

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 (*):

	Time	Discharge (ft ³ /s)	Gage height (ft)	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov 1	1800	1,160	7.61	1100	938	6.57
Apr 1	0430	(ice jam)	*9.78	0800	*1,690	8.87

Minimum discharge, 28 ft³/s, Aug. 9, gage height, 2.50 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	1,130	e68	e50	e63	e59	e1,070	135	833	582	57	71
2	84	1,120	e65	e49	e65	e59	e1,030	140	686	602	55	73
3	111	1,040	e63	e49	e66	e58	982	129	544	516	76	75
4	123	935	e62	e49	e66	e58	840	116	513	456	86	88
5	92	768	e62	e49	e67	e59	873	106	551	387	88	85
6	71	592	e61	e49	e66	e60	771	94	809	338	73	112
7	57	499	e61	e49	e65	e61	643	106	1,070	292	54	127
8	45	450	e61	e49	e64	e61	516	112	1,510	251	47	117
9	51	417	e60	e49	e63	e60	452	128	1,680	231	39	108
10	60	390	e60	e48	e63	e59	408	158	1,640	206	49	104
11	44	366	e60	e48	e64	e58	389	190	1,500	184	37	107
12	53	335	e60	e48	e65	e58	446	190	1,560	179	36	103
13	45	305	e60	e48	e67	e58	563	179	1,560	177	41	91
14	50	288	e59	e48	e68	e58	503	177	1,580	158	43	90
15	50	276	e59	e48	e68	e59	442	238	1,590	135	44	86
16	44	254	e58	e48	e67	e60	407	270	1,410	126	38	80
17	45	233	e58	e48	e66	e60	368	252	1,210	128	41	66
18	42	219	e58	e48	e64	e61	336	237	1,030	121	55	59
19	39	217	e57	e49	e63	e62	315	213	837	105	82	56
20	42	228	e56	e50	e61	e63	266	198	646	103	117	51
21	44	228	e55	e51	e61	e64	222	197	528	104	109	46
22	39	215	e54	e52	e60	e65	209	209	466	114	86	44
23	71	201	e53	e53	e60	e67	230	250	400	115	77	42
24	158	e175	e52	e55	e60	e71	225	260	359	108	71	42
25	200	e148	e51	e56	e60	e80	202	249	301	100	73	43
26	196	e128	e51	e57	e59	e98	202	334	245	87	70	44
27	162	e109	e50	e58	e59	e130	186	670	233	101	123	43
28	142	e92	e50	e59	e59	e230	143	823	282	92	109	44
29	206	e80	e50	e60	---	e410	122	906	276	75	90	45
30	689	e73	e50	e61	---	e720	115	933	397	72	79	44
31	1,000	---	e50	e62	---	e980	---	903	---	66	74	---
TOTAL	4,150	11,511	1,774	1,597	1,779	4,106	13,476	9,102	26,246	6,311	2,119	2,186
MEAN	134	384	57.2	51.5	63.5	132	449	294	875	204	68.4	72.9
MAX	1,000	1,130	68	62	68	980	1,070	933	1,680	602	123	127
MIN	39	73	50	48	59	58	115	94	233	66	36	42
AC-FT	8,230	22,830	3,520	3,170	3,530	8,140	26,730	18,050	52,060	12,520	4,200	4,340
CFSM	0.24	0.69	0.10	0.09	0.11	0.24	0.81	0.53	1.58	0.37	0.12	0.13
IN.	0.28	0.77	0.12	0.11	0.12	0.28	0.90	0.61	1.76	0.42	0.14	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2005, BY WATER YEAR (WY)

MEAN	115	103	67.3	54.4	52.4	119	526	357	272	229	126	113
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 2004 CALENDAR YEAR		FOR 2005 WATER YEAR		WATER YEARS 1939 - 2005	
ANNUAL TOTAL	54,197		84,357		a179	
ANNUAL MEAN	148		231		354	
HIGHEST ANNUAL MEAN					57.0	
LOWEST ANNUAL MEAN					1950	
HIGHEST DAILY MEAN	1,130	Nov 1	1,680	Jun 9	3,840	Apr 25, 1979
LOWEST DAILY MEAN	39	Mar 12	36	Aug 12	2.6	May 16, 1977
ANNUAL SEVEN-DAY MINIMUM	42	Oct 16	40	Aug 11	2.9	May 10, 1977
MAXIMUM PEAK FLOW			b1,690	Jun 9	c3,940	Apr 25, 1979
MAXIMUM PEAK STAGE			d9.78	Apr 1	d12.74	Apr 16, 1997
INSTANTANEOUS LOW FLOW			28	Aug 9	2.5	May 16, 1977
ANNUAL RUNOFF (AC-FT)	107,500		167,300		129,500	
ANNUAL RUNOFF (CFSM)	0.267		0.416		0.322	
ANNUAL RUNOFF (INCHES)	3.63		5.65		4.37	
10 PERCENT EXCEEDS	350		656		413	
50 PERCENT EXCEEDS	83		86		79	
90 PERCENT EXCEEDS	49		48		34	

- a Median of annual mean discharges is 180 ft³/s.
- b Gage-height, 8.87 ft.
- c Gage-height, 12.31 ft.
- d Backwater from ice.
- e Estimated.

