STREAMS TRIBUTARY TO LAKE SUPERIOR

04024000 ST. LOUIS RIVER AT SCANLON, MN

LOCATION.--Lat 46° 42'12", long 92° 25'07", in NW1/4 sec. 30, T.49 N., R.16 W., Carlton County, Hydrologic Unit 04010201, on right bank 25 ft downstream from lower bridge on U.S. Highway 61 at Scanlon, 0.6 mi downstream from Minnesota Power Co. power plant, 3 mi upstream from Thomson Reservoir, and 3.2 mi upstream from Midway River.

DRAINAGE AREA.--3,430 mi², approximately.

PERIOD OF RECORD.--January 1908 to current year. Monthly discharge only for some periods published in WSP 1307. Published as "near Thomson" 1908-50.

REVISED RECORDS.--WSP 1337: 1911-12.

GAGE.--Water-stage recorder. Datum of gage is 1,101.23 ft above sea level. Oct. 5, 1909 to Sept. 5, 1914, nonrecording gage 3 mi downstream and 50 ft below power plant at datum about 420 ft lower. Sept. 6, 1914 to Aug. 4, 1953, power plant record at Thomson hydroelectric plant.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diurnal fluctuation caused by power plant upstream.
Flow regulated by Whiteface Reservoir and Boulder, Island, Rice and Fish Lakes, combined capacity, 332,160 acre-ft; the water-discharge table shows the monthly change in contents (+).

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	1810	e5500	e3700	e1950	e1650	e1400	e3300	7010	2380
8010	1110	639							
2	1730	e5800	e3500	e2000	e1650	e1400	e3900	6520	2180
7580	899	590							
3	1540	e5400	e3300	e2000	e1650	e1400	e5000	6250	2050
7830	882	568							
4	1460	e5200	e3150	e2000	e1650	e1400	e7500	5860	1910
10100	909	530							
5	1450	e5000	e3000	e2000	e1650	e1400	e10000	5290	1760
10200	905	586							
6	1390	e5100	e2900	e1900	e1650	e1400	e16500	4590	1820
8630	809	542							
7	1350	e6000	e2850	e1700	e1650	e1400	e19500	4240	1870
7300	774	490							
8	1280	e7400	e2800	e1800	e1650	e1400	21100	4090	1750
6250	723	499							

9	1240	e6400	e2750	e1900	e1650	e1400	20100	3830	1680	5480	706	544
10	1190	e5400	e2700	e1900	e1600	e1400	18000	3860	1560	4770	667	479
11	1170	e4900	e2650	e1850	e1600	e1400	16300	3760	1470	4050	658	503
12	1200	e5000	e2600	e1800	e1550	e1400	15700	3580	1340	3420	632	487
13	1150	e5300	e2550	e1750	e1500	e1400	15500	3620	1200	3230	619	494
14	1130	e4500	e2500	e1800	e1500	e1400	14700	3700	1180	3710	552	461
15	1130	e3600	e2400	e1900	e1500	e1400	14600	4000	1230	3860	558	501
16	1120	e3200	e2300	e1900	e1500	e1400	13800	4340	1050	3530	617	471
17	1450	e5000	e2200	e1700	e1450	e1450	12500	4390	1050	3080	537	615
18	2140	e7400	e2200	e1700	e1450	e1550	11800	4220	1170	2680	572	524
19	2980	e8000	e1980	e1800	e1450	e1700	11900	4210	1270	2230	530	836
20	3050	e7600	e1850	e1900	e1450	e1900	12500	4430	1360	1790	819	1480
21	2860	e6600	e1950	e1850	e1450	e2200	12500	4520	1300	1560	743	1490
22	2570	e6700	e2100	e1800	e1400	e2200	11900	4160	1160	1480	843	1330
23	2510	e6500	e2000	e1750	e1400	e2100	11400	4000	1140	1320	763	1100
24	2790	e6000	e1900	e1700	e1400	e2050	10700	4170	1920	1220	744	1090
25	3000	e5500	e1700	e1700	e1400	e2050	10000	4400	4930	1640	719	1000
26	3090	e5000	e1800	e1600	e1400	e2100	9430	4190	7050	2070	736	847
27	3080	e4600	e1900	e1600	e1400	e2250	8930	3870	6340	2340	627	829
28	2930	e4300	e2100	e1600	e1400	e2400	8510	3420	5900	2080	681	936
29	2770	e4100	e2200	e1600	---	e2600	8170	3270	8390	1750	569	824
30	3590	e3900	e2150	e1650	---	e2700	7570	2950	8370	1380	642	876
31	4840	---	e2100	e1650	---	e2950	---	2640	---	1060	659	---
TOTAL	64990	164900	75780	55750	42650	54600	363310	133380	77780	125630	22204	22161
MEAN	2096	5497	2445	1798	1523	1761	12110	4303	2593	4053	716	739

