

## STREAMS TRIBUTARY TO LAKE SUPERIOR--Continued

04024000 ST. LOUIS RIVER AT SCANLON, MN

LOCATION.--Lat 46°42'12", long 92°25'07", in NW<sup>1</sup>/<sub>4</sub> 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 mi<sup>2</sup> (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, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	872	3390	4130	e1700	e1190	1180	5540	2690	2810	1970	4370	2290		
2	792	3070	4070	e1570	e1150	1220	5610	2430	2710	1960	3820	2100		
3	863	2890	3850	e1620	e1170	1200	5470	2280	2510	2210	3510	1880		
4	790	2590	3760	e1520	e1180	1160	6600	2140	2420	2170	2900	2190		
5	742	2330	3850	e1520	e1120	1090	9640	2230	2160	2680	2520	2510		
6	939	2050	4220	e1520	e1190	1040	10600	2720	2130	12400	2330	2910		
7	917	1950	4480	e1270	e1220	1010	11300	3830	2270	21200	1970	3100		
8	944	1790	4030	e1180	e1150	1330	12700	4730	2320	25300	1640	3080		
9	985	1650	3400	e1180	e1200	1170	12000	4760	2300	27500	1820	2980		
10	1020	2010	3380	e1170	e1120	1170	10900	4790	2110	28200	1740	3020		
11	941	2510	3330	e1160	e1290	1110	9820	6550	2030	27700	1940	2950		
12	930	2780	3270	e1140	e1240	1190	8990	9310	1920	25500	2330	3410		
13	932	2570	3070	e1130	e1130	1160	8310	10700	1900	21800	5180	4340		
14	810	2900	2860	e1300	e1170	1110	7620	10300	1590	17400	8040	4720		
15	948	3040	3000	e1200	e1200	1150	7080	9270	1540	13900	7260	4930		
16	1220	3000	2840	e1230	e1200	1130	6980	8260	1390	13800	6400	4680		
17	2500	3160	2540	e1330	e1220	1250	6900	8840	1270	17100	5760	4270		
18	4790	3130	2280	e1250	e1180	1330	6600	8400	1120	17000	5620	4040		
19	5410	3380	2320	e1200	e1150	1310	6100	7320	1090	15000	6090	3810		
20	5430	3170	e1800	e1300	e1120	1470	5840	6190	964	13200	6280	3440		
21	5480	3000	e2000	e1270	1250	1490	5440	5570	1040	11300	6180	3150		
22	5530	3140	e1400	e1250	e1180	1470	5120	5670	1090	9480	5560	2800		
23	5170	3500	e1200	e1400	e1200	1550	4860	6290	1580	7970	5350	2500		
24	4930	4100	e1600	e1270	e1120	1560	4470	6290	3230	6890	5230	2310		
25	4710	4320	e1500	e1320	e1150	1700	4020	5860	3690	6120	4800	2260		
26	4610	4190	e1700	e1280	1220	1780	3780	5360	3380	7120	4400	5400		
27	4640	4050	e1900	e1260	e1160	1910	3490	4810	2880	9210	3990	11400		
28	4390	3840	e1900	e1290	1270	3070	3250	4310	2650	7810	3420	12700		
29	3990	3840	e1850	e1220	---	4160	2990	3770	2380	6750	2960	12300		
30	3760	3950	e1200	e1160	---	4870	2810	3390	2080	5770	2540	11700		
31	3600	---	e2200	e1130	---	5280	---	3080	---	5020	2280	---		
TOTAL	83585	91290	84930	40340	33140	52620	204830	172140	62554	391430	128230	133170		
MEAN	2696	3043	2740	1301	1184	1697	6828	5553	2085	12630	4136	4439		
MAX	5530	4320	4480	1700	1290	5280	12700	10700	3690	28200	8040	12700		
MIN	742	1650	1200	1130	1120	1010	2810	2140	964	1960	1640	1880		
+	384	-3.66	-509	-632	-540	-278	1920	162	-38.5	43.1	-83.0	310		
MEAN <sup>†</sup>	3080	3039	2231	669	644	1419	8748	5715	2047	12670	4053	4749		
CFSM <sup>‡</sup>	.90	.89	.65	.20	.19	.41	2.55	1.67	.60	3.69	1.18	1.38		
IN <sup>‡</sup>	1.04	.99	.75	.23	.20	.47	2.85	1.93	.67	4.25	1.36	1.54		
CAL YR 98	TOTAL	795660	MEAN	2180	MAX	9150	MIN	268	MEAN <sup>‡</sup>	2200	CFSM <sup>‡</sup>	.64	IN <sup>‡</sup>	8.71
WTR YR 99	TOTAL	1478259	MEAN	4050	MAX	28200	MIN	742	MEAN <sup>‡</sup>	4111	CFSM <sup>‡</sup>	1.20	IN <sup>‡</sup>	16.28

e Estimated.

+ 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.

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STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1908 - 1999, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2026	1740	1289	1076	1060	1456	5671	5087	3560	2519	1681	1785
MAX	7508	8518	2993	2272	2200	6026	15230	22210	16480	12630	9197	7594
(WY)	1974	1972	1972	1966	1966	1945	1948	1950	1908	1999	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 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1908 - 1999
ANNUAL TOTAL	795660	1478259	
ANNUAL MEAN	2180	4050	2400
HIGHEST ANNUAL MEAN			4276
LOWEST ANNUAL MEAN			945
HIGHEST DAILY MEAN	9150	Jun 13	37900
LOWEST DAILY MEAN	268	Sep 10	88
ANNUAL SEVEN-DAY MINIMUM	315	Sep 7	134
INSTANTANEOUS PEAK FLOW			37900
INSTANTANEOUS PEAK STAGE			15.80
ANNUAL RUNOFF (AC-FT)	1578000	2932000	1739000
ANNUAL RUNOFF (CFSM)	.64	1.18	.70
ANNUAL RUNOFF (INCHES)	8.63	16.03	9.51
10 PERCENT EXCEEDS	4670	8350	5350
50 PERCENT EXCEEDS	1600	2800	1400
90 PERCENT EXCEEDS	464	1150	646

