

## RAINY RIVER BASIN--Continued

05132000 BIG FORK RIVER AT BIG FALLS, MN

LOCATION.--Lat 48°11'45", long 93°48'25", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.35, T.155 N., R.25 W., Koochiching County, Hydrologic Unit 09030006, on left bank at town of Big Falls, 700 ft downstream from falls, 0.3 mi downstream from bridge on U.S. Highway 71, and 4.8 mi upstream from Sturgeon River.

DRAINAGE AREA.--1480 mi<sup>2</sup>.

PERIOD OF RECORD.--August to November 1909, April to November 1910, April 1911 to September 1912 (gage heights and discharge measurements only), June 1928 to September 1979, October 1979 to September 1982 (annual maximum only), October 1982 to September 1993, October 1993 to September 1994 (annual maximum only) and October 1997 to current year.

REVISED RECORDS.--WSP 1308:1935 (M).

GAGE.--Water-stage recorder. Datum of gage is 1,144.71 ft above sea level. Prior to June 10, 1911, non-recording gage at railroad bridge about 0.4 mi upstream at different datum. June 10, 1911 to Sept. 30, 1912, and June 22, 1928 to Dec. 17, 1937, non-recording gage at site 200 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to 1971, a powerplant, located 0.3 mi upstream, caused some diurnal fluctuation at low flows.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	551	740	e280	e195	e190	e1700	1340	1410	556	1010	822
2	201	551	826	e270	e195	e190	e2500	1280	1320	536	929	845
3	201	e550	824	e260	e195	e190	e3500	1210	1250	533	854	1000
4	192	e540	809	e250	e195	e190	e3800	1160	1190	603	797	1870
5	191	e540	770	e245	e195	e190	e3760	1140	1130	829	746	2770
6	205	e530	e800	e240	e195	e190	e4000	1230	1230	3170	705	3050
7	203	e520	e850	e230	e195	e190	e5200	1460	1390	3920	690	3120
8	210	e510	e820	e225	e195	e190	e6400	1850	1560	4010	705	2820
9	221	486	e860	e220	e195	e190	5740	2170	1590	3970	757	2420
10	224	469	e890	e215	e195	e190	4970	2600	1530	3690	794	2190
11	222	430	e750	e210	e195	e190	4520	3770	1540	3300	781	2020
12	225	e400	e670	e205	e195	e190	4040	5100	1480	2880	832	1900
13	230	e280	e620	e205	e195	e190	3590	6930	1320	2440	1440	1860
14	228	e330	e590	e205	e195	e190	3270	7600	1170	2070	2160	1900
15	240	e370	e560	e200	e195	e190	2980	6870	1060	1790	2220	1890
16	271	e400	e530	e200	e195	e190	2750	5670	956	1640	2100	1840
17	333	e420	e510	e200	e195	e190	2630	4750	869	1590	1840	1750
18	494	e400	e480	e200	e195	e190	2520	4070	805	1480	1630	1630
19	721	e380	e460	e200	e195	e190	2410	3500	734	1350	1700	1570
20	796	e430	e440	e200	e195	e195	2300	3150	696	1230	1660	1470
21	792	e490	e420	e200	e195	e195	2190	2970	661	1120	1470	1380
22	743	493	e410	e200	e195	e195	2110	2720	620	1030	1310	1300
23	682	530	e390	e200	e195	e195	2020	2680	603	971	1200	1240
24	629	628	e380	e195	e190	e200	1900	2600	585	913	1220	1180
25	597	650	e360	e195	e190	e200	1830	2440	569	864	1280	1140
26	579	689	e350	e195	e190	e210	1760	2270	549	903	1220	1230
27	582	668	e340	e195	e190	e225	1660	2070	555	1050	1120	1600
28	577	663	e330	e195	e190	e250	1580	1870	561	1200	1060	1800
29	582	662	e320	e195	---	e330	1490	1700	570	1240	971	1760
30	582	693	e310	e195	---	e560	1410	1590	571	1220	888	1640
31	566	---	e300	e195	---	e900	---	1500	---	1120	852	---
TOTAL	12721	15253	17709	6620	5435	7265	90530	91260	30074	53218	36941	53007
MEAN	410	508	571	214	194	234	3018	2944	1002	1717	1192	1767
MAX	796	693	890	280	195	900	6400	7600	1590	4010	2220	3120
MIN	191	280	300	195	190	190	1410	1140	549	533	690	822
AC-FT	25230	30250	35130	13130	10780	14410	179600	181000	59650	105600	73270	105100
CFSM	.28	.34	.39	.14	.13	.16	2.04	1.99	.68	1.16	.81	1.19
IN.	.32	.38	.45	.17	.14	.18	2.28	2.29	.76	1.34	.93	1.33

e Estimated

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	659	528	285	173	138	249	1912	2004	1162	655	410	572
MAX	2247	2034	685	399	335	1928	5186	7496	2890	2321	1799	2989
(WY)	1970	1972	1970	1969	1969	1945	1966	1950	1974	1944	1978	1937
MIN	38.3	44.5	31.6	22.2	22.9	32.9	175	138	180	46.0	26.7	22.4
(WY)	1932	1935	1935	1935	1935	1940	1931	1931	1934	1931	1934	1934

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1909 - 1999
ANNUAL TOTAL	217986	420033	
ANNUAL MEAN	597	1151	729
HIGHEST ANNUAL MEAN			1362
LOWEST ANNUAL MEAN			92.0
HIGHEST DAILY MEAN	3380	May 19	14800
LOWEST DAILY MEAN	136	Aug 22	14
ANNUAL SEVEN-DAY MINIMUM	139	Aug 18	18
INSTANTANEOUS PEAK FLOW			14800
INSTANTANEOUS PEAK STAGE			17.08
INSTANTANEOUS LOW FLOW			7.0
ANNUAL RUNOFF (AC-FT)	432400	833100	528300
ANNUAL RUNOFF (CFSM)	.40	.78	.49
ANNUAL RUNOFF (INCHES)	5.48	10.56	6.69
10 PERCENT EXCEEDS	1210	2730	1820
50 PERCENT EXCEEDS	424	705	325
90 PERCENT EXCEEDS	175	195	80

a Estimated.  
b Backwater from ice.