MAX	4840	8000	3700	2000	1650	2950	21100	7010	8390	10200	1110	1490
MIN	1120	3200	1700	1600	1400	1400	3300	2640	1050	1060	530	461
+	266	-17.8	-598	-572	-541	-676	2070	371	143	-210	-184	-83.0
MEAN	2362	5479	1847	1226	982	1085	14180	4674	2736	3843	532	656
CFSM	.69	1.60	.54	.36	.29	.32	4.13	1.36	.80	1.12	.16	.19
IN	.80	1.79	.62	.42	.30	.37	4.61	1.57	.89	1.29	.18	.21

CAL. YR. .96 TOTAL 1319975 MEAN 3606 MAX 27400 MIN 867 MEAN 3624 CFSM 1.06 IN 14.35
WTR YR .97 TOTAL 1203135 MEAN 3296 MAX 3296 MIN 461 MEAN 3292 CFSM .96 IN 13.03

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- \+ Change in contents, equivalent in cubic feet per second, in Whiteface Reservoir, and Boulder, Island, Rice and Fish Lakes; records furnished by
- Minnesota Power Co.
- Adjusted for change in reservoir contents.
- e Estimated.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1997, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2023	1725	1274	1074	1053	1441	5668	5122	3573	2421	1668	1766
MAX	7508	8518	2993	2272	2200	6026	15230	22210	16480	9492	9197	7594
(WY)	1974	1972	1972	1966	1966	1945	1948	1950	1908	1993	1953	1928
MIN	407	473	282	265	249	301	667	593	458	199	377	402
(WY)	1935	1935	1911	1911	1924	1924	1977	1977	1988	1988	1977	1934

SUMMARY STATISTICS FOR 1996 CALENDAR YEAR FOR 1997 WATER YEAR WATER YEARS 1908 - 1997

ANNUAL TOTAL	1319975		1203135		
ANNUAL MEAN	3606		3296		2388
HIGHEST ANNUAL MEAN					4276 1972
LOWEST ANNUAL MEAN					945 1924
HIGHEST DAILY MEAN	27400	Apr 21	21100	Apr 8	37900 May 9 1950
LOWEST DAILY MEAN	867	Sep 18	461	Sep 14	88 Aug 24 1977
ANNUAL SEVEN-DAY MINIMUM	954	Sep 15	485	Sep 10	134

Jul 26 1988					
INSTANTANEOUS PEAK FLOW		22600	Apr	8	37900
May 9 1950					
INSTANTANEOUS PEAK STAGE		11.20a	Apr	7	15.80
May 9 1950					
ANNUAL RUNOFF (AC-FT)	2618000	2386000			1730000
ANNUAL RUNOFF (CFSM)	1.05	.96			.70
ANNUAL RUNOFF (INCHES)	14.32	13.05			9.46
10 PERCENT EXCEEDS	6800	7530			5320
50 PERCENT EXCEEDS	2040	1900			1390
90 PERCENT EXCEEDS	1250	731			644

- a From highwater mark, backwater from ice.