

05331000 MISSISSIPPI RIVER AT ST. PAUL, MN

LOCATION.--LAT 44°56'01", long 93°06'20", in NE¹/₄NE¹/₄ sec.13, T. 28 N., R. 22 W., Ramsey County, Hydrologic Unit 07010206, on left bank in St. Paul, 100 ft upstream from Smith Ave. Bridge, 4.8 mi downstream from Minnesota River, and at mile 840.5 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 sea level (NGVD of 1929). Prior to Mar. 18, 1925, nonrecording gage at several sites within 300 ft of each other and 1.2 miles downstream of present site at present datum. Mar. 19, 1925 to June 24, 1999, recording gage 1.2 miles downstream of present site at present datum. Since September 1938, auxiliary water-stage recorder 5.6 mi downstream.

REMARKS.--Records fair except those for estimated days, which are poor. Slight regulation, except during extreme floods, by reservoirs on headquarters and by power plants. Beginning July 20, 1939, effluent from Minneapolis and St. Paul, which formerly entered the river above station, was diverted to a wastewater treatment plant, thence to river about 4 miles below station. Discharge figures do not include this diversion.

COOPERATION.--Records of discharge from the Metro Plant wastewater treatment plant were provided by the Metropolitan Council - Environmental Services.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11000	9820	8040	e6370	e4940	e14200	11500	8140	13900	14400	8180	4000
2	11500	9490	7810	e6410	e4920	e16500	10500	8190	14500	13100	7810	4590
3	11500	9690	7840	e6390	e4900	e17800	10600	7910	17400	12500	7640	4150
4	11700	9350	8310	e6280	e4850	e18000	10700	7420	20500	12600	7240	4160
5	11100	9490	8400	e6180	e4860	18600	10200	8150	22000	12000	6650	3830
6	e11000	9420	8240	e6040	e4870	17200	10100	e7630	23400	11800	6380	4180
7	e11100	9300	8040	e6030	e4820	16000	10200	e7470	24200	12100	6050	4010
8	10800	9160	7880	e5940	e4810	15800	9640	e7700	24300	12300	6000	4140
9	10500	8960	7840	e5860	e4820	15000	9870	8040	24300	12800	5740	4160
10	10800	8990	7710	e5770	e4830	15000	10200	8460	23200	14800	5580	4220
11	10800	8970	7260	e5660	e4820	15400	10400	9710	21000	16800	5280	4090
12	11000	8920	7260	e5560	e4780	15400	9960	11300	18300	18300	5290	4850
13	10800	8770	7610	e5460	e4780	15600	9500	12700	15500	19800	5050	4270
14	10900	8530	7080	e5370	e4790	15500	9320	13000	14300	22400	5310	3320
15	10500	8670	6920	e5370	e4740	14200	9480	14200	13600	23800	5500	4040
16	10400	8620	7250	e5370	e4750	13700	9670	14400	13100	24200	5310	3840
17	10500	8250	6490	e5260	e4760	13100	9470	14800	13800	24600	5060	3970
18	9950	8090	e5770	e5250	e4760	12600	8710	14500	14400	23000	4920	3880
19	10100	8080	e4930	e5140	e4810	11700	8910	14500	16000	20500	6190	3640
20	10100	8510	e4140	e5140	e4860	10700	8430	14600	17000	17800	5850	3580
21	10100	8240	e3640	e5140	e4870	10900	9160	19700	18500	15800	5680	e3650
22	10200	8160	e3420	e5030	e4880	10900	9030	22300	18100	14400	5740	e3440
23	9720	8380	e3480	e5020	e5000	10500	9220	22300	17800	13100	5720	e3590
24	9800	8500	e3630	e5000	e5170	10100	9290	23200	17200	11700	5700	e3240
25	10000	8660	e4040	e4980	e5380	10300	9340	22500	16800	10700	5810	3780
26	9970	8300	e4350	e4960	e5860	10600	9450	20000	16700	10000	5390	3460
27	10200	8340	e4860	e4960	e6840	11000	9410	17400	16400	9990	5260	3350
28	9600	8420	e5380	e4970	e8530	11700	9340	15300	15800	9750	5280	3410
29	9820	8490	e5760	e4950	e12600	11600	9250	14500	15200	9440	4670	3600
30	9610	8280	e6140	e4960	---	12200	8770	13600	15100	8970	4250	3610
31	9830	---	e6290	e4950	---	11500	---	13400	---	8680	4520	---
TOTAL	324900	262850	195810	169770	155600	423300	289620	417020	532300	462130	179050	116050
MEAN	10480	8762	6316	5476	5366	13650	9654	13450	17740	14910	5776	3868
MAX	11700	9820	8400	6410	12600	18600	11500	23200	24300	24600	8180	4850
MIN	9600	8080	3420	4950	4740	10100	8430	7420	13100	8680	4250	3240
AC-FT	644400	521400	388400	336700	308600	839600	574500	827200	1056000	916600	355100	230200
CFSM	.28	.24	.17	.15	.15	.37	.26	.37	.48	.41	.16	.11
IN.	.33	.27	.20	.17	.16	.43	.29	.42	.54	.47	.18	.12
+	313	306	303	305	303	302	297	310	330	345	337	326
‡MEAN	10780	9066	6620	5781	5668	13950	9954	13760	18050	15240	6113	4195
‡CFSM	.29	.25	.18	.16	.15	.38	.27	.37	.49	.41	.17	.11
‡IN	.34	.27	.21	.18	.17	.44	.30	.43	.55	.48	.19	.13

ANNUAL SUMMARY † WTR. YR 00 TOTAL 3642300 MEAN 11680 MAX 24900 MIN 3530 CFSM .27 IN 3.68

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1892 - 2000, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8593	7897	5722	4619	4594	11230	25990	20930	18210	14490	8931	8067
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 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1892 - 2000
ANNUAL TOTAL	6447640	3528400	
ANNUAL MEAN	17660	9640	11680
HIGHEST ANNUAL MEAN			29580
LOWEST ANNUAL MEAN			1935
HIGHEST DAILY MEAN	61600	May 21	171000
LOWEST DAILY MEAN	3420	Dec 22	632
ANNUAL SEVEN-DAY MINIMUM	3810	Dec 20	741
INSTANTANEOUS PEAK FLOW			171000
INSTANTANEOUS PEAK STAGE			26.01
ANNUAL RUNOFF (AC-FT)	12790000	6999000	8460000
ANNUAL RUNOFF (CFSM)	.48	.26	.32
ANNUAL RUNOFF (INCHES)	6.52	3.57	4.31
10 PERCENT EXCEEDS	36800	16800	27400
50 PERCENT EXCEEDS	13200	8840	7230
90 PERCENT EXCEEDS	7260	4470	2730

^a Backwater from lock and dam.

^e Estimated.

+ Diversion, in cubic feet per second, from metropolitan wastewater treatment plant.

‡ Adjusted for discharges from metropolitan wastewater treatment plant.

