

UPPER MISSISSIPPI RIVER MAIN STEM--Continued

05372995 SOUTH FORK ZUMBRO RIVER AT ROCHESTER, MN

LOCATION.--Lat 44°03'42", long 92°27'58", in NW¹/₄NE¹/₄ sec. 23, T.107 N., R.14 W., Olmsted County, Hydrologic Unit 07040004, on left bank 50 ft downstream from 37th Street Bridge, 0.2 mi upstream from sewer plant, and 2.0 mi downstream from Silver Lake Dam.

DRAINAGE AREA.--303 mi².

PERIOD OF RECORD.--March 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 950.00 ft above sea level.

REMARKS.--Records good. Slight regulation at times from Silver Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 6, 1978, reached a stage of about 28.0 ft, on upstream side of bridge, discharge 30,500 ft³/s. This is the highest known stage since at least 1908.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 10	0700	1,750	7.04	May 21	1500	2,190	7.61
Apr 23	0700	1,340	6.18	Aug 18	1700	2,380	7.92
May 18	0900	*2,990	*8.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	162	123	68	73	161	157	348	358	181	404	240
2	66	150	121	67	75	171	153	325	346	170	317	224
3	80	140	121	65	80	159	239	307	321	451	275	211
4	76	135	124	68	69	152	302	294	310	356	248	211
5	121	132	124	62	74	151	384	303	291	260	225	202
6	98	124	124	61	77	133	630	286	352	233	209	189
7	90	124	117	63	76	121	685	274	340	199	195	193
8	83	122	112	63	91	120	585	260	298	203	187	198
9	80	130	111	63	95	111	1160	245	282	186	331	178
10	76	197	111	63	103	128	1610	234	289	170	370	172
11	75	204	109	63	213	131	1180	293	293	161	279	166
12	70	190	107	63	215	119	1120	370	310	155	259	189
13	69	180	107	63	203	118	826	534	279	153	241	168
14	73	175	107	63	237	120	687	608	255	146	218	162
15	98	168	107	63	248	135	597	490	235	139	201	156
16	119	166	107	66	321	213	556	715	226	172	190	152
17	133	160	103	71	312	304	500	1790	215	201	182	149
18	119	154	101	72	254	280	438	2670	202	400	637	146
19	109	154	95	65	206	224	404	1470	195	1020	679	140
20	104	143	75	68	189	205	381	1160	191	721	396	136
21	97	137	77	71	173	200	359	1970	186	739	338	136
22	90	137	80	72	164	190	765	1440	182	583	562	134
23	89	137	78	73	167	178	1280	933	185	456	778	132
24	84	137	74	73	159	172	890	757	178	363	634	128
25	82	130	73	65	148	164	683	639	169	305	529	126
26	84	129	71	69	148	155	586	564	160	502	443	120
27	270	129	74	73	152	149	527	503	154	391	384	120
28	261	126	76	73	161	169	473	467	156	396	338	116
29	225	126	76	70	---	169	417	426	153	359	304	117
30	197	126	66	69	---	161	372	389	151	333	277	111
31	177	---	71	65	---	157	---	372	---	397	252	---
TOTAL	3464	4424	3022	2073	4483	5120	18946	21436	7262	10501	10882	4822
MEAN	112	147	97.5	66.9	160	165	632	691	242	339	351	161
MAX	270	204	124	73	321	304	1610	2670	358	1020	778	240
MIN	66	122	66	61	69	111	153	234	151	139	182	111
AC-FT	6870	8780	5990	4110	8890	10160	37580	42520	14400	20830	21580	9560
CFSM	.37	.49	.32	.22	.53	.55	2.08	2.28	.80	1.12	1.16	.53

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	158	148	120	77.5	131	390	418	320	239	238	174	176
MAX	824	338	358	167	454	760	1211	691	1014	663	501	1075
(WY)	1987	1992	1992	1983	1984	1983	1993	1999	1993	1993	1990	1986
MIN	20.0	24.5	21.0	22.5	23.8	165	106	88.3	49.0	23.2	24.6	31.5
(WY)	1990	1990	1990	1990	1990	1999	1981	1989	1989	1988	1988	1988

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1981 - 1999
ANNUAL TOTAL	72482	96435	
ANNUAL MEAN	199	264	217
HIGHEST ANNUAL MEAN			431
LOWEST ANNUAL MEAN			87.3
HIGHEST DAILY MEAN	1370	Apr 1	2670
LOWEST DAILY MEAN	35	Jan 13	61
ANNUAL SEVEN-DAY MINIMUM	38	Jan 10	63
INSTANTANEOUS PEAK FLOW			2990
INSTANTANEOUS PEAK STAGE			8.86
INSTANTANEOUS LOW FLOW			52a
ANNUAL RUNOFF (AC-FT)	143800	191300	157300
ANNUAL RUNOFF (CFSM)	.66	.87	.72
10 PERCENT EXCEEDS	382	558	476
50 PERCENT EXCEEDS	151	169	125
90 PERCENT EXCEEDS	62	73	46

a Due in part to regulation.

