

UPPER MISSISSIPPI RIVER MAIN STEM

05372995 SOUTH FORK ZUMBRO RIVER AT ROCHESTER, MN

LOCATION.--Lat 4403'42", long 9227'58", in NW 1 / 4 NE 1 / 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 mean sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. 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	Gage height (ft)	Date	Time	Discharge	Gage height (ft)
		(ft ³ /s)				(ft ³ /s)	
Apr. 01	1400	1520	6.73	Aug. 17	0600	1850	7.38
June 27	2100	*2010	*7.66				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	112	82	56	59	358	1370	208	161	446	116	108
2	92	108	78	61	53	322	1050	204	158	374	112	104
3	91	108	80	62	51	310	788	200	151	385	123	102
4	89	104	78	59	54	294	662	193	151	361	148	100
5	87	102	72	70	52	275	587	187	155	346	170	100
6	86	100	74	70	52	264	528	179	151	307	146	94
7	85	99	73	65	54	251	506	218	151	368	178	88
8	91	98	75	63	56	251	492	289	138	508	194	87

9	90	99	76	56	63	233	459	283	155	464	179	84
10	86	98	76	39	63	187	412	267	151	357	155	80
11	85	96	75	e37	64	e180	379	249	170	306	139	76
12	166	89	73	e36	65	e170	354	234	164	272	131	74
13	175	90	61	e35	63	e180	364	220	156	249	126	74
14	191	99	65	e36	64	185	342	206	151	227	122	74
15	172	97	75	e40	74	196	342	230	152	222	117	72
16	159	86	75	45	103	185	403	214	170	200	111	71
17	151	80	67	45	269	185	427	187	159	186	487	71
18	134	92	72	45	565	186	380	181	187	176	220	69
19	131	89	73	46	654	185	352	231	190	244	188	66
20	128	86	71	45	601	171	333	172	202	285	239	65
21	123	82	55	47	441	170	313	168	200	231	196	63
22	119	83	67	47	355	171	295	165	203	193	182	62
23	117	71	69	48	369	182	281	165	180	175	166	61
24	116	64	67	48	425	198	265	192	420	165	156	68
25	114	83	61	48	345	221	250	201	693	153	150	63
26	111	84	57	48	338	357	245	213	433	148	135	81
27	109	84	48	50	426	485	243	207	558	144	134	63
28	109	84	61	53	411	781	229	197	1200	133	131	61
29	109	84	64	55	---	992	217	186	1130	129	130	78
30	106	84	62	55	---	1030	213	171	568	129	118	75
31	107	---	46	57	---	1030	---	168	---	125	116	---
TOTAL	3622	2735	2128	1567	6189	10185	13081	6385	8808	8008	5015	2334
MEAN	117	91.2	68.6	50.5	221	329	436	206	294	258	162	77.8
MAX	191	112	82	70	654	1030	1370	289	1200	508	487	108
MIN	85	64	46	35	51	170	213	165	138	125	111	61
AC-FT	7180	5420	4220	3110	12280	20200	25950	12660	17470	15880	9950	4630
CFSM	.39	.30	.23	.17	.73	1.08	1.44	.68	.97	.85	.53	.26
	.44	.34	.26	.19	.76	1.25	1.61	.78	1.08	.98	.62	.29

e Estimated

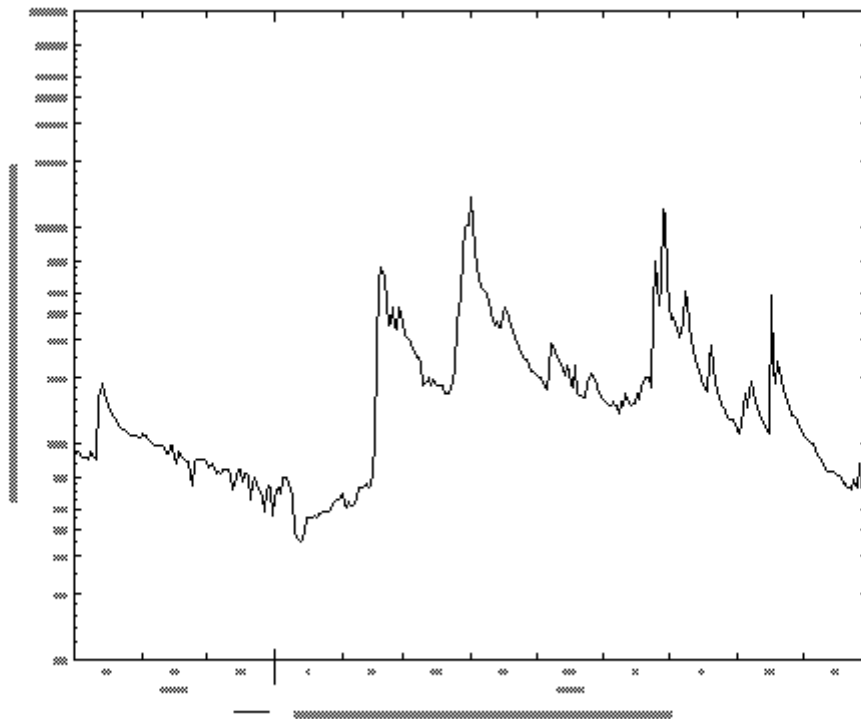
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1998, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	161	148	122	78.1	130	403	406	299	239	232	164	177
MAX	824	338	358	167	454	760	1211	617	1014	663	501	1075
(WY)	1987	1992	1992	1983	1984	1983	1993	1991	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	1987	1981	1989	1989	1988	1988	1988

SUMMARY STATISTICS	FOR 1997 CALENDAR YEAR	FOR 1998 WATER YEAR	WATER YEARS 1981 - 1998
ANNUAL TOTAL	76881	70057	
ANNUAL MEAN	211	192	214
HIGHEST ANNUAL MEAN			431 1993
LOWEST ANNUAL MEAN			87.3 1989
HIGHEST DAILY MEAN	2540 Mar 22	1370 Apr 1	7710 Sep 21 1986
LOWEST DAILY MEAN	46 Dec 31	35 Jan 13	12 Sep 12 1988
ANNUAL SEVEN-DAY MINIMUM	57 Dec 25	38 Jan 10	14 Sep 8 1988
INSTANTANEOUS PEAK FLOW		2010 Jun 27	10000 Sep 21 1986
INSTANTANEOUS PEAK STAGE		7.66 Jun 27	20.77 Sep 21 1986
INSTANTANEOUS LOW FLOW		35 Jan 13	10a Oct 23 1981
ANNUAL RUNOFF (AC-FT)	152500	139000	155300
ANNUAL RUNOFF (CFSM)	.70	.63	.71
	9.44	8.60	9.61
10 PERCENT EXCEEDS	432	382	470
50 PERCENT EXCEEDS	120	139	122

90 PERCENT EXCEEDS	71		59		45		
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a Due in part to regulation.



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