

## UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05227500 MISSISSIPPI RIVER AT AITKIN, MN

LOCATION.--Lat 46°32'26", long 93°42'26", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 24, T.47 N., R.27 W., Aitkin County, Hydrologic Unit 07010104, on right bank upstream side of highway bridge at north edge of Aitkin, 1 mi downstream from Ripple River and at mile 1,055.9 upstream from Ohio River.

DRAINAGE AREA.--6,140 mi<sup>2</sup> (approximately).

PERIOD OF RECORD.--March 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,182.41 ft above sea level (NGVD of 1929, levels by U.S. Army Corps of Engineers). Mar. 1, 1945 to Mar. 14, 1961, nonrecording gage, and Mar. 15, 1961 to Sept. 30, 1967, water-stage recorder at same site at datum 3.0 ft higher. Diversion channel: Non-recording gage and crest-stage gage. Datum of gage is 1,182.02 ft above sea level (NGVD of 1929). Apr. 9, 1955 to Apr. 10, 1956, nonrecording gage at site 4 mi downstream at different datum. Apr. 11, 1956 to Sept. 30, 1967, non-recording gage at same site at datum 3.0 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Winnibigoshish Lake, Leech Lake, Pokegama Lake, and Sandy Lake. Water diverted at medium and high stages into Aitkin diversion channel 6.5 mi above station, bypasses station and returns to river 15.5 mi below station. Diversion began Apr. 2, 1955. These records include flow in diversion channel.

EXTREMES FOR CURRENT YEAR.--Main channel: maximum discharge, 4100 ft<sup>3</sup>/s, July 11; gage height, 12.27 ft. Diversion channel: maximum discharge, 3200 ft<sup>3</sup>/s, July 11, gage height, 11.78 ft.

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	1750	2930	2700	e2740	e2240	e1900	e1320	3440	1780	6360	3270	1900
2	1750	2920	2610	e2700	e2220	e1830	e1330	3330	1730	6370	3280	1930
3	1770	2910	2590	e2680	e2200	e1760	e1320	3140	1670	6260	3420	1920
4	1770	2900	2670	e2680	e2180	e1730	e1300	3030	1620	6060	3630	1910
5	1830	2870	2710	e2680	e2170	e1730	e1280	2950	1580	5760	3680	1870
6	1890	2820	2730	e2690	e2160	e1740	e1270	2860	1460	5390	3500	1830
7	1900	2760	2810	e2700	e2140	e1740	e1260	2750	1330	5050	3230	1800
8	1920	2720	2990	e2730	e2120	e1730	e1340	2780	1260	5880	3010	1760
9	1950	2690	3050	e2770	e2100	e1690	e1450	2980	1170	6880	2750	1770
10	1970	2720	3030	e2790	e2090	e1670	e1680	3170	1100	6990	2590	1810
11	2000	2760	3110	e2800	e2070	e1660	e2100	3320	1080	7470	2540	1760
12	2110	2710	3190	e2820	e2070	e1670	e2380	3560	1070	7560	2610	1780
13	2340	2660	3210	e2830	e2060	e1670	e2800	3900	1030	7290	2650	1840
14	2630	2640	3100	e2850	e2070	e1660	e3350	4180	1010	6900	2640	1810
15	2830	2610	3130	e2850	e2080	e1640	e3800	4350	1010	6460	2670	1740
16	2940	2570	3090	e2800	e2090	e1590	e3880	4500	956	6090	2660	1700
17	2990	2540	3370	e2730	e2100	e1560	e4150	4560	947	5680	2770	1650
18	3020	2510	3280	e2650	e2100	e1560	4450	4430	891	5290	2920	1590
19	2980	2490	e2950	e2570	e2120	e1560	4650	4160	885	5030	2950	1590
20	2930	2440	e2700	e2500	e2140	e1560	4860	3810	926	4710	2910	1590
21	2900	2410	e2500	e2450	e2170	e1560	4970	3480	977	4400	2920	1530
22	2890	2400	e2300	e2400	e2190	e1550	4950	3190	1050	4170	2870	1460
23	2890	2360	e2250	e2380	e2200	e1500	4890	2980	1150	3990	2700	1480
24	2870	2370	e2260	e2380	e2220	e1400	4850	2820	1920	3790	2540	1480
25	2820	2430	e2350	e2380	e2200	e1300	4650	2650	3820	3550	2380	1470
26	2800	2510	e2470	e2400	e2160	e1200	4370	2460	5060	3340	2280	1480
27	2890	2680	e2600	e2420	e2080	e1160	4120	2240	5690	3190	2190	1520
28	2970	2680	e2720	e2420	e2000	e1170	3860	2080	5990	3330	2100	1570
29	3010	2610	e2770	e2390	---	e1230	3660	1970	6160	3420	2000	1560
30	3000	2640	e2780	e2350	---	e1260	3510	1890	6290	3350	1910	1540
31	2970	---	e2760	e2260	---	e1300	---	1830	---	3280	1890	---
TOTAL	77280	79260	86780	80790	59740	48280	93800	98790	62612	163290	85460	50640
MEAN	2493	2642	2799	2606	2134	1557	3127	3187	2087	5267	2757	1688
MAX	3020	2930	3370	2850	2240	1900	4970	4560	6290	7560	3680	1930
MIN	1750	2360	2250	2260	2000	1160	1260	1830	885	3190	1890	1460
AC-FT	153300	157200	172100	160200	118500	95760	186100	196000	124200	323900	169500	100400
CFSM	0.41	0.43	0.46	0.42	0.35	0.25	0.51	0.52	0.34	0.86	0.45	0.27
IN.	0.47	0.48	0.53	0.49	0.36	0.29	0.57	0.60	0.38	0.99	0.52	0.31

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2704	2838	2325	2005	1909	2258	5216	5291	3695	3158	2379	2236
MAX	6534	6756	4498	3525	3196	5415	10830	15510	8072	8201	8270	6689
(WY)	1966	1972	1997	1966	1966	1945	1966	1950	1965	1993	1953	1986
MIN	313	328	324	345	398	638	1074	669	540	346	273	321
(WY)	1977	1977	1977	1977	1977	1977	1977	1958	1988	1961	1961	1976

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1945 - 2002
ANNUAL TOTAL	1602370	986722	
ANNUAL MEAN	4390	2703	2995
HIGHEST ANNUAL MEAN			4985
LOWEST ANNUAL MEAN			796
HIGHEST DAILY MEAN	14200	Apr 27	7560
LOWEST DAILY MEAN	1600	Sep 22	885
ANNUAL SEVEN-DAY MINIMUM	1690	Sep 18	942
MAXIMUM PEAK FLOW			7610
MAXIMUM PEAK STAGE			12.27
INSTANTANEOUS LOW FLOW			856
ANNUAL RUNOFF (AC-FT)	3178000	1957000	2169000
ANNUAL RUNOFF (CFSM)	0.71	0.44	0.49
ANNUAL RUNOFF (INCHES)	9.71	5.98	6.63
10 PERCENT EXCEEDS	9620	4410	5900
50 PERCENT EXCEEDS	2940	2570	2380
90 PERCENT EXCEEDS	1950	1470	990

a Present datum.  
e Estimated.

