

## 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.--1,480 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 (NGVD of 1929). Prior to June 10, 1911, nonrecording 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, nonrecording 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 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	386	1060	e760	e283	e270	e240	e255	4180	3540	870	1130	387
2	378	1410	e700	e283	e266	e239	e265	4610	3330	820	972	383
3	376	2020	e670	e282	e264	e239	e280	4730	3160	778	794	381
4	373	2090	e650	e282	e262	e239	e295	4560	2930	733	668	367
5	386	2040	e620	e281	e260	e239	e320	4240	2700	706	578	351
6	382	1990	e600	e280	e258	e239	e400	3850	2480	672	506	344
7	386	2190	e570	e280	e257	e239	e700	3620	2300	639	427	343
8	378	2730	e550	e280	e255	e239	e1400	3500	2180	606	384	363
9	381	3000	e530	e280	e253	e238	e3500	3350	2080	578	394	412
10	375	3000	e510	e280	e252	e238	e5800	3250	1990	550	405	411
11	366	2880	e475	e280	e250	e238	e5700	3200	1900	515	404	413
12	355	2650	e460	e280	e249	e238	e5000	3090	1840	478	408	410
13	354	2410	e445	e280	e248	e238	5580	2970	1790	452	403	397
14	415	2240	e425	e279	e247	e238	8050	2820	1920	443	379	382
15	1030	2080	e410	e279	e246	e238	9360	2690	2560	428	926	369
16	1700	1890	e395	e278	e245	e238	8930	2720	2840	441	1970	361
17	1670	1720	e385	e278	e244	e238	7120	2800	2730	443	1730	355
18	1620	1560	e375	e278	e243	e237	e5840	2700	2480	423	1490	352
19	1520	1470	e360	e278	e242	e237	5280	2550	2240	456	1350	349
20	1390	1090	e355	e277	e242	e237	4870	2410	2000	459	1200	350
21	1260	e890	e345	e277	e241	e237	4620	3020	1810	451	1040	347
22	1160	e950	e340	e277	e241	e237	4350	4720	1670	433	926	355
23	1070	e1000	e330	e277	e240	e237	4120	6530	1540	405	825	379
24	1000	e1000	e325	e276	e240	e237	4080	8270	1430	382	722	398
25	973	e990	e315	e276	e240	e237	4480	8870	1320	360	643	394
26	964	e950	e305	e276	e240	e238	4680	8160	1230	337	586	391
27	994	e930	e300	e276	e240	e240	4640	7160	1140	322	516	383
28	1040	e870	e295	e275	e240	e242	4500	6300	1060	324	476	371
29	1060	e840	e290	e275	---	e243	4240	5510	995	315	447	363
30	1030	e800	e285	e275	---	e245	4080	4730	929	314	420	358
31	1010	---	e284	e274	---	e250	---	4020	---	360	404	---
TOTAL	25782	50740	13659	8632	6975	7409	122735	135130	62114	15493	23523	11219
MEAN	832	1691	441	278	249	239	4091	4359	2070	500	759	374
MAX	1700	3000	760	283	270	250	9360	8870	3540	870	1970	413
MIN	354	800	284	274	240	237	255	2410	929	314	379	343
AC-FT	51140	100600	27090	17120	13830	14700	243400	268000	123200	30730	46660	22250
CFSM	.56	1.14	.30	.19	.17	.16	2.76	2.95	1.40	.34	.51	.25
IN.	.65	1.28	.34	.22	.18	.19	3.08	3.40	1.56	.39	.59	.28

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	669	550	290	176	140	254	1929	2025	1169	649	414	568
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 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1909 - 2001

ANNUAL TOTAL		240165		483411								
ANNUAL MEAN		656		1324					737			
HIGHEST ANNUAL MEAN									1362			1950
LOWEST ANNUAL MEAN									92.0			1931
HIGHEST DAILY MEAN				3000	Nov 9		9360	Apr 15	14800		May 9	1950
LOWEST DAILY MEAN				160	Feb 18		237	Mar 18-25	14		Jan 10	1940
ANNUAL SEVEN-DAY MINIMUM				162	Feb 15		237	Mar 18	18		Jan 22	1935
MAXIMUM PEAK FLOW							9570	Apr 15	14800		May 8	1950
MAXIMUM PEAK STAGE							12.48	Apr 15		17.08	May 8	1950
INSTANTANEOUS LOW FLOW									7.0		Aug 7	1939
ANNUAL RUNOFF (AC-FT)			476400				958800		533700			
ANNUAL RUNOFF (CFSM)			.44				.89		.50			
ANNUAL RUNOFF (INCHES)			6.04				12.15		6.76			
10 PERCENT EXCEEDS			1340				3920		1830			
50 PERCENT EXCEEDS			486				443		335			
90 PERCENT EXCEEDS			215				242		80			

e Estimated.

