

UPPER MISSISSIPPI RIVER BASIN

05331000 MISSISSIPPI RIVER AT ST. PAUL, MN

LOCATION.--LAT 44° 56'40", long 93°05'20", inSE¼NE¼ sec. 6, T. 28 N., R. 22 W., Ramsey County, Hydrologic Unit 07010206, on left bank in St. Paul, 300 ft upstream from Robert Street Bridge, 6 mi downstream from Minnesota River, and at mile 839.3 upstream from Ohio River.

DRAINAGE AREA.--36,800 mi², approximately.

PERIOD OF RECORD.--Water year 1867-69, 1872-92 (annual maximums), March 1892 to current year (prior to 1901, fragmentary during some winters). Records prior to March 1892, published in the 19th Annual Report, Part 4, have been found to be unreliable and should not be used. Monthly discharge only for some periods, published in WSP 1308. Gage-height records (winter records incomplete) collected at same site since 1866 are contained in reports of U.S. Weather Bureau, War Department and Mississippi River Commission.

REVISED RECORDS.--WSP 285: 1892-96. WSP 715: Drainage area. WSP 875: 1938. WSP 895: 1939. WSP 1308: 1867(M). WSP 1508: 1897, 1898(M). 1903(M), 1917-18(M). 1928(M), 1929. WRD MN-74: 1973.

GAGE.--Water-stage recorder. Datum of gage is 683.62 ft above mean sea level. Prior to Mar. 18, 1925, nonrecording gage at several sites within 300 ft of present site at present datum. Since September 1938, auxiliary water-stage recorder 5.6 mi downstream.

REMARKS.--Records good. Slight regulation except during extreme floods by reservoirs on headquarters and by power plants. Beginning July 20, 1939, sewage from Minneapolis and St. Paul, which formerly entered above station, was diverted to a sewage-disposal plant, thence to river below station. Figures do not include this diversion.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
1	4670	11900	e14500	e9640	e7470	e8620	52200	55300	22800
31000	42600	14500							
2	4570	12400	e14000	e9800	e8720	e8580	57000	53400	21600
33800	41200	13500							
3	4950	12800	e13700	e10100	e8710	e8260	64400	51500	20900
32800	40300	12900							
4	4910	12900	e13300	e9990	e8600	e8690	72500	49800	20000
33400	38600	11800							
5	5120	13500	e13500	e10300	e8200	e9520	80800	47600	18900
34200	35100	11300							

6	4980	13800	e14700	e9510	e8470	e9890	89400	46200	18000
34800	31500	11000							
7	4970	14400	e15000	e8790	e8800	e10000	96200	45000	17300
35200	28100	10900							
8	5030	14400	e14600	e8850	e8600	e11600	104000	44300	16500
35700	20300	10700							
9	4810	14000	e13900	e8230	e8190	e12800	111000	41700	15500
34800	19300	10200							
10	4810	14500	e14200	e7910	e8240	e13400	120000	40000	15300
34200	18100	10000							
11	4920	14200	e14600	e7860	e8280	e14200	128000	40100	14800
34600	17200	10100							
12	4840	14000	e14700	e7150	e8200	e15000	133000	38300	13600
33900	16200	9710							
13	4780	13100	e15100	e6670	e8140	e15600	133000	37800	13100
33500	15500	9330							
14	4420	12400	e14600	e6950	e8150	e16400	130000	37500	12400
34500	15300	9660							
15	4660	e11500	e13800	e7150	e8490	e16900	124000	36000	12400
33600	15000	10200							
16	4110	e10700	e12500	e8000	e8150	e17800	117000	34600	11600
33700	14500	10500							
17	4720	e10500	e11800	e9670	e8020	e19100	109000	33600	11200
36000	13900	10100							
18	5140	e13400	e12000	e8380	e8010	e19900	102000	32200	10800
33800	14800	9860							
19	5750	e14000	e11400	e8560	e8130	e20700	95100	30800	10700
33300	18700	9680							
20	5890	e14400	e10100	e8310	e7940	e22000	89800	29700	10400
32700	20400	9330							
21	5930	e15500	e9130	e8330	e8520	e23200	84900	28500	10100
31000	19300	9610							
22	7460	e15800	e9580	e8490	e8430	e24700	80700	27000	10600
33800	19400	9600							
23	7990	e15200	e11100	e8810	e8360	25600	77100	22700	10400
36100	19600	9040							
24	8590	e15300	e10700	e8780	e8090	27800	73800	22900	12100
37000	18700	8900							
25	9520	e14900	e10500	e8510	e8220	28000	70600	24000	13200
38800	17700	9370							
26	9720	e13900	e9980	e8640	e8160	29300	67600	25000	14700
40500	17100	8780							
27	9820	e12600	e10100	e8420	e8510	31800	65000	25300	15600
41500	16500	8890							
28	10100	e12000	e10400	e8540	e8390	35500	62500	25300	18100
42300	15900	8860							
29	10500	e12900	e10800	e8610	---	39500	59800	25000	21600
42800	15500	8210							
30	10700	e13400	e10900	e8530	---	43500	57400	24300	26700
43000	14700	8370							

