

05132000 BIG FORK RIVER AT BIG FALLS, MN

LOCATION.--Lat 48°11'45", long 93°48'25", in SW¹/₄SE¹/₄ 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.--1480 mi².

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 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1510	996	e480	e370	e200	e290	593	736	671	759	194	425
2	1420	990	e540	e360	e200	e340	557	743	672	662	185	494
3	1340	974	e605	e355	e195	e390	570	766	671	592	183	551
4	1300	972	e610	e340	e195	e430	600	771	649	519	175	612
5	1210	949	e600	e330	e190	e460	681	760	616	464	175	624
6	1160	930	e595	e320	e185	e475	900	770	578	425	301	638
7	1130	939	e540	e310	e185	e480	1410	817	515	424	330	692
8	1260	949	e480	e300	e180	e490	1460	1010	490	454	321	728
9	1420	939	e500	e295	e180	e510	1290	1370	454	527	334	718
10	1470	934	e560	e290	e175	e530	1150	1670	436	698	353	681
11	1440	933	e580	e280	e175	e530	1040	1660	413	767	324	644
12	1370	914	e580	e275	e170	e530	928	1660	386	750	340	589
13	1310	895	e550	e265	e170	e520	844	1670	362	692	343	531
14	1250	886	e520	e260	e165	e530	813	1610	371	619	335	478
15	1210	879	e475	e255	e165	e530	792	1490	401	549	462	437
16	1170	872	e440	e250	e165	e520	790	1330	422	483	583	403
17	1140	844	e415	e250	e165	e480	784	1170	444	426	531	383
18	1130	817	e395	e245	e160	455	797	1050	450	379	486	359
19	1160	816	e385	e245	e160	411	821	959	451	339	454	373
20	1170	800	e380	e240	e160	414	835	872	465	317	416	396
21	1190	790	e380	e235	e160	438	826	851	581	288	399	435
22	1190	780	e385	e235	e165	485	803	988	1000	263	390	446
23	1170	766	e405	e230	e165	512	801	1080	1520	242	368	475
24	1150	758	e420	e225	e170	582	801	1060	1700	227	351	489
25	1120	732	e430	e220	e180	712	794	986	1700	215	315	490
26	1080	e720	e430	e220	e190	900	790	910	1440	218	293	486
27	1060	e710	e420	e215	e220	1120	793	822	1200	238	273	458
28	1050	e700	e410	e215	e230	1120	798	764	1010	230	262	432
29	1030	e660	e400	e210	e250	975	788	716	903	222	256	408
30	1020	e590	e390	e210	---	803	763	701	848	216	247	391
31	1010	---	e380	e205	---	660	---	684	---	205	306	---
TOTAL	37640	25434	14680	8255	5270	17622	25612	32446	21819	13409	10285	15266
MEAN	1214	848	474	266	182	568	854	1047	727	433	332	509
MAX	1510	996	610	370	250	1120	1460	1670	1700	767	583	728
MIN	1010	590	380	205	160	290	557	684	362	205	175	359
AC--FT	74660	50450	29120	16370	10450	34950	50800	64360	43280	26600	20400	30280
CFSM	.82	.57	.32	.18	.12	.38	.58	.71	.49	.29	.22	.34
IN.	.95	.64	.37	.21	.13	.44	.64	.82	.55	.34	.26	.38

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	667	533	288	174	139	254	1896	1990	1155	651	408	571
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 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1909 - 2000
ANNUAL TOTAL	452104	227738	
ANNUAL MEAN	1239	622	728
HIGHEST ANNUAL MEAN			1362
LOWEST ANNUAL MEAN			92.0
HIGHEST DAILY MEAN	7600	May 14	14800
LOWEST DAILY MEAN	190	Feb 24	14
ANNUAL SEVEN-DAY MINIMUM	190	Feb 24	18
INSTANTANEOUS PEAK FLOW			1750 ^a
INSTANTANEOUS PEAK STAGE			5.95 ^b
INSTANTANEOUS LOW FLOW			17.08
ANNUAL RUNOFF (AC-FT)	896700	451700	527100
ANNUAL RUNOFF (CFSM)	.84	.42	.49
ANNUAL RUNOFF (INCHES)	11.36	5.72	6.68
10 PERCENT EXCEEDS	2730	1160	1800
50 PERCENT EXCEEDS	949	528	330
90 PERCENT EXCEEDS	195	215	80

^a Gage height, 5.39 ft.
^b Backwater from ice.
^e Estimated.

