

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)
Jun 27	0700	*616	*5.60	No peak greater than base discharge.			

Minimum discharge, 11 ft³/s, Apr. 3, gage height, 2.10 ft (result of ice jam upstream).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	e45	e40	e41	e39	e36	e57	45	176	343	110	42
2	45	e46	e40	e41	e39	e36	e48	47	163	312	108	39
3	46	e47	e39	e41	e38	e35	e41	48	161	288	109	36
4	45	e48	e38	e40	e38	e35	e56	46	176	317	110	38
5	45	47	e38	e41	e38	e35	e72	47	143	287	117	30
6	54	46	e38	e41	e38	e35	e84	48	123	260	133	28
7	59	e45	e39	e42	e38	e35	e78	42	125	244	115	33
8	53	e46	e40	e42	e38	e35	e72	45	132	222	110	32
9	45	e45	e42	e42	e38	e35	e66	44	124	192	116	33
10	43	e44	e44	e42	e38	e35	58	46	145	181	95	38
11	41	e43	e45	e42	e38	e35	48	56	222	177	79	47
12	58	e42	e46	e41	e37	e35	42	55	238	173	76	39
13	54	e41	e47	e41	e37	e36	37	63	249	191	70	36
14	48	e39	e48	e40	e37	e38	49	61	228	204	59	36
15	44	e38	e47	e40	e37	e45	59	58	198	228	53	40
16	48	e37	e47	e40	e37	e84	44	37	178	231	47	39
17	41	e38	e46	e40	e37	e128	60	57	176	215	45	37
18	41	e39	e45	e40	e37	e155	58	56	164	197	43	40
19	45	e44	e44	e40	e37	e162	40	61	165	183	42	54
20	51	e47	e43	e40	e37	e160	60	110	158	179	39	63
21	49	e48	e42	e40	e37	e126	61	143	125	161	39	38
22	52	e48	e42	e40	e36	e112	52	133	115	145	44	41
23	45	e47	e41	e40	e36	e99	53	141	208	154	45	52
24	44	e46	e40	e40	e36	e96	45	161	182	140	54	45
25	37	e42	e40	e40	e36	e92	44	151	223	133	61	32
26	55	e37	e41	e39	e36	e83	46	139	546	142	58	45
27	89	e34	e41	e39	e36	e77	40	129	605	133	56	42
28	71	e35	e42	e39	e36	e70	35	124	541	106	56	39
29	56	e39	e42	e39	---	e64	40	120	472	103	53	39
30	48	e41	e42	e39	---	e60	40	119	401	106	53	36
31	e47	---	e42	e39	---	e64	---	145	---	109	46	---
TOTAL	1,548	1,284	1,311	1,251	1,042	2,173	1,585	2,577	6,862	6,056	2,241	1,189
MEAN	49.9	42.8	42.3	40.4	37.2	70.1	52.8	83.1	229	195	72.3	39.6
MAX	89	48	48	42	39	162	84	161	605	343	133	63
MIN	37	34	38	39	36	35	35	37	115	103	39	28
AC-FT	3,070	2,550	2,600	2,480	2,070	4,310	3,140	5,110	13,610	12,010	4,450	2,360
CFSM	0.09	0.08	0.08	0.07	0.07	0.13	0.10	0.15	0.41	0.35	0.13	0.07
IN.	0.10	0.09	0.09	0.08	0.07	0.15	0.11	0.17	0.46	0.41	0.15	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	116	99.2	67.5	54.4	52.3	118	533	359	264	231	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)

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SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	68,744		29,119			
ANNUAL MEAN	188		79.8		a179	
HIGHEST ANNUAL MEAN					354 1950	
LOWEST ANNUAL MEAN					57.0 1990	
HIGHEST DAILY MEAN	1,370	Jun 23	605	Jun 27	3,840	Apr 25, 1979
LOWEST DAILY MEAN	34	Nov 27	28	Sep 6	2.6	May 16, 1977
ANNUAL SEVEN-DAY MINIMUM	38	Nov 26	33	Sep 3	2.9	May 10, 1977
MAXIMUM PEAK FLOW			616	Jun 27	b3,940	Apr 25, 1979
MAXIMUM PEAK STAGE			5.60	Jun 27	c12.74	Apr 16, 1997
INSTANTANEOUS LOW FLOW			d11	Apr 3	2.5	May 16, 1977
ANNUAL RUNOFF (AC-FT)	136,400		57,760		129,600	
ANNUAL RUNOFF (CFSM)	0.34		0.14		0.32	
ANNUAL RUNOFF (INCHES)	4.61		1.95		4.38	
10 PERCENT EXCEEDS	468		174		413	
50 PERCENT EXCEEDS	77		46		79	
90 PERCENT EXCEEDS	42		37		34	

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

