	131	73	278	55	72
14	92	79	e68	e44	e44	157	154	126	87	246	56	66
15	96	77	e67	e44	e44	139	157	117	126	219	58	63
16	108	77	e58	e44	e44	118	152	117	227	196	61	60
17	109	77	e52	e43	e44	114	151	120	284	176	61	57
18	108	77	e48	e43	e44	124	147	119	282	161	60	56
19	113	78	e46	e43	e45	152	150	112	270	151	57	54
20	125	75	e45	e43	e45	181	172	104	736	145	54	54
21	127	74	e45	e42	e45	211	200	101	1490	137	58	56
22	118	74	e45	e42	e46	211	200	99	2070	128	57	73
23	107	75	e45	e42	e47	226	190	97	2050	122	54	120
24	101	77	e46	e42	e49	274	177	94	1750	111	52	148
25	99	75	e47	e42	e57	384	167	86	1540	104	53	129
26	98	71	e48	e42	e74	439	164	81	1380	102	55	116
27	97	69	e49	e42	e105	422	157	79	1230	102	52	105
28	94	68	e50	e42	e125	348	151	84	1080	97	49	96
29	91	e68	e50	e42	e150	263	146	87	954	91	50	91
30	92	e68	e49	e42	---	235	142	95	856	87	49	85
31	92	---	e49	e42	---	211	---	110	---	83	103	---
TOTAL	3000	2357	1786	1365	1564	6753	5031	3451	17677	8695	1898	3311
MEAN	96.8	78.6	57.6	44.0	53.9	218	168	111	589	280	61.2	110
MAX	127	90	70	48	150	439	200	138	2070	760	103	231
MIN	77	68	45	42	42	114	142	79	72	83	49	54
AC-FT	5950	4680	3540	2710	3100	13390	9980	6850	35060	17250	3760	6570
CFSM	.30	.24	.18	.14	.17	.67	.52	.34	1.81	.86	.19	.34
IN.	.34	.27	.20	.16	.18	.77	.58	.40	2.02	1.00	.22	.38

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	43.1	40.3	28.8	23.1	26.3	93.5	266	139	115	112	53.3	42.7
MAX	151	176	127	68.5	170	434	1036	383	589	784	472	192
(WY)	1974	1972	1999	1999	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 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1945 - 2000
ANNUAL TOTAL	59842	56888	
ANNUAL MEAN	164	155	82.5
HIGHEST ANNUAL MEAN			188
LOWEST ANNUAL MEAN			16.7
HIGHEST DAILY MEAN	781	May 15	2360 ^a
LOWEST DAILY MEAN	45	Dec 20	3.2
ANNUAL SEVEN-DAY MINIMUM	46	Dec 19	4.3
INSTANTANEOUS PEAK FLOW		2200	2360
INSTANTANEOUS PEAK STAGE		10.86	10.86
INSTANTANEOUS LOW FLOW			2.8
ANNUAL RUNOFF (AC-FT)	118700	112800	59790
ANNUAL RUNOFF (CFSM)	.50	.48	.25
ANNUAL RUNOFF (INCHES)	6.85	6.51	3.45
10 PERCENT EXCEEDS	364	232	193
50 PERCENT EXCEEDS	98	91	34
90 PERCENT EXCEEDS	65	44	14

^a Estimated, backwater from ice.
^e Estimated.