31	11800	---	e10400	e8450	---	47700	---	23700	---
42900	14400	---							
TOTAL	200180	404300	385590	265930	232190	635560	2707800	1099100	460900
1109200	665400	304900							
MEAN	6457	13480	12440	8578	8293	20500	90260	35450	15360
35780	21460	10160							
MAX	11800	15800	15100	10300	8800	47700	133000	55300	26700
43000	42600	14500							
MIN	4110	10500	9130	6670	7470	8260	52200	22700	10100
31000	13900	8210							
AC-FT	397100	801900	764800	527500	460500	1261000	5371000	2180000	914200
2200000	1320000	604800							
CFSM	.18	.37	.34	.23	.23	.56	2.45	.96	.42
.97	.58	.28							
IN.	.20	.41	.39	.27	.23	.64	2.74	1.11	.47
1.12	.67	.31							

o e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1892 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
JUL	AUG	SEP							
MEAN	8567	7806	5613	4559	4488	11110	25920	20820	18080
14350	8917	8092							
MAX	38210	27660	16080	11500	14700	43240	91610	66470	57170
73590	42550	34380							
(WY)	1987	1972	1983	1983	1966	1983	1969	1986	1993
1993	1993	1986							
MIN	1289	1348	1277	1097	1300	1757	3421	3085	1980
1272	864	1143							
(WY)	1937	1937	1935	1935	1895	1940	1895	1934	1934
1934	1934	1934							

SUMMARY STATISTICS	FOR 1996 CALENDAR YEAR	FOR 1997 WATER YEAR	WATER YEARS
1892 - 1997			
ANNUAL TOTAL	6321610	8471050	
ANNUAL MEAN	17270	23210	11600
HIGHEST ANNUAL MEAN			
29580		1986	
LOWEST ANNUAL MEAN			
1935		1934	
HIGHEST DAILY MEAN	50500	Apr 23	171000
16 1965			Apr
LOWEST DAILY MEAN	4110	Oct 16	632
26 1934			Aug
ANNUAL SEVEN-DAY MINIMUM	4440	Sep 22	741
26 1934			Aug
INSTANTANEOUS PEAK FLOW			
16 1965		134000	Apr 13
			171000
			Apr

INSTANTANEOUS PEAK STAGE		22.37	Apr 13	26.01	Apr
16 1965					
ANNUAL RUNOFF (AC-FT)	12540000	16800000		8400000	
ANNUAL RUNOFF (CFSM)	.47	.63		.32	
ANNUAL RUNOFF (INCHES)	6.39	8.56		4.28	
10 PERCENT EXCEEDS	39200	46800		27400	
50 PERCENT EXCEEDS	11300	14000		7100	
90 PERCENT EXCEEDS	5410	8140		2700	