

RED RIVER OF THE NORTH BASIN--Continued

05078000 CLEARWATER RIVER AT PLUMMER, MN

LOCATION.--Lat 47°55'24", long 96°02'46", in SE¹/₄SW¹/₄ sec. 4, T.151 N., R.42 W., Red Lake County, Hydrologic Unit 09020305, on right bank 200 ft downstream from Soo Line Railroad bridge, 300 ft downstream from bridge on U.S. Highway 59, 0.9 mi northwest of railroad depot in Plummer, and 8 mi upstream from Hill River.

DRAINAGE AREA.--555 mi².

PERIOD OF RECORD.--April 1939 to September 1979, March 1982 to current year. Annual maximums only, October 1979 to February 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,098.57 ft above sea level (NGVD of 1929, levels by U.S. Army Corps of Engineers). Prior to Nov. 10, 1939, nonrecording gage at site 100 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Since 1968, undetermined amounts of water diverted for the flooding of wild rice paddies upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 630 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 9	2400	1,320	8.24	May 28	2300	1,450	8.29
Apr 9	2100	*2,220	9.76	Aug 2	2030	912	6.68

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	290	e277	e142	e112	e89	e140	653	1140	183	746	88
2	134	418	e273	e139	e111	e89	e173	584	1100	168	884	85
3	127	582	e270	e137	e110	e88	e202	551	1070	159	806	84
4	119	660	e265	e137	e109	e88	e310	503	962	161	447	81
5	116	706	e259	e136	e108	e89	e450	472	812	155	302	77
6	100	721	e255	e135	e107	e90	e615	452	637	149	239	75
7	94	e787	e250	e134	e106	e90	e1100	449	543	158	205	86
8	83	e967	e245	e133	e105	e91	e1950	478	480	168	181	109
9	76	1250	e240	e132	e104	e91	e2080	496	436	158	220	125
10	73	1270	e237	e130	e104	e91	2040	459	414	151	344	127
11	72	1160	e232	e129	e103	e91	1990	434	393	183	316	124
12	69	1040	e228	e128	e102	e92	2020	425	354	172	252	108
13	64	948	e225	e127	e102	e92	2100	408	344	163	213	87
14	69	884	e219	e126	e101	e92	2090	391	383	173	198	76
15	223	834	e215	e125	e100	e93	2050	348	490	171	181	76
16	399	762	e210	e124	e99	e94	1970	339	493	159	178	69
17	429	675	e205	e123	e98	e94	1870	412	449	182	173	57
18	437	590	e200	e123	e97	e95	1730	438	393	211	168	55
19	382	517	e196	e122	e96	e97	1560	415	364	203	166	51
20	306	e435	e192	e121	e96	e100	1360	388	384	255	166	55
21	276	e350	e189	e120	e95	e104	1230	378	350	358	164	51
22	256	e320	e187	e119	e94	e110	1150	441	330	329	179	49
23	242	e305	e182	e119	e93	e108	1060	595	307	277	162	50
24	211	e300	e178	e118	e93	e106	956	774	289	266	153	63
25	208	e298	e175	e117	e92	e103	928	985	269	242	136	70
26	222	e295	e170	e117	e91	e100	923	1200	244	213	126	56
27	248	e292	e166	e116	e90	e100	888	1330	223	191	116	56
28	330	e288	e162	e116	e90	e100	831	1410	220	184	108	57
29	343	e285	e157	e115	---	e100	778	1420	213	168	104	51
30	336	e282	e150	e114	---	e102	715	1330	198	156	99	44
31	292	---	e146	e113	---	e121	---	1230	---	215	90	---
TOTAL	6462	18511	6555	3887	2808	2990	37259	20188	14284	6081	7822	2242
MEAN	208	617	211	125	100	96.5	1242	651	476	196	252	74.7
MAX	437	1270	277	142	112	121	2100	1420	1140	358	884	127
MIN	64	282	146	113	90	88	140	339	198	149	90	44
AC-FT	12820	36720	13000	7710	5570	5930	73900	40040	28330	12060	15510	4450
CFSTM	.38	1.11	.38	.23	.18	.17	2.24	1.17	.86	.35	.45	.13
IN.	.43	1.24	.44	.26	.19	.20	2.50	1.35	.96	.41	.52	.15

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	117	100	67.6	54.2	52.3	120	547	366	259	227	127	114
MAX	483	617	211	125	184	445	1472	1974	1140	1072	507	666
(WY)	1972	2001	2001	2001	1998	1995	1997	1950	1962	1997	1985	1973
MIN	21.5	23.8	24.4	18.4	19.0	22.8	26.8	7.52	30.1	16.0	13.3	14.1
(WY)	1941	1991	1990	1940	1940	1940	1977	1977	1991	1940	1940	1940

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1939 - 2001
ANNUAL TOTAL	78828	129089	
ANNUAL MEAN	215	354	180a
HIGHEST ANNUAL MEAN			354
LOWEST ANNUAL MEAN			57.0
HIGHEST DAILY MEAN	1310	2100	3840
LOWEST DAILY MEAN	46	44	2.6
ANNUAL SEVEN-DAY MINIMUM	55	53	2.9
MAXIMUM PEAK FLOW		2200b	3940c
MAXIMUM PEAK STAGE		11.62d	12.74d
INSTANTANEOUS LOW FLOW		40	2.5
ANNUAL RUNOFF (AC-FT)	156400	256000	130600
ANNUAL RUNOFF (CFSM)	.39	.64	.32
ANNUAL RUNOFF (INCHES)	5.28	8.65	4.41
10 PERCENT EXCEEDS	431	925	420
50 PERCENT EXCEEDS	146	184	79
90 PERCENT EXCEEDS	62	89	34

- a Median of annual mean discharges is 180 ft³/s.
- b Gage-height, 9.76 ft.
- c Gage-height, 12.31 ft.
- d Backwater from ice.
- e Estimated.

