

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)
Mar 29	(daily)	e670	*7.76	May 31	0600	741	6.10
May 13	0130	*859	6.54				

Minimum discharge, 28 ft³/s, Nov. 4, (result of freezeup).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	41	e60	e67	e47	e59	e465	56	527	110	96	81
2	38	e33	e64	e65	e47	e60	e460	64	419	118	83	78
3	45	e32	e66	e64	e47	e49	e430	55	348	110	75	72
4	42	e31	e65	e63	e47	e50	361	57	300	108	82	66
5	35	e53	e64	e62	e47	e50	290	55	266	98	88	62
6	34	e73	e64	e61	e47	e51	246	52	218	101	98	93
7	40	e64	e63	e60	e47	e52	207	45	198	113	99	202
8	38	e54	e63	e59	e48	e54	197	47	172	131	119	192
9	44	e46	e62	e59	e48	e55	183	59	149	136	132	160
10	41	e49	e61	e58	e48	e51	169	51	145	139	166	137
11	49	e54	e60	e58	e48	e44	150	55	139	129	181	116
12	45	e42	e59	e58	e48	e39	133	522	136	154	158	101
13	40	e43	e58	e57	e48	e43	115	799	142	160	164	92
14	39	e45	e57	e57	e48	e48	101	653	135	151	151	83
15	39	e47	e56	e56	e48	e53	85	505	126	138	125	81
16	39	e51	e63	e56	e48	e57	88	426	116	133	101	84
17	39	e44	e62	e56	e49	e59	81	370	104	129	89	116
18	40	e48	e68	e56	e49	e61	83	331	106	132	79	120
19	43	e36	e73	e56	e50	e65	84	303	105	122	78	109
20	41	e60	e74	e55	e51	e67	78	349	101	121	73	103
21	39	e62	e74	e55	e53	e68	51	376	93	124	72	119
22	41	e55	e74	e54	e55	e68	57	371	87	128	68	139
23	38	e48	e73	e53	e57	e69	58	354	82	130	62	134
24	41	e56	e72	e53	e59	e76	54	315	76	133	62	167
25	38	e40	e73	e52	e61	e98	62	302	83	136	67	193
26	39	e45	e76	e51	e56	e400	72	315	75	118	92	173
27	44	e47	e77	e50	e56	e600	65	320	72	91	127	150
28	45	e49	e78	e49	e57	e690	61	303	74	89	113	130
29	45	e53	e76	e48	e58	e600	59	263	72	94	93	115
30	40	e57	e72	e47	---	e520	65	444	86	121	85	104
31	43	---	e70	e47	---	e471	---	703	---	104	88	---
TOTAL	1,258	1,458	2,077	1,742	1,472	4,727	4,610	8,920	4,752	3,801	3,166	3,572
MEAN	40.6	48.6	67.0	56.2	50.8	152	154	288	158	123	102	119
MAX	49	73	78	67	61	690	465	799	527	160	181	202
MIN	34	31	56	47	47	39	51	45	72	89	62	62
AC-FT	2,500	2,890	4,120	3,460	2,920	9,380	9,140	17,690	9,430	7,540	6,280	7,090
CFSM	0.07	0.09	0.12	0.10	0.09	0.27	0.28	0.52	0.29	0.22	0.18	0.21
IN.	0.08	0.10	0.14	0.12	0.10	0.32	0.31	0.60	0.32	0.25	0.21	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2004, BY WATER YEAR (WY)

MEAN	115	98.4	67.5	54.4	52.2	119	527	358	263	230	127	114
MAX	483	617	211	125	184	445	1,472	1,974	1,140	1,072	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)

05078000 CLEARWATER RIVER AT PLUMMER, MN—Continued

SUMMARY STATISTICS	FOR 2003 CALENDAR YEAR		FOR 2004 WATER YEAR		WATER YEARS 1939 - 2004	
ANNUAL TOTAL	29,769		41,555			
ANNUAL MEAN	81.6		114		a178	
HIGHEST ANNUAL MEAN					354 1950	
LOWEST ANNUAL MEAN					57.0 1990	
HIGHEST DAILY MEAN	605	Jun 27	799	May 13	3,840	Apr 25, 1979
LOWEST DAILY MEAN	28	Sep 6	31	Nov 4	2.6	May 16, 1977
ANNUAL SEVEN-DAY MINIMUM	33	Sep 3	38	Oct 29	2.9	May 10, 1977
MAXIMUM PEAK FLOW			b859	May 13	c3,940	Apr 25, 1979
MAXIMUM PEAK STAGE			d7.76	Mar 29	d12.74	Apr 16, 1997
INSTANTANEOUS LOW FLOW			f28	Nov 4	2.5	May 16, 1977
ANNUAL RUNOFF (AC-FT)	59,050		82,420		128,900	
ANNUAL RUNOFF (CFSM)	0.147		0.205		0.320	
ANNUAL RUNOFF (INCHES)	2.00		2.79		4.35	
10 PERCENT EXCEEDS	174		251		411	
50 PERCENT EXCEEDS	49		68		79	
90 PERCENT EXCEEDS	36		44		34	

- a Median of annual mean discharges is 170 ft³/s.
- b Gage-height, 6.54 ft.
- c Gage-height, 12.31 ft.
- d Backwater from ice.
- e Estimated.
- f Result of freezeup.

