

## RAINY RIVER BASIN--Continued

05132000 BIG FORK RIVER AT BIG FALLS, MN

LOCATION.--Lat 48°11'45", long 93°48'25", in SW $\frac{1}{4}$ SE $\frac{1}{4}$  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 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	357	980	e620	e420	e300	e195	e215	1040	797	2360	520	465
2	355	1000	e660	e415	e300	e190	e215	1030	774	1960	468	445
3	359	994	e690	e410	e295	e185	e220	990	688	1680	436	448
4	359	974	e675	e405	e290	e190	e225	950	605	1430	408	437
5	357	935	e655	e400	e285	e195	e230	942	537	1260	381	429
6	356	894	e675	e390	e280	e200	e240	944	490	1140	355	429
7	357	875	e685	e385	e275	e200	e260	960	460	1050	1150	420
8	361	893	e690	e380	e270	e200	e300	975	441	1090	1380	411
9	364	896	e680	e375	e265	e200	e370	1120	434	1140	976	401
10	396	887	e665	e370	e265	e200	e440	1370	557	1520	894	391
11	511	864	e635	e365	e260	e200	e500	1570	1130	1670	838	380
12	646	835	e615	e365	e260	e200	e590	1570	1240	1580	775	365
13	713	819	e590	e360	e255	e200	e700	1480	1310	1410	727	364
14	765	807	e580	e360	e250	e200	e920	1450	1440	1240	641	347
15	810	799	e565	e360	e245	e200	e1500	1390	1320	1100	653	339
16	805	783	e550	e357	e245	e200	e2500	1310	1130	991	774	329
17	805	771	e540	e355	e240	e200	1970	1210	945	879	730	331
18	787	746	e530	e350	e235	e200	1760	1120	776	786	710	325
19	761	736	e520	e340	e230	e200	1900	1020	802	710	652	335
20	728	722	e510	e340	e225	e200	2000	932	1210	645	609	336
21	718	695	e505	e335	e225	e200	1970	857	1220	610	568	333
22	710	671	e495	e330	e220	e200	1820	777	1210	560	531	336
23	707	655	e485	e330	e215	e200	1620	742	4150	530	480	338
24	730	651	e480	e325	e215	e200	1480	738	7910	501	452	335
25	795	724	e470	e325	e210	e200	1390	741	9420	468	429	330
26	868	825	e465	e320	e210	e200	1270	716	8450	445	404	327
27	916	e680	e455	e320	e205	e205	1180	657	6570	440	407	319
28	919	e580	e445	e315	e205	e205	1080	640	4920	461	430	323
29	910	e400	e440	e310	---	e210	1030	654	3800	530	476	325
30	925	e385	e435	e310	---	e210	1030	734	2970	589	465	325
31	950	---	e430	e305	---	e210	---	796	---	567	464	---
TOTAL	20100	23476	17435	11027	6975	6195	30925	31425	67706	31342	19183	11018
MEAN	648	783	562	356	249	200	1031	1014	2257	1011	619	367
MAX	950	1000	690	420	300	210	2500	1570	9420	2360	1380	465
MIN	355	385	430	305	205	185	215	640	434	440	355	319
AC-FT	39870	46560	34580	21870	13830	12290	61340	62330	134300	62170	38050	21850
CFSM	0.44	0.53	0.38	0.24	0.17	0.14	0.70	0.68	1.52	0.68	0.42	0.25
IN.	0.51	0.59	0.44	0.28	0.18	0.16	0.78	0.79	1.70	0.79	0.48	0.28

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	669	553	294	178	142	253	1915	2010	1185	654	417	565
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 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1909 - 2002

ANNUAL TOTAL		454241		276807								
ANNUAL MEAN		1244		758						737		
HIGHEST ANNUAL MEAN										1362		1950
LOWEST ANNUAL MEAN										92.0		1931
HIGHEST DAILY MEAN				9360	Apr 15		9420	Jun 25		14800	May 9	1950
LOWEST DAILY MEAN				237	Mar 18		185	Mar 3		14	Jan 10	1940
ANNUAL SEVEN-DAY MINIMUM				237	Mar 18		194	Mar 1		18	Jan 22	1935
MAXIMUM PEAK FLOW							9570	Jun 25		14800	May 8	1950
MAXIMUM PEAK STAGE							12.50	Jun 25		17.08	May 8	1950
INSTANTANEOUS LOW FLOW										7.0	Aug 7	1939
ANNUAL RUNOFF (AC-FT)			901000				549000			533900		
ANNUAL RUNOFF (CFM)			0.84				0.51			0.50		
ANNUAL RUNOFF (INCHES)			11.42				6.96			6.77		
10 PERCENT EXCEEDS			3920				1310			1810		
50 PERCENT EXCEEDS			510				530			337		
90 PERCENT EXCEEDS			242				215			81		

e Estimated.

