

UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05275000 ELK RIVER NEAR BIG LAKE, MN

LOCATION.--Lat 45°20'02", long 93°40'00", in NE¹/₄SW¹/₄ sec. 23, T.33 N., R.27 W., Sherburne County, Hydrologic Unit 07010203, on right bank at upstream side of County Highway 15 bridge, 4 mi east of Big Lake and 4 mi downstream from St. Francis River.

DRAINAGE AREA.--559 mi².

PERIOD OF RECORD.--April 1911 to September 1917, April to September 1931, April to November 1932, March to November 1933, March 1934 to September 1987, October 1990 to current year.

REVISED RECORDS.--WSP 895: 1939. WSP 1308: 1912(M), 1915-17(M).

GAGE.--Water-stage recorder. Datum of gage is 899.60 ft above sea level (NGVD of 1929). April 1911 to Sept. 30, 1917, April 1, 1931 to July 26, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for periods of estimated daily discharge, which are fair.

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	78	100	189	e86	e94	e88	e157	488	222	500	719	498
2	77	100	175	e86	e93	e88	e195	483	208	496	735	526
3	74	100	179	e87	e93	e87	e229	490	200	512	754	544
4	74	100	182	e89	e93	e87	e227	486	194	506	1070	518
5	72	100	187	e93	e93	e89	e217	473	189	479	1030	479
6	69	100	201	e99	e94	e92	e208	472	178	440	953	609
7	69	101	196	e102	e95	e94	e239	457	178	393	911	702
8	70	101	195	e106	e95	e98	e383	484	180	346	927	690
9	70	101	179	e113	e95	e101	e675	532	179	308	1010	1150
10	77	101	219	e115	e96	e106	899	527	174	403	983	1830
11	82	98	221	e117	e97	e112	1090	526	196	562	894	1940
12	84	99	189	e119	e98	e119	1170	574	203	583	809	1830
13	87	104	183	e119	e98	e128	1230	630	195	640	720	1730
14	93	108	205	e119	e99	e126	1570	652	188	991	637	1680
15	96	109	176	e119	e99	e119	1820	637	178	1620	577	1590
16	96	110	165	e119	e99	e114	1900	628	169	2050	534	1490
17	95	109	166	e119	e100	e108	1850	637	160	2220	519	1360
18	97	109	165	e117	e100	e102	1690	646	153	2210	478	1210
19	100	110	e143	e116	e100	e98	1500	646	151	2040	437	1040
20	100	110	e130	e116	e99	e94	1260	622	151	1780	399	876
21	100	109	e119	e114	e97	e88	1090	581	162	1550	543	732
22	103	110	e110	e109	e95	e85	995	539	202	1350	518	625
23	103	110	e103	e105	e93	e84	902	501	222	1170	469	560
24	104	126	e99	e102	e91	e85	830	461	251	1000	470	514
25	106	168	e96	e101	e90	e85	749	413	315	903	527	487
26	105	180	e93	e100	e89	e88	672	356	351	815	617	483
27	107	151	e91	e99	e89	e92	612	318	372	755	680	459
28	104	143	e89	e98	e88	e95	586	293	413	752	629	439
29	100	181	e88	e97	---	e100	546	278	463	699	560	433
30	101	195	e88	e96	---	e107	511	264	494	649	528	428
31	103	---	e87	e95	---	e121	---	240	---	653	503	---
TOTAL	2796	3543	4708	3272	2662	3080	26002	15334	6891	29375	21140	27452
MEAN	90.2	118	152	106	95.1	99.4	867	495	230	948	682	915
MAX	107	195	221	119	100	128	1900	652	494	2220	1070	1940
MIN	69	98	87	86	88	84	157	240	151	308	399	428
AC-FT	5550	7030	9340	6490	5280	6110	51570	30410	13670	58270	41930	54450
CFSM	0.16	0.21	0.27	0.19	0.17	0.18	1.55	0.88	0.41	1.70	1.22	1.64
IN.	0.19	0.24	0.31	0.22	0.18	0.20	1.73	1.02	0.46	1.95	1.41	1.83

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	204	209	149	111	117	298	667	443	336	271	185	206
MAX	778	794	410	290	392	1125	1823	1620	1647	1026	926	1050
(WY)	1985	1972	1966	1979	1984	1966	1969	1986	1984	1978	1972	1986
MIN	32.7	56.3	44.1	38.4	29.8	58.8	75.5	37.5	20.5	8.94	8.74	23.4
(WY)	1934	1935	1935	1935	1936	1934	1934	1934	1934	1934	1934	1932

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1911 - 2002

ANNUAL TOTAL		121348		146255								
ANNUAL MEAN		332		401						276a		
HIGHEST ANNUAL MEAN										669		1986
LOWEST ANNUAL MEAN										88.0		1935
HIGHEST DAILY MEAN				4370	Apr 27		2220	Jul 17		7170	Apr 16	1965
LOWEST DAILY MEAN				58	Feb 21		69	Oct 6,7		4.0	Aug 1	1934
ANNUAL SEVEN-DAY MINIMUM				59	Feb 18		71	Oct 3		4.5	Jul 27	1934
MAXIMUM PEAK FLOW							2240	Jul 17		7360	Apr 16	1965
MAXIMUM PEAK STAGE							6.25	Jul 17		10.86	Apr 16	1965
INSTANTANEOUS LOW FLOW							68	Oct 6		3.6	Jul 31	1934
ANNUAL RUNOFF (AC-FT)			240700				290100			200100		
ANNUAL RUNOFF (CFM)			0.59				0.72			0.49		
ANNUAL RUNOFF (INCHES)			8.08				9.73			6.71		
10 PERCENT EXCEEDS			880				993			575		
50 PERCENT EXCEEDS			100				181			170		
90 PERCENT EXCEEDS			63				91			72		

a Median of annual mean discharges is 258 ft³/s.
 e Estimated.

