

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 wastewater treatment 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 (NGVD of 1929). Prior to Mar. 1981, recording gage at site 0.6 miles downstream. Record published as "near Rochester, MN" and under downstream order number 05373000. Peak flow record is considered equivalent at both sites but daily-mean streamflows are not.

REMARKS.--Record good to 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 (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr 7	1900	2,990	9.48	May 3	1300	2,270	7.98
Apr 12	0800	*5,160	*13.67	Jun 14	2200	2,420	8.38
Apr 21	2000	1,550	6.64				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	138	89	59	57	60	473	472	418	282	149	118
2	61	116	76	58	54	65	596	1310	432	266	144	103
3	65	97	66	60	58	71	796	2110	387	260	140	94
4	67	91	90	61	59	67	980	1900	357	245	136	84
5	65	87	58	62	59	64	1540	1280	439	230	130	79
6	63	167	70	63	59	64	2080	1110	435	221	122	82
7	61	184	75	64	58	63	2550	1310	406	217	117	119
8	62	179	72	62	61	63	2300	1060	376	211	115	141
9	63	164	67	55	60	64	1280	840	374	203	112	106
10	64	150	67	61	50	64	965	779	358	197	106	92
11	64	136	59	62	56	67	1950	756	329	190	101	80
12	63	142	60	64	56	68	4410	645	370	187	98	72
13	64	137	58	65	57	77	2420	590	1200	185	95	69
14	74	136	59	68	57	87	2060	571	2070	180	89	69
15	64	126	60	68	52	85	1620	515	2140	174	108	69
16	64	133	63	63	54	84	1170	466	1340	172	96	69
17	64	120	60	56	49	87	965	431	959	174	91	70
18	63	105	60	61	50	85	832	399	828	207	110	71
19	65	110	56	59	52	97	738	375	1100	204	97	73
20	63	99	58	51	50	115	670	364	789	173	90	77
21	62	83	57	53	48	130	1310	632	644	169	87	74
22	65	101	58	51	49	142	1210	451	555	168	122	108
23	94	97	57	52	47	162	986	429	504	330	94	208
24	75	93	57	52	55	150	829	430	458	234	89	188
25	77	95	56	50	75	159	708	577	423	192	146	146
26	80	95	58	50	54	147	636	584	389	178	119	126
27	74	94	59	49	52	155	568	569	356	170	108	112
28	71	90	60	50	53	165	513	525	345	165	97	104
29	69	91	57	58	---	167	473	476	330	162	99	99
30	68	89	59	69	---	183	447	437	305	157	220	97
31	68	---	60	62	---	327	---	405	---	152	154	---
TOTAL	2085	3545	1961	1818	1541	3384	38075	22798	19416	6255	3581	2999
MEAN	67.3	118	63.3	58.6	55.0	109	1269	735	647	202	116	100
MAX	94	184	90	69	75	327	4410	2110	2140	330	220	208
MIN	61	83	56	49	47	60	447	364	305	152	87	69
AC-FT	4140	7030	3890	3610	3060	6710	75520	45220	38510	12410	7100	5950
CFSM	.22	.39	.21	.19	.18	.36	4.19	2.43	2.14	.67	.38	.33

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	151	143	115	75.6	127	363	442	336	287	247	170	169
MAX	824	338	358	167	454	760	1269	735	1014	663	501	1075
(WY)	1987	1992	1992	1983	1984	1983	2001	2001	1993	1993	1990	1986
MIN	20.0	24.5	21.0	22.5	23.8	109	79.4	88.3	49.0	23.2	24.6	31.5
(WY)	1990	1990	1990	1990	1990	2001	2000	1989	1989	1988	1988	1988

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1981 - 2001
ANNUAL TOTAL	74742	107458	
ANNUAL MEAN	204	294	220
HIGHEST ANNUAL MEAN			431
LOWEST ANNUAL MEAN			87.3
HIGHEST DAILY MEAN	2570	Jul 10	4410
LOWEST DAILY MEAN	47	Jan 28	47
ANNUAL SEVEN-DAY MINIMUM	48	Jan 27	49
MAXIMUM PEAK FLOW			5160
MAXIMUM PEAK STAGE			13.67
INSTANTANEOUS LOW FLOW			38a
ANNUAL RUNOFF (AC-FT)	148300	213100	159600
ANNUAL RUNOFF (CFSM)	.67	.97	.73
10 PERCENT EXCEEDS	441	783	483
50 PERCENT EXCEEDS	93	99	122
90 PERCENT EXCEEDS	56	57	48

a Due in part to regulation.

