

RAINY RIVER BASIN

05132000 BIG FORK RIVER AT BIG FALLS, MN

LOCATION.--Lat 4811'45", long 9348'25", in SW 1 / 4 SE 1 / 4 sec.35, T.155 N., R.25 W., Koochiching County, Hydrologic Unit 09030006, on left bank at town of Big Fork, 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 mi².

PERIOD OF RECORD.--August to November 1909, April to November 1910, April 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 poor. Prior to 1971, a powerplant, located 0.3 mi upstream, caused some diurnal fluctuation at low flows.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	747	826	e640	e330	e235	e1200	1060	868	866	948	265	192
2	760	890	e630	e320	e235	e1300	1430	814	814	889	256	186
3	738	989	e630	e310	e235	e1340	1670	766	762	835	243	181
4	716	1030	e620	e300	e235	e1280	e2000	731	697	884	235	174
5	705	1020	e600	e290	e235	e1150	e2050	689	639	890	220	171
6	710	974	e570	e285	e235	e1060	1830	652	585	816	215	166
7	702	956	e570	e280	e235	e950	1850	631	536	792	210	163
8	696	963	e560	e270	e235	e830	2040	600	493	773	197	160
9	738	1000	e560	e260	e235	e750	2110	560	455	724	188	156

10	738	1060	e550	e255	e235	e680	2030	533	427	650	180	149
11	755	1070	e545	e250	e235	e640	1880	510	404	558	168	149
12	786	820	e540	e245	e235	e600	1750	514	389	485	164	153
13	902	745	e535	e240	e235	e560	1700	587	378	432	160	153
14	1180	675	e530	e240	e235	e520	1860	748	370	399	156	157
15	1390	e700	e520	e240	e235	e480	2150	1230	365	399	152	168
16	1440	e710	e510	e235	e235	e440	2250	2330	356	416	152	166
17	1380	e720	e500	e235	e235	e420	2140	3160	344	461	149	171
18	1300	e720	e490	e235	e235	e405	1920	3300	339	476	140	171
19	1220	e710	e485	e235	e250	e390	1740	3380	398	450	138	171
20	1150	e700	e480	e235	e260	e385	1590	3090	641	424	138	171
21	1100	e700	e465	e235	e280	e380	1510	2600	942	399	138	172
22	1040	e690	e450	e235	e310	e380	1380	2170	967	384	136	174
23	980	e690	e435	e235	e380	e400	1290	1750	885	379	142	176
24	925	e680	e420	e235	e430	e420	1200	1440	775	374	143	180
25	876	e660	e405	e235	e500	442	1140	1220	665	359	146	180
26	860	e650	e390	e235	e600	462	1100	1050	576	349	157	183
27	836	e650	e380	e235	e750	493	1040	926	504	330	172	192
28	818	e640	e370	e235	e1000	558	983	968	554	320	202	193
29	808	e640	e360	e235	---	624	954	1040	754	302	192	194
30	795	e640	e350	e235	---	694	921	1010	923	288	204	200
31	804	---	e340	e235	---	837	---	937	---	279	199	---
TOTAL	28595	23918	15430	7875	8990	21070	48568	40804	17803	16464	5557	5172
MEAN	922	797	498	254	321	680	1619	1316	593	531	179	172
MAX	1440	1070	640	330	1000	1340	2250	3380	967	948	265	200
MIN	696	640	340	235	235	380	921	510	339	279	136	149
AC-FT	56720	47440	30610	15620	17830	41790	96330	80930	35310	32660	11020	10260
CFSM	.62	.54	.34	.17	.22	.46	1.09	.89	.40	.36	.12	.12
IN.	.72	.60	.39	.20	.23	.53	1.22	1.03	.45	.41	.14	.13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	663	528	280	172	137	249	1895	1990	1164	638	398	554
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 WATER YEAR	WATER YEARS 1909 - 1998			
ANNUAL TOTAL	240246				
ANNUAL MEAN	658		723		
HIGHEST ANNUAL MEAN			1362		1950
LOWEST ANNUAL MEAN			92.0		1931
HIGHEST DAILY MEAN	3380	May 19	14800	May 9	1950
LOWEST DAILY MEAN	136	Aug 22	14	Jan 10	1940
ANNUAL SEVEN-DAY MINIMUM	139	Aug 18	18	Jan 22	1935
INSTANTANEOUS PEAK FLOW	3430	May 19	14800	May 8	1950
INSTANTANEOUS PEAK STAGE	7.26	May 19	17.08	May 8	1950
INSTANTANEOUS LOW FLOW	134	Aug 22	7.0	Aug 7	1939
ANNUAL RUNOFF (AC-FT)	476500		523500		
ANNUAL RUNOFF (CFSM)	.44		.49		
ANNUAL RUNOFF (INCHES)	6.04		6.63		
10 PERCENT EXCEEDS	1290		1800		
50 PERCENT EXCEEDS	520		320		
90 PERCENT EXCEEDS	175		79		

