

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 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	147	e130	e81	e66	e310	272	164	120	104	85	46
2	109	145	135	e81	e66	e370	268	155	124	100	77	48
3	109	149	134	e80	e67	e400	264	145	116	101	70	48
4	106	144	133	e80	e67	374	260	136	123	98	68	46
5	105	146	132	e80	e67	331	255	133	146	100	63	44
6	115	156	113	e80	e66	298	236	128	137	105	62	41
7	131	160	e110	e79	e65	271	212	125	126	98	58	37
8	148	164	e115	e78	e65	262	185	132	119	96	55	34
9	161	171	e112	e78	e64	272	169	143	113	112	56	34
10	164	175	e110	e77	e64	259	156	142	105	129	52	34
11	162	175	e110	e77	e64	248	152	152	98	122	47	32
12	151	172	e110	e75	e64	258	148	169	93	128	45	31
13	136	173	e109	e74	e64	258	145	168	90	137	51	30
14	129	172	e107	e74	e64	243	162	170	105	131	44	30
15	122	161	e105	e75	e65	227	189	170	120	117	41	28
16	116	151	e88	e76	e65	210	204	173	126	104	40	28
17	113	144	e82	e77	e65	191	213	174	155	95	71	26
18	113	141	e76	e77	e66	183	219	173	181	92	76	24
19	111	135	e75	e76	e66	172	217	163	185	97	67	24
20	110	139	e73	e74	e67	166	211	149	195	91	61	25
21	111	140	e66	e71	e72	162	206	139	188	84	57	26
22	110	140	e67	e70	e82	156	197	132	179	79	57	27
23	111	145	e68	e70	e97	155	193	125	170	77	58	30
24	112	148	e78	e70	e118	173	197	116	163	73	56	33
25	108	148	e80	e70	e160	189	197	109	150	70	60	36
26	108	146	e80	e68	e220	194	196	103	150	82	70	33
27	111	143	e80	e68	e255	207	204	99	140	87	63	31
28	114	140	e80	e67	e270	228	205	114	129	82	53	30
29	114	127	e82	e67	e275	256	197	114	118	80	52	28
30	124	e127	e81	e66	---	268	179	107	112	84	49	26
31	142	---	e81	e66	---	273	---	109	---	87	46	---
TOTAL	3786	4524	3002	2302	2856	7564	6108	4331	4076	3042	1810	990
MEAN	122	151	96.8	74.3	98.5	244	204	140	136	98.1	58.4	33.0
MAX	164	175	135	81	275	400	272	174	195	137	85	48
MIN	105	127	66	66	64	155	145	99	90	70	40	24
AC-FT	7510	8970	5950	4570	5660	15000	12120	8590	8080	6030	3590	1960
CFSM	.22	.27	.17	.13	.18	.44	.36	.25	.24	.18	.10	.06
IN.	.25	.30	.20	.15	.19	.50	.41	.29	.27	.20	.12	.07

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	208	212	150	111	118	305	650	437	334	263	179	198
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 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1911 - 2000
ANNUAL TOTAL	66256	44391	
ANNUAL MEAN	182	121	274 ^a
HIGHEST ANNUAL MEAN			669
LOWEST ANNUAL MEAN			88.0
HIGHEST DAILY MEAN	913	May 22	7170
LOWEST DAILY MEAN	66	Dec 21	4.0
ANNUAL SEVEN-DAY MINIMUM	72	Dec 18	4.5
INSTANTANEOUS PEAK FLOW			426 ^b
INSTANTANEOUS PEAK STAGE			3.10 ^c
INSTANTANEOUS LOW FLOW			23
ANNUAL RUNOFF (AC-FT)	131400	88050	198400
ANNUAL RUNOFF (CFSM)	.32	.22	.49
ANNUAL RUNOFF (INCHES)	4.41	2.95	6.66
10 PERCENT EXCEEDS	286	206	550
50 PERCENT EXCEEDS	144	111	165
90 PERCENT EXCEEDS	84	49	68

a Median of annual mean discharges is 250 ft³/s.
 b Maximum observed.
 c Backwater from ice.
 e Estimated.

